

**PHASE II ENVIRONMENTAL SITE ASSESSMENT  
GMPT – ROMULUS ENGINEERING CENTER  
AST FUEL DISTRIBUTION AREA  
37350 ECORSE ROAD  
ROMULUS, MICHIGAN 48174**

**PREPARED FOR:**

**GENERAL MOTORS CORPORATION**

**ENCORE ENVIRONMENTAL CONSORTIUM, LLC**

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## EXECUTIVE SUMMARY

Encore Environmental Consortium, LLC (EEC) has conducted a focused Phase II Environmental Site Assessment (ESA) of the General Motors Powertrain (GMPT) – Romulus Engineering Center located at 37550 Ecorse Road in Romulus, Michigan (herein referred to as “the Site”; see Figure 1 in Appendix A). The purpose of Phase II ESA activities was to investigate for the residual presence of diesel fuel-related contamination due to a spill of approximately 2,100-gallons of diesel fuel that occurred in an aboveground storage tank (AST) fuel distribution area at the Site on April 29, 2007.

- Subsurface investigation activities included the completion of thirteen shallow hand auger test borings in a bermed wetland area where diesel fuel was observed to have spread after the spill, and nine test borings in the vicinity surrounding this area. The nine perimeter borings included four borings using direct push technology (DPT) and five additional shallow hand auger borings. Groundwater was not encountered in any of the boreholes, which extended to a maximum depth of 15 feet below ground level (bgl) for the four DPT borings. Observed soils included brown sandy silt and sand from ground level down to approximately 5 feet bgl, and a homogeneous brown clay layer from approximately 5 feet bgl to 15 feet bgl. Photoionization detector (PID) readings were less than the instrument’s detection limits at all boring locations. An apparent slight petroleum odor was detected and minimal staining was observed in depth intervals at two of the direct push boring locations, intervals from which samples were obtained for analysis. Two soil samples were collected at each of the thirteen shallow hand auger test borings in the immediate vicinity of the observed diesel fuel spill area from the following intervals: 1) at 0 to 0.25 feet bgl and 2) at 1.5 to 2.5 feet bgl. One representative soil sample was collected at 1 to 3 feet bgl or 3 to 5 feet bgl from the DPT boring locations, and one representative soil sample was collected at 1.5 to 2.5 feet bgl from each of the five shallow hand auger sample locations in the vicinity surrounding where the diesel fuel spill occurred.
- The analytical protocol was established in accordance with guidance provided in Michigan Department of Environmental Quality (MDEQ) Operation Memorandum Numbers 2 and 14. These memoranda provide recommended test parameters for spills/releases of common petroleum products, and designated test methods and target detection limits for various test parameters. Consistent with guidance presented in the memoranda, test parameters and methods included benzene / ethylbenzene / toluene / xylenes (BTEX) and trimethylbenzene isomers (TMBs) via EPA Method 8260B, polynuclear aromatic hydrocarbons (PAHs) via EPA Method 8270C, and total petroleum hydrocarbon diesel-range organics (TPH-DRO) via EPA Method 8015B. Soil sample analytical results for BTEX, TMBs, and PAHs are compared to Michigan Part 201 (Environmental Remediation) & Part 213 (Leaking Underground Storage Tanks) Generic Cleanup Criteria as promulgated under the Michigan Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451. Cleanup criteria for TPH-DRO do not exist in Michigan. Analysis of TPH-DRO is recommended in the memoranda to evaluate aesthetic impacts where other target contaminants are not detected, and for evaluating impacts where staining or objectionable odors may exist. Memoranda recommend evaluation of TPH-DRO results with respect to the intended use of the property, the depth of impacted soils, the source of contamination, and specific adverse characteristics of the soil.
- Analytical results did not indicate exceedances of Michigan Industrial and Commercial II, III, and IV Soil Cleanup Criteria and Risk-Based Screening Levels (RBSLs) or Michigan Residential and Commercial I Soil Cleanup Criteria and RBSLs at the Site. Neither BTEX nor TMBs were detected in any of the soil samples. While PAHs were detected in many of the shallow soil samples collected both within and outside of the bermed wetland area, concentrations were considerably less than the most stringent Michigan cleanup criteria.

- Analytical results for soil samples collected from 0 to 0.25 feet bgl within the bermed wetland area indicated that TPH-DRO was detected at concentrations ranging from 89 milligrams per kilogram (mg/kg) to 300 mg/kg, with an average concentration of 168 mg/kg. Analytical results for soil samples collected from 1.5 to 2.5 feet bgl within the wetland area indicated that TPH-DRO was detected at concentrations ranging from less than 12 mg/kg to 32 mg/kg, with an average concentration of 22 mg/kg. TPH - DRO was detected in soil samples collected from PDT locations at concentrations ranging from 34 mg/kg to 87 mg/kg. TPH-DRO was detected at 120 mg/kg in a hand auger sample obtained from a location just outside of the observed area of impact where soil was excavated. This was nearby the source of the spill, and within the perimeter of an installed French drain. In four other hand auger samples obtained from locations which were slightly further out from the wetland area and DPT boring locations, TPH-DRO was detected at concentrations ranging from 21 to 67 mg/kg. Analytical results indicate that surface soils in the wetland area have been impacted with DRO, but the extent of impact decreases considerably within one foot of the surface and outside of the bermed wetland area where the spill was observed to have spread.

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## 1.0 INTRODUCTION

A focused Phase II Investigation has been performed of the General Motors Powertrain (GMPT) – Romulus Engineering Center located at 37550 Ecorse Road in Romulus, Michigan (herein referred to as “the Site”; see Figure 1 in Appendix A). The purpose of Phase II ESA activities was to investigate for the residual presence of diesel fuel-related contamination due to a spill of approximately 2,100-gallons of diesel fuel that occurred in an aboveground storage tank (AST) fuel distribution area at the Site on April 29, 2007.

### 1.1 SCOPE OF WORK

EEC developed the following scope of work based on its observations made during diesel fuel spill response cleanup activities, Site and on-site response contractor documentation of cleanup activities, and Michigan Department of Environmental Quality (MDEQ) Operation Memorandum guidance providing recommended methodology and target analytical parameters for assessing potential subsurface impacts due to diesel fuel-type petroleum releases:

1. Prepared a Health and Safety Plan for Site activities.
2. Mobilized an EEC field representative with a hand auger, and mobilized a drilling subcontractor to perform direct-push test (DPT) borings via a track-mounted Geoprobe unit. The mobilization included an underground public utility stake out. The public utility stake-out included a call-in to the local jurisdictional public utilities clearance organization to identify and locate public utilities present in the vicinity of the target investigation location at the Site. An on-site meeting was held with public utility organizations to screen for the presence of utilities in the area of investigation on the Site property. In addition, Site personnel were solicited to check for the presence of utilities in the area of investigation.
3. Completed hand auger borings at thirteen (13) locations throughout a pre-specified grid in the immediate vicinity of the observed diesel fuel spill area of impact. In addition, completed hand auger borings at five (5) locations in the vicinity surrounding the observed area of impact. Soils were screened in the field with a photoionization detector (PID) equipped with a flame ionization detector (FID). Two (2) soil samples were collected at each of the thirteen (13) pre-specified hand auger locations from the following intervals: 1) at a depth of 0 to 3 inches below ground level (bgl) and 2) at a depth of 18 to 30 inches bgl. One (1) soil sample was collected at each of the five (5) hand auger locations in the vicinity surrounding the observed area of impact at a depth of 18 to 30 inches bgl. Excess soil removed was returned to the auger location.
4. Completed four (4) DPT borings using a track-mounted Geoprobe unit at four locations in the vicinity surrounding where the diesel fuel spill occurred. Concrete coring was not necessary at any of the boring locations. Soil samples were collected in each test boring and screened in the field with a PID equipped with a FID. Representative soil samples were collected from each borehole and submitted for confirmation laboratory analysis. Excess soil cuttings were returned to the borehole.
5. No groundwater was encountered during the investigation; therefore, it was not necessary to complete the protocol for collection and sampling of groundwater.
6. Soil samples were collected and submitted to an accredited laboratory for analysis according to the following:

<u>Method</u>	<u>No. of Samples</u>
- Benzene / ethylbenzene / toluene / xylenes (BTEX) and trimethylbenzene isomers (TMBs), Method 8260B	30 soil
- Polynuclear aromatic hydrocarbons (PAHs), Method 8270C	35 soil
- Total petroleum hydrocarbon Diesel-Range Organics (TPH-DRO), Method 8015B	35 soil

7. The results of the investigation are summarized in this Phase II ESA report. This report includes:

- A Site plan showing sampling and test boring locations;
- A summary of field screening data;
- Boring logs with detailed descriptions of soils encountered;
- A tabular summary of analytical laboratory results; and
- Conclusions of the investigation.

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## 2.0 PREVIOUS REPORTS AND DOCUMENTATION

EEC reviewed the following reports and documentation relevant to diesel fuel spill response activities the Site:

- General Motors Corporation, 10-Day Letter and Written Spill/Release Report submitted to MDEQ regarding diesel fuel spill; GMPT – Romulus Engineering Center, 37350 Ecorse Road, Romulus, Michigan 48174; May 7, 2007.
  - As follow-up to initial spill response and cleanup activities associated with the diesel fuel spill, General Motors Corporation (GM) submitted a letter and completed Spill/Release Report (MDEQ EQP 3465) to representatives of the Water Division (WD) and Remediation and Redevelopment Division (RRD) in the MDEQ Southeast Michigan District Office.
  - During a routine inspection on April 27, 2007 at approximately 10:10 AM, it was discovered that a gauge associated with the pump station of the Diesel Tank Farm at the Site had fractured, and diesel fuel was found to be leaking into standing surface water and brush in an adjacent wetland area. The Site estimated that approximately 2,100 gallons of diesel fuel was spilled. Responders were initially GM employees, who stopped the leak at the source and contained the spill to the wooded area. GM contracted EQ Industrial Services to take additional mitigation measures and cleanup the spill. EQ mobilized that day and utilized vacuum trucks, skimmers, booms, absorbents, back-hoes, bob-cats, and vacuum trucks and roll-off boxes to remove impacted standing surface water and vegetative debris.
  - A MDEQ WD representative arrived at the Site on April 27 to review the progress of the clean-up activities. The representative indicated cleanup activities were being handled appropriately. On April 30, 2007, a representative from the MDEQ RRD arrived at the Site to review the status cleanup activities. The representative also indicated cleanup activities were being handled appropriately.
  - Preventative measures completed at the Site included capping the fractured gauge, as well as removing and capping the remaining gauges and thermometers associated with piping in the fueling area. Other pumping areas at the Site were also evaluated for similar types of risks.
  - Cleanup activities completed at the Site included removal of contaminated debris (brush, leaves, etc.) and removal of diesel fuel from the standing surface water within the wetland area. It was estimated that 85% of contaminants were recovered within the first week of cleanup activities via skimming and utilization of booms and other absorbents. The letter indicated that the remaining 15% would be handled through alternate remediation techniques.
- EQ Emergency Response, Incident Report, Prepared for GMPT – Romulus Engineering Center, 37350 Ecorse Road, Romulus, MI; June 4, 2007.
  - EQ Industrial Services of Ypsilanti, Michigan and EQ Emergency Response (EQ) of Portage, Ohio prepared this report to document response and cleanup activities conducted on behalf of GM in response to a spill of approximately 2,100 gallons of diesel fuel from a pumping station used to distribute fuels from a nearby AST farm. EQ was contact at approximately 11:30 AM on April 27, 2007, and mobilized to the Site by 1:00 PM.
  - Below is a chronological description of response and cleanup activities as documented by EQ in the report:

▪ Friday April 27, 2007:

- EQ personnel arrived on-site. Observations indicated that the spill appeared to be confined to an approximate 200-foot by 120-foot wetland area. EQ personnel used water-finding paste to measure the thickness of the diesel fuel, which was determined to be approximately ¾-inch to 1 inch thick in some areas with standing water. EQ placed an absorbent boom across the southern end of the wetland area. In addition, a four-inch hard boom was placed through the center of the wetland area to divide the area in half, and two oil skimmers were installed in the northern portion of the wetland area for the removal of the diesel fuel from standing water. The oil skimmers discharged into a vacuum truck. Site personnel notified the MDEQ of the spill/release.
- Site personnel indicated the wetland area is a designated federal regulated wetland. The presence of standing water in the wetland area was noted to be seasonal. Based on the designation of the wetland area, EQ personnel indicated at the time that no excavation of the wetland area would take place, and vegetation would have to be cut at the surface of the standing water. A small trench was dug the western boundary of the wetland area. An absorbent boom was placed in the trench to prevent runoff into the nearby storm sewer (west of area approximately 35 feet).
- A MDEQ WD representative arrived on-site, and was pleased with the activities in-progress and the cleanup plans determined by EQ and Site personnel. EQ personnel began running weed eaters and chainsaws to remove the vegetation impacted by the diesel fuel.

▪ Saturday April 28, 2007:

- EQ personnel arrived on-site and initiated site-specific hazard assessment and safety briefing form. EQ Health and Safety personnel arrived on-site to complete the Site safety plan. The diesel fuel was observed to be leaching beyond the absorbent boom across the southern end of the wetland area. As a result, EQ decided to remove brush in this area. In addition, more absorbent boom was placed in this area.
- Test holes approximately 18 inches bgl were dug around the wetland area. The test holes approximately 6 feet from the water impacted with diesel fuel. EQ and GM Site personnel determined the soil around the pump pad needed to be excavated to within five feet of the water line. Roll-off boxes were mobilized to contain removed vegetation and excavated soils.
- The absorbent boom along the southern end of the wetland area was removed and replaced.

▪ Sunday April 29, 2007:

- EQ personnel continued skimming diesel fuel, removing debris, and conducting excavation activities.

▪ Monday April 30, 2007:

- The removal of debris from the southern end of the wetland area began. Oil skimmers continued to remove product, discharging into two vacuum trucks.



- Additional test holes were dug in the vicinity of the spill point, and fuel began to seep into the test holes at 3.5 feet bgl. In addition, EQ observed saturated stained soil in this area at approximately 4 to 5 feet bgl.
- Site personnel requested the sump pump associated with the pump pad be pumped empty.
- Tuesday May 1, 2007:
  - Due to heavy rainfall the water level in the wetland area had increased approximately 8 inches. An additional oil skimmer was added to the wetland area for product removal. Diesel fuel continued to migrate in the wetland area to the south. EQ personnel placed peat sorb and an additional absorbent boom in the area.
  - EQ and Site personnel planned a recovery system and discussed the utilization of a pump to remove standing water from the wetland area. Site personnel granted EQ permission to pump the standing water to the GM's on-site industrial wastewater treatment plant. Site personnel requested a berm be installed around the wetland area to prevent the initial area of contamination from releasing into the surrounding area and potentially into a storm sewer leading to a nearby Site storm water retention pond. As a precaution, EQ personnel placed an absorbent boom at the storm water outfall leading into the retention pond.
- Wednesday May 2, 2007:
  - EQ personnel continued skimming fuel and began construction of the berm. The berm was constructed along the northern, southern, and western boundaries of the wetland area. The berm was constructed of dirt which was hauled from a GM site.
- Thursday May 3, 2007:
  - The berm construction activities were completed. EQ personnel also completed grading the surrounding area of the wetland area and skimming fuel. More dirt was hauled on-site to backfill the excavated area.
- Friday May 4, 2007:
  - EQ completed removal activities of the debris and contaminated soil in the northern portion of the wetland area. A silt fence was installed along the exterior edge of the berm on the south side and a portion of the west side.
  - Construction activities commenced for a French drain to be located between the pump pad and seasonal wetland area. A sump was installed just west of the pump pad, and was equipped with a 24-inch capped PVC manhole. A sump pump was to be installed to pump impacted water for discharge into the Site's industrial wastewater treatment plant. The French drain trench was excavated to approximately 15 feet long by 2.5 feet wide by 3.5 deep. The trench was approximately 2 feet south of the pump pad. The trench was sloped to drain directly into the sump so that it would intercept water migrating north from the seasonal wetland area. In addition, a French drain trench 30 feet long by 2.5 feet wide by 3.5 deep was excavated north of the seasonal wetland area. The trench was also sloped to drain directly into the sump. The bottoms of the trenches were lined with 6-inch perforated drain tile. The trenches were then completed with alternating layers of geotextile fabric and peastone.

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- Many of the absorbent boom and pads were removed from the retention pond.
- May 7, 2007:
  - Remaining absorbent booms were removed from the wetland area, placed in bags, and placed in the roll-off boxes. The hard booms and skimmers were taken to the GM wastewater treatment plant for decontamination.
  - EQ completed the backfilling activities of the French drain using clay-sand material. The backfill was placed approximately 12-inches thick atop the pea stone layer inside the French drain trenches. A sump pump was installed within the sump manhole by GM personnel. In addition, GM personnel installed the piping and completed electrical work associated with pump installation.
- May 8, 2007:
  - The surrounding areas were hydro seeded and the access roads were swept clean. EQ equipment was removed from the Site.
  - EQ concluded that 2,100 gallons of diesel fuel had been spilled. EQ estimated that 250 gallons of diesel fuel product had been recovered, 490 gallons of diesel fuel had been recovered in absorbents, 1,010 gallons of debris and impacted soil was removed, and approximately 150 gallons of diesel fuel evaporated. EQ estimated that approximately 90% of the diesel fuel spilled was recovered. EQ documented that approximately 2,300 gallons of diesel fuel and water mixture were recovered from the area, and 120.21 tons of impacted media was removed from the area and taken to the EQ facility on Frederick Street in Detroit, Michigan for proper disposal.
- General Motors Corporation, Follow-up Letter submitted to MDEQ regarding diesel fuel spill; GMPT – Romulus Engineering Center, 37350 Ecorse Road, Romulus, Michigan 48174; July 18, 2007.
  - The letter documented that emergency response cleanup activities were conducted from April 27, 2007 through May 8, 2007 by EQ Industrial Services. Equipment utilized for the removal of the contaminated standing water and debris included vacuum trucks, skimmers, booms, absorbents, back-hoes, bob-cats, and vacuum trucks and roll-off boxes used to collect impacted standing surface water and vegetative debris. Cleanup activities and recovery estimates were described similarly to that estimated in the 10-day written report follow-up letter.
  - The letter indicated that hydro seeding of the area was conducted upon completion of cleanup activities. The letter also indicated that stained/contaminated soils were removed during the emergency response cleanup activities, and no further soil remediation was planned or required at the time. Waste manifests applicable to transportation and disposal of the contaminated soil and vegetative debris were attached to the letter.

The previous reports and documentation are referenced in Section 6.0.

### **3.0 PHASE II SUBSURFACE INVESTIGATION ACTIVITIES**

EEC performed an investigation on August 16, 2007 to investigate residual subsurface impacts from the approximate 2,100-gallon diesel fuel spill which occurred at the Site on April 29, 2007. A Site Location Map, a Site Layout and Boring Locations, and a Soil Analytical Results Map are presented as Figures 1 through 3 in Appendix A. A summary table showing analytical results from soil samples is included as Table 1 in Appendix B. The analytical laboratory reports are included in Appendix C, while test boring lithologic logs are included in Appendix D. Previous reports are referenced in Appendix E. Resumes of the EEC personnel who prepared this report are provided in Appendix F.

#### **3.1 FIELD ACTIVITIES**

During the subsurface investigation, EEC completed 22 test borings at the Site. This included 18 had auger borings and 4 DPT borings. A description of field activities is provided below.

##### **3.1.1 Site Health and Safety**

EEC prepared a Site Health and Safety Plan (HASP) for the subsurface investigation and assessment activities at the Site. The HASP was developed to minimize hazards and exposures to workers involved in the environmental assessment activities. The HASP contains the following information:

- Site description,
- Roles and responsibilities,
- Project hazards and control information,
- General safety practices,
- Personal protective equipment,
- Air monitoring,
- Work zones and decontamination,
- Training and medical surveillance, and
- Emergency procedures.

The HASP is referenced in Section 6.0 of this report.

##### **3.1.2 Quality Assurance / Quality Control**

EEC employed quality assurance / quality control (QA/QC) procedures in accordance with the ENCORE Field Method Guidelines (FMGs). ENCORE FMGs detail standard operating procedures (SOPs) for the primary field activities. Related QA/QC guidance and procedures are provided in the FMGs for the following applicable activities:

- Data recording / field books,
- Soil boring installation and borehole abandonment / sealing,
- Soil sample collection for laboratory analysis,
- Sample handling and shipping,
- Usage and calibration of field instruments,
- Equipment decontamination, and
- Waste characterization.

The ENCORE Field Method Guidelines Manual is referenced in Section 6.0 of this report.

### **3.1.3 Decontamination Procedures**

Prior to sampling, non-disposable sampling equipment was washed in a Liquinox solution, and then rinsed in tap water. Sampling equipment utilized during this Phase II Investigation (including Geoprobe® liners, nitrile gloves, and plastic bags) were disposed of and placed away from the sampling area in order to prevent cross-contamination of soil samples.

## **3.2 INVESTIGATION ACTIVITIES AND ANALYTICAL PROTOCOL**

Subsurface investigation activities included the completion of thirteen shallow hand auger test borings in the wetland area where diesel fuel was observed to have spread after the spill, and nine test borings in the vicinity surrounding this area. The nine perimeter borings included four borings using direct push technology (DPT) and five additional shallow hand auger borings. Groundwater was not encountered in any of the boreholes, which extended to a maximum depth of 15 feet bgl for the four DPT borings. Two soil samples were collected at each of the thirteen shallow hand auger test borings in the immediate vicinity of the observed diesel fuel spill area from the following intervals: 1) at 0 to 0.25 feet bgl and 2) at 1.5 to 2.5 feet bgl. One representative soil sample was collected at 1 to 3 feet bgl or 3 to 5 feet bgl from the DPT boring locations, and one representative soil sample was collected at 1.5 to 2.5 feet bgl from each of the five shallow hand auger sample locations in the vicinity surrounding where the diesel fuel spill occurred. A description of the boring installation and sampling activities is provided below.

### **3.2.1 Soil Boring Advancement and Sampling**

On August 16, 2007, EEC contracted Altech Services LLC of Detroit, Michigan to advance a total of four soil borings on-site using DPT. Boring SB-1 was completed south of the wetland area, and SB-2 was completed west of the wetland area. Boring SB-3 was completed east of the diesel fuel AST farm, and SB-4 was completed west of the diesel fuel AST farm. Borings SB-1, SB-2, SB-3, and SB-4 were completed to determine if shallow groundwater was present in the area, and if so to determine if diesel fuel may have impacted shallow groundwater and migrated from the wetland area.

Shallow borings HA-1 through HA-18 were completed using a hand auger. Borings HA-1 through HA-9 and borings HA-11 through HA-14 were completed within the wetland area which represented the immediate vicinity of where diesel fuel was observed to spread after the spill. Borings HA-10 and HA-15 through HA-18 were completed in the area surrounding the wetland area where the diesel fuel spill was observed to impact.

EEC screened the soil samples in the field with a MiniRae PID. PID readings were less than the instrument's detection limits at all boring locations. An apparent slight petroleum odor was detected and minimal staining was observed in boring SB-2 from 4.5 to 4.8 feet bgl and boring SB-3 at 3.8 to 4.0 feet bgl; however, no PID readings were detected as indicated. No apparent staining was observed or odors were detected at the remaining soil boring locations. Two soil samples were collected at each of the thirteen test borings in the wetland area from the following intervals: 1) at 0 to 3 inches bgl and 2) at 18 to 30 inches bgl. In addition, representative soil samples were collected from each of the nine test boring locations in the perimeter area. The soil samples were sealed, labeled with sample location, date, time, and stored on ice. Samples were transferred directly at a collection point to TestAmerica Analytical Testing Corporation for analysis in its North Canton, Ohio laboratory.

The soils encountered at the Site consisted primarily of brown sandy silt and sand from ground level down to approximately 5 feet bgl, and brown clay from approximately 5 feet bgl to 15 feet bgl, the maximum depth explored. The lithology is characterized in the soil boring logs contained in Appendix D.

### 3.2.2 Analytical Methods

The analytical protocol was established in accordance with guidance provided in Michigan Department of Environmental Quality (MDEQ) Operation Memorandum Numbers 2 and 14. Table 1 in MDEQ Operational Memorandum Number 14 provides recommended test parameters for spills/releases of common petroleum products. Diesel fuel #2 (the material spilled) is classified in the table under a light distillate oil category. The table recommends analysis for BTEX, TMBs, polynuclear aromatics (PNAs) which are also referenced as PAHs, and diesel range organics (DRO) which are also referenced as TPH-DRO. The table provides footnotes which provide further details regarding the recommended analytical protocol. TMBs include 1,2,4-TMB and 1,3,5-TMB. PAHs include the sixteen priority pollutant PAHs listed in Method 8310 plus 2-methylnaphthalene.

Attachment 1, Table 1 of MDEQ Operational Memorandum Number 2 gives target detection limits and designated analytical methods for various contaminants, with footnotes providing further description of target and potential alternative methods. Attachment 8, Table 1 identifies designated screening methods used for identifying the presence and analyzing petroleum hydrocarbons. Analytical test methods were selected based on the listing of target methods and alternative methods deemed appropriate based on the capacity of the laboratory and consideration of target detection limits appropriate for this investigation. BTEX and TMBs were analyzed by EPA Method 8260B. PAHs were analyzed by EPA Method 8270C. TPH-DRO was analyzed by EPA Method 8015B.

With the exception of four samples obtained around the perimeter of the wetland area, each of the soil samples was analyzed for BTEX, TMBs, PAHs and TPH-DRO. Due to the availability of sample containers at the time of the investigation, samples obtained from HA-10, HA-16, HA-17, and HA-18 were not analyzed for BTEX or TMBs. This did not present a data gap given the results of the investigation and analysis of samples for PAHs and TPH-DRO.

### 3.3 ANALYTICAL RESULTS

Copies of the analytical laboratory reports and chain-of-custody documentation are included in Appendix C. The results of analysis of the soil samples are summarized below and listed in Table 1 of Appendix B. Soil sample analytical results for BTEX, TMBs, and PAHs are compared to Michigan Part 201 (Environmental Remediation) & Part 213 (Leaking Underground Storage Tanks) Generic Cleanup Criteria as promulgated under the Michigan Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451 (herein referred to as "cleanup criteria"). Cleanup criteria are referenced from MDEQ Operational Memorandum #1, with the cleanup criteria tables last revised January 23, 2006. Cleanup criteria are categorized as Michigan Residential and Commercial I Soil Cleanup Criteria and Risk-Based Screening Levels (RBSLs) and Michigan Industrial and Commercial II, III, and IV Soil Cleanup Criteria and RBSLs. Cleanup criteria for TPH-DRO do not exist in Michigan. Analysis of TPH-DRO was included consistent with cleanup guidance protocol to evaluate aesthetic impacts where other target contaminants are not detected, and evaluating impacts where staining or objectionable odors may exist. In addition, MDEQ Operational Memorandum 14 suggests evaluation of TPH-DRO with respect to the intended use of the property, the depth of impacted soils, the source of contamination, and specific adverse characteristics of the soil.

- Hand auger borings HA-1 through HA-9 and borings HA-11 through HA-14 were completed within the immediate vicinity of the wetland area where diesel fuel was observed to spread after the spill occurred. Analytical results for soil samples collected from 0 to 0.25 feet bgl indicated that TPH-DRO was detected at concentrations ranging from 89 milligrams per kilogram (mg/kg) to 300 mg/kg, with an average concentration of 168 mg/kg. Analytical results for soil samples collected from 1.5 to 2.5 feet bgl indicated that TPH-DRO was detected at concentrations ranging from less than 12 mg/kg to 32 mg/kg, with an average concentration of 22 mg/kg. In soil samples collected from 0 to 0.25 feet bgl, several PAHs were detected in most samples, but at concentrations well below Michigan cleanup criteria. Concentrations did not exceed 5% of the most stringent Michigan cleanup criteria for any type of property. PAHs were only detected in one of thirteen samples collected from 1.5 to 2.5 feet bgl. Several PAHs were detected in the deeper sample from HA-9, but only at concentrations only slightly above method detection limits. BTEX and TMBs were not detected above laboratory reporting limits in any of the soil samples.
- DPT borings SB-1, SB-2, SB-3 and SB-4 were completed around the perimeter of the wetland area. As previously described, shallow groundwater was not detected down to a depth of 15 feet bgl at any of the four locations, with a hard homogenous clay layer existing from approximately 5 to 15 feet bgl. If seasonal shallow groundwater did exist in the area, contaminants would most likely migrate in sandy soils above the clay layer. Therefore, samples were obtained at depths from 1 to 5 feet bgl. TPH - DRO was detected in soil samples SB-1, SB-2, SB-3 and SB-4 at concentrations of 34 mg/kg, 87 mg/kg, 40 mg/kg and 34 mg/kg, respectively. Several PAHs were detected in soil samples in SB-2 and SB-4, but at concentrations well below Michigan cleanup criteria. No PAHs were detected in soil samples SB-1 and SB-3. BTEX and TMBs were not detected above the laboratory reporting limits in any of the four soil samples.
- Hand auger borings HA-10 and HA-15 through HA-18 were also completed in the vicinity surrounding where the diesel fuel spill was observed to spread, with just one sample obtained from 1.5 to 2.5 feet bgl at each location. Hand auger boring HA-10 was obtained from a location just outside of the observed area of impact where soil was excavated. This was nearby the source of the spill, and within the perimeter of the installed French drain. TPH-DRO was detected at 120 mg/kg in the sample obtained from HA-10. Several PAHs were detected in this sample, but at concentrations well below Michigan cleanup criteria. Hand auger borings HA-15 through HA-18 were taken slightly further out from the wetland area and DPT boring locations. TPH-DRO was detected at these locations at concentrations ranging from 21 to 67 mg/kg. Several PAHs were detected in three of the four samples, at concentrations which generally exceeded those concentrations realized within the wetland area, but still well below Michigan cleanup criteria (concentrations did not exceed 10% of the most stringent Michigan cleanup criteria for any type of property). BTEX and TMBs were not detected above the laboratory reporting limits soil sample HA-15, while due to the availability of extra sample bottles the remaining samples were not analyzed for BTEX or TMBs.

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#### 4.0 CONCLUSIONS

Encore Environmental Consortium, LLC (EEC) has conducted a focused Phase II Environmental Site Assessment (ESA) of the General Motors Powertrain (GMPT) – Romulus Engineering Center located at 37550 Ecorse Road in Romulus, Michigan (herein referred to as “the Site”; see Figure 1 in Appendix A). The purpose of Phase II ESA activities was to investigate for the residual presence of diesel fuel-related contamination due to a spill of approximately 2,100-gallons of diesel fuel that occurred in an aboveground storage tank (AST) fuel distribution area at the Site on April 29, 2007. The assessment has revealed the following results:

- Subsurface investigation activities included the completion of thirteen shallow hand auger test borings in a bermed wetland area where diesel fuel was observed to have spread after the spill, and nine test borings in the vicinity surrounding this area. The nine perimeter borings included four borings using direct push technology (DPT) and five additional shallow hand auger borings. Groundwater was not encountered in any of the boreholes, which extended to a maximum depth of 15 feet below ground level (bgl) for the four DPT borings. Observed soils included brown sandy silt and sand from ground level down to approximately 5 feet bgl, and a homogeneous brown clay layer from approximately 5 feet bgl to 15 feet bgl. Photoionization detector (PID) readings were less than the instrument’s detection limits at all boring locations. An apparent slight petroleum odor was detected and minimal staining was observed in depth intervals at two of the direct push boring locations, intervals from which samples were obtained for analysis. Two soil samples were collected at each of the thirteen shallow hand auger test borings in the immediate vicinity of the observed diesel fuel spill area from the following intervals: 1) at 0 to 0.25 feet bgl and 2) at 1.5 to 2.5 feet bgl. One representative soil sample was collected at 1 to 3 feet bgl or 3 to 5 feet bgl from the DPT boring locations, and one representative soil sample was collected at 1.5 to 2.5 feet bgl from each of the five shallow hand auger sample locations in the vicinity surrounding where the diesel fuel spill occurred.
- The analytical protocol was established in accordance with guidance provided in Michigan Department of Environmental Quality (MDEQ) Operation Memorandum Numbers 2 and 14. These memoranda provide recommended test parameters for spills/releases of common petroleum products, and designated test methods and target detection limits for various test parameters. Consistent with guidance presented in the memoranda, test parameters and methods included benzene / ethylbenzene / toluene / xylenes (BTEX) and trimethylbenzene isomers (TMBs) via EPA Method 8260B, polynuclear aromatic hydrocarbons (PAHs) via EPA Method 8270C, and total petroleum hydrocarbon diesel-range organics (TPH-DRO) via EPA Method 8015B. Soil sample analytical results for BTEX, TMBs, and PAHs are compared to Michigan Part 201 (Environmental Remediation) & Part 213 (Leaking Underground Storage Tanks) Generic Cleanup Criteria as promulgated under the Michigan Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451. Cleanup criteria for TPH-DRO do not exist in Michigan. Analysis of TPH-DRO is recommended in the memoranda to evaluate aesthetic impacts where other target contaminants are not detected, and for evaluating impacts where staining or objectionable odors may exist. Memoranda recommend evaluation of TPH-DRO results with respect to the intended use of the property, the depth of impacted soils, the source of contamination, and specific adverse characteristics of the soil.
- Analytical results did not indicate exceedances of Michigan Industrial and Commercial II, III, and IV Soil Cleanup Criteria and Risk-Based Screening Levels (RBSLs) or Michigan Residential and Commercial I Soil Cleanup Criteria and RBSLs at the Site. Neither BTEX nor TMBs were detected in any of the soil samples. While PAHs were detected in many of the shallow soil samples collected both within and outside of the bermed wetland area, concentrations were considerably less than the most stringent Michigan cleanup criteria.

- Analytical results for soil samples collected from 0 to 0.25 feet bgl within the bermed wetland area indicated that TPH-DRO was detected at concentrations ranging from 89 milligrams per kilogram (mg/kg) to 300 mg/kg, with an average concentration of 168 mg/kg. Analytical results for soil samples collected from 1.5 to 2.5 feet bgl within the wetland area indicated that TPH-DRO was detected at concentrations ranging from less than 12 mg/kg to 32 mg/kg, with an average concentration of 22 mg/kg. TPH - DRO was detected in soil samples collected from PDT locations at concentrations ranging from 34 mg/kg to 87 mg/kg. TPH-DRO was detected at 120 mg/kg in a hand auger sample obtained from a location just outside of the observed area of impact where soil was excavated. This was nearby the source of the spill, and within the perimeter of an installed French drain. In four other hand auger samples obtained from locations which were slightly further out from the wetland area and DPT boring locations, TPH-DRO was detected at concentrations ranging from 21 to 67 mg/kg. Analytical results indicate that surface soils in the wetland area have been impacted with DRO, but the extent of impact decreases considerably within one foot of the surface and outside of the bermed wetland area where the spill was observed to have spread.

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**5.0 QUALIFICATIONS AND LIMITATIONS**

This Report was prepared pursuant to the agreement dated January 2, 2002 with Encore Environmental Consortium, LLC (“EEC”). All uses of this Report are subject to, and deemed acceptance of, the conditions and restrictions contained in the referenced Agreement. The observations and conclusions described in this Report are based solely on the scope of services provided pursuant to the Agreement. EEC has not performed any additional observations, investigations, studies, or other testing not specified in the Agreement. EEC shall not be liable for the existence of any condition the discovery of which would have required the performance of services not authorized under the Agreement.

This Report is prepared for the exclusive use of General Motors Corporation. Use of this Report by any person or entity other than General Motors Corporation shall be at such other person’s or entity’s sole risk, and shall be without legal exposure or liability to EEC.

This Report reflects site conditions observed and described by records available to EEC as of the date of the Report. The passage of time may result in significant changes in site conditions or technology which could alter the findings and/or recommendations of the Report. Accordingly, EEC shall bear no liability for deviations from observed conditions or available records after the date of the Report.

EEC shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld or not fully disclosed at the time the assessment was conducted.

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**6.0 REFERENCES**

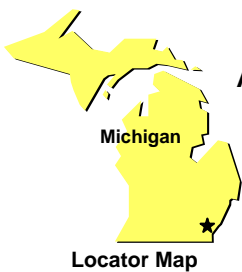
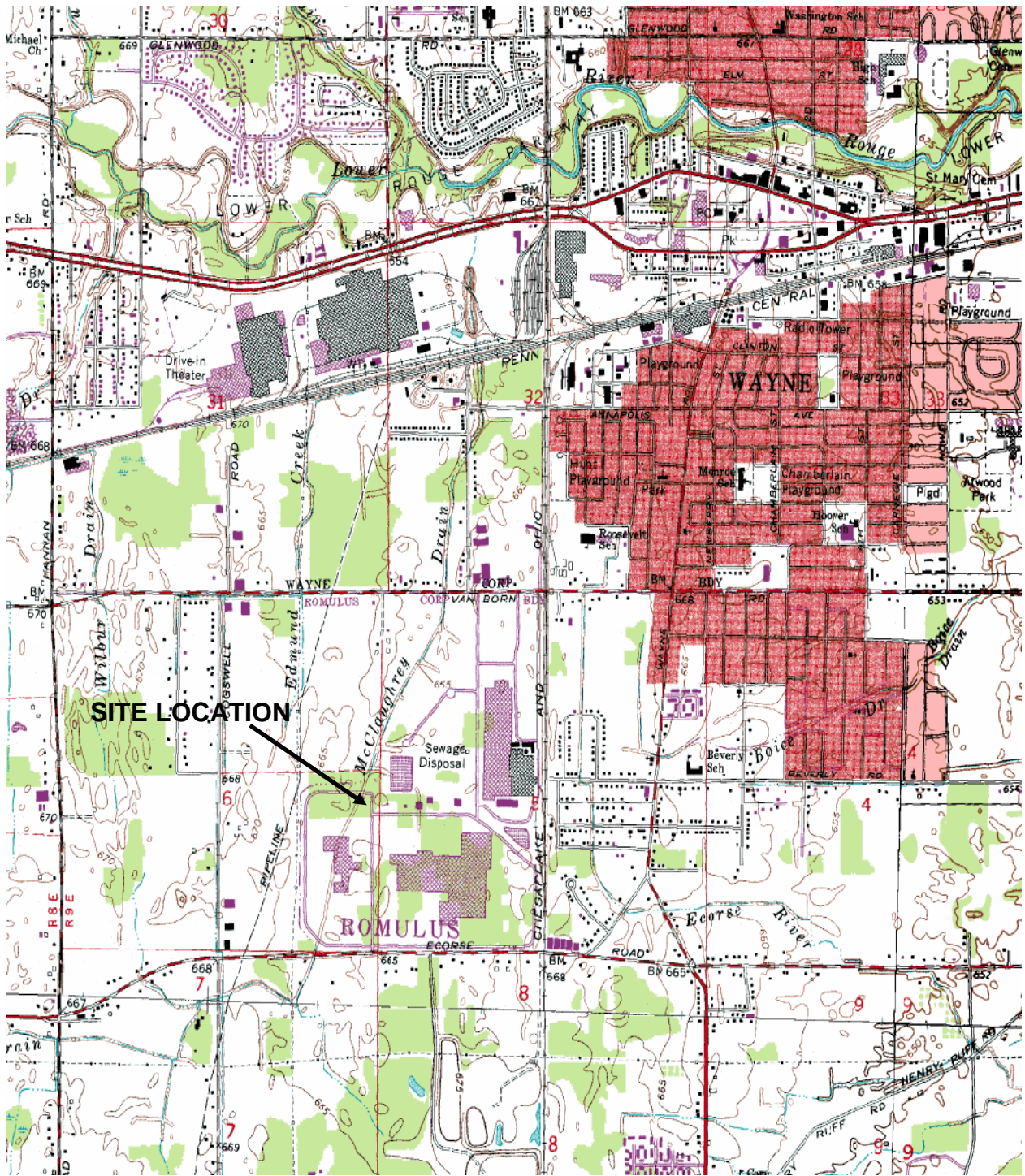
1. General Motors Corporation, 10-Day Letter and Written Spill/Release Report submitted to MDEQ regarding diesel fuel spill; GMPT – Romulus Engineering Center, 37350 Ecorse Road, Romulus, Michigan 48174; May 7, 2007.
2. EQ Emergency Response, Incident Report, Prepared for GMPT – Romulus Engineering Center, 37350 Ecorse Road, Romulus, MI; June 4, 2007.
3. General Motors Corporation, Follow-up Letter submitted to MDEQ regarding diesel fuel spill; GMPT – Romulus Engineering Center, 37350 Ecorse Road, Romulus, Michigan 48174; July 18, 2007.

HAIR

**APPENDIX A**

**Figures**

DRAFT



Approximate Scale:  
1" = 5,200'



GMPT – Romulus Engineering Center  
AST and Distribution Area – Diesel Fuel Spill Location  
37350 Ecorse Road, Romulus, MI 48174

**SITE LOCATION MAP**

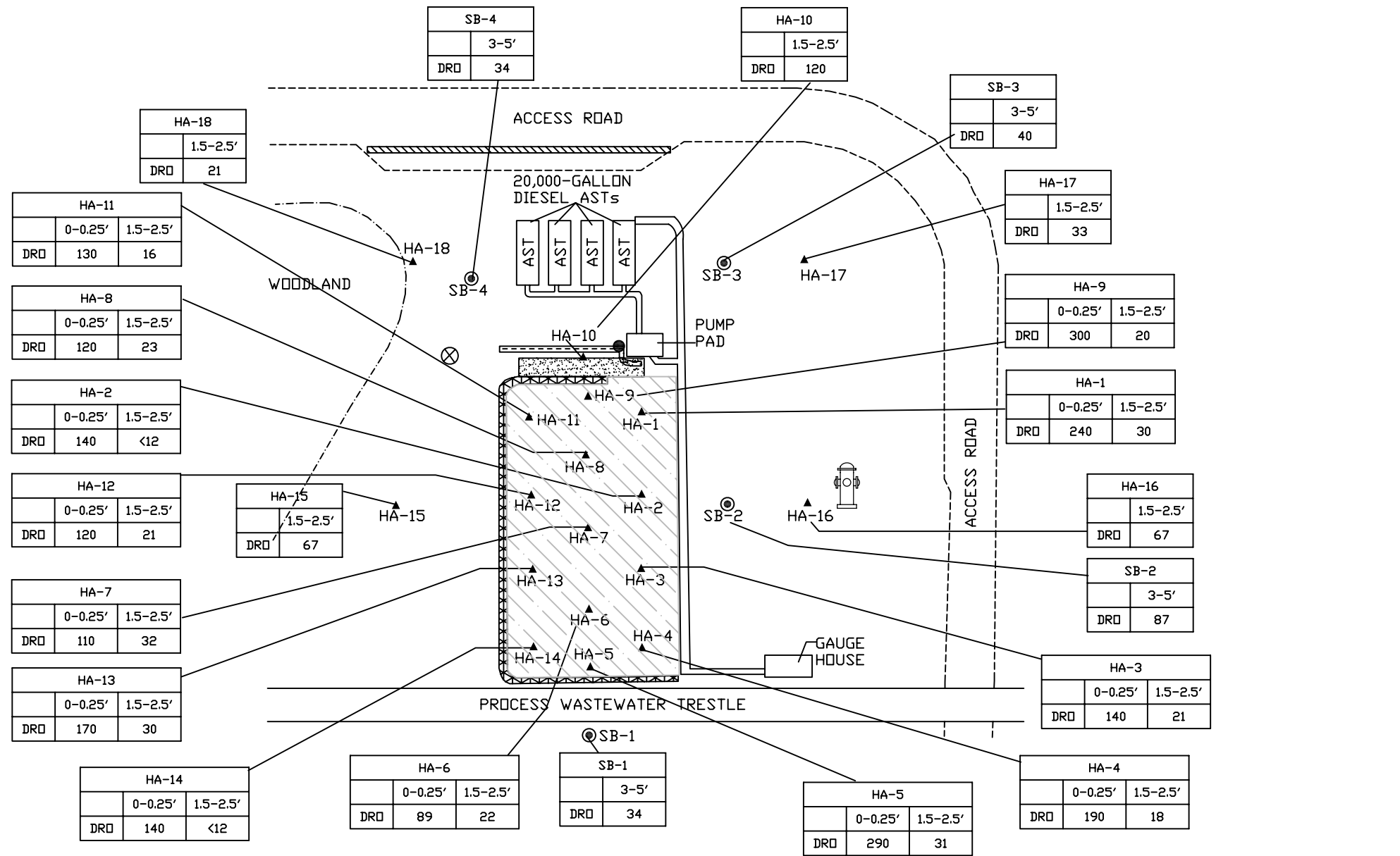


FIGURE

**1**



LEX-85-RER LAYER: ON=\*, OFF=\*REF\*  
 G:\COMMON\Autocad\GM\Michigan\2007\64488.004\64488004\602.dwg  
 G:\COMMON\Autocad\GM\Michigan\2007\64488.004\64488004\602.dwg  
 PAGESETUP:PDF-MICHIGAN PENTABLE:PLT\FULL.CTB PRINTED:10/30/2007 1:19 PM BY:RER  
 LAYOUT:Layout1 SAVED:10/30/2007 1:18 PM



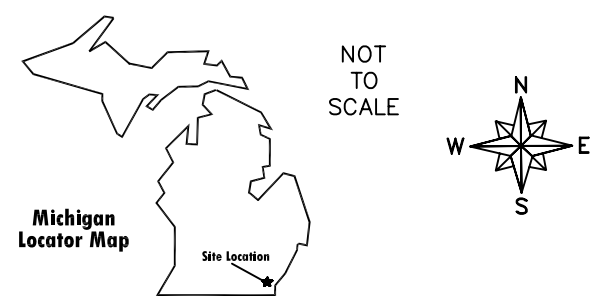
**LEGEND**

- STORMWATER DRAIN
- TRENCH-STYLE ROAD DRAIN
- CONSTRUCTED EARTHEN BERM
- CONSTRUCTED FRENCH DRAIN
- APPROXIMATE AREA OF SOIL REMOVAL
- EXTENT OF SEASONAL WETLAND AREA VISIBLY IMPACTED BY DIESEL FUEL SPILL ON APRIL 29, 2007.
- FRENCH DRAIN SUMP PUMP
- AST ABOVEGROUND STORAGE TANK
- HAND AUGER LOCATION
- SOIL BORING LOCATION
- FIRE HYDRANT

HA-17	SAMPLE ID
1.5-2.5'	SAMPLE DEPTH (FEET)
DRD	TOTAL PETROLEUM HYDROCARBONS-DIESEL RANGE ORGANICS (TPH-DRD)
33	

CONCENTRATIONS ARE REPORTED IN MILLIGRAMS PER KILOGRAM (mg/kg).  
 METHOD: EPA 8015B

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 AST AND FUEL DISTRIBUTION AREA -  
 DIESEL FUEL SPILL LOCATION  
 37350 ECORSE ROAD  
 ROMULUS, MI 48174

**SOIL ANALYTICAL RESULTS MAP**

FIGURE

**3**

**APPENDIX B**

**Tables**

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**GMPT - ROMULUS ENGINEERING CENTER  
AST / FUEL DISTRIBUTION AREA  
37350 ECORSE ROAD  
ROMULUS, MICHIGAN**

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**SOIL SAMPLE LABORATORY ANALYTICAL RESULTS**

Sample ID: Description of Sample Location:  Date Collected: Sample Depth (feet bgl): Analytical Parameter	Units	Michigan Part 201 (Environmental Remediation) & Part 213 (Leaking Underground Storage Tanks)								HA-1	HA-1	HA-2	HA-2	HA-3	HA-3	HA-4
		Residential and Commercial I Soil Cleanup Criteria and Risk Based Screening Levels				Industrial and Commercial II, III, & IV Soil Cleanup Criteria and Risk Based Screening Levels				Northeastern Portion of Wetland Area	Northeastern Portion of Wetland Area	Northeastern Portion of Wetland Area	Northeastern Portion of Wetland Area	Southeastern Portion of Wetland Area	Southeastern Portion of Wetland Area	Southeastern Portion of Wetland Area
		Ground- Water Protection	Indoor Air	Ambient Air	Direct Contact Criteria	Ground- Water Protection	Indoor Air	Ambient Air	Direct Contact Criteria	8/16/2007 0-0.25'	8/16/2007 1.5-2.5'	8/16/2007 0-0.25'	8/16/2007 1.5-2.5'	8/16/2007 0-0.25'	8/16/2007 1.5-2.5'	8/16/2007 0-0.25'
<b>TPH - DRO (EPA Method 8015B)</b>	mg/kg	none	none	none	none	none	none	none	none	<b>240</b>	<b>30</b>	<b>140</b>	<b>&lt;12</b>	<b>140</b>	<b>21</b>	<b>190</b>
<b>PAHs (EPA Method 8270C)</b>																
1-Methylnaphthalene	ug/kg	none	none	none	none	none	none	none	none	<25	<8.1	<24	<7.8	<24	<7.7	<24
2-Methylnaphthalene	ug/kg	57,000	none	none	8.1E+06	57,000	none	none	2.6E+07	<25	<8.1	<24	<7.8	<24	<7.7	<24
Acenaphthene	ug/kg	4,400	1.9E+08	8.1E+07	4.1E+07	4,400	3.5E+08	9.7E+07	1.3E+08	<25	<8.1	<24	<7.8	<24	<7.7	<24
Acenaphthylene	ug/kg	5,900	1.6E+06	2.2E+06	1.6E+06	5,900	3.0E+06	2.7E+06	5.2E+06	<25	<8.1	<24	<7.8	<24	<7.7	<24
Anthracene	ug/kg	41,000	1.0E+09	1.4E+09	2.3E+08	41,000	1.0E+09	1.6E+09	7.3E+08	<25	<8.1	<24	<7.8	<24	<7.7	53
Benz(a)anthracene	ug/kg	none	none	none	20,000	none	none	none	80,000	40	<8.1	<24	<7.8	47	<7.7	110
Benzo(a)pyrene	ug/kg	none	none	1.5E+06	2,000	none	none	1.9E+06	8,000	50	<8.1	27	<7.8	53	<7.7	100
Benzo(b)fluoranthene	ug/kg	none	none	none	20,000	none	none	none	80,000	88	<8.1	44	<7.8	85	<7.7	140
Benzo(g,h,i)perylene	ug/kg	none	none	8.0E+08	2.5E+06	none	none	3.5E+08	7.0E+06	40	<8.1	<24	<7.8	44	<7.7	72
Benzo(k)fluoranthene	ug/kg	none	none	none	200,000	none	none	none	800,000	<25	<8.1	<24	<7.8	39	<7.7	61
Chrysene	ug/kg	none	none	none	2.0E+06	none	none	none	8.0E+06	61	<8.1	25	<7.8	65	<7.7	110
Dibenzo(a,h)anthracene	ug/kg	none	none	none	2,000	none	none	none	8,000	<25	<8.1	<24	<7.8	<24	<7.7	<24
Fluoranthene	ug/kg	5,500	1.0E+09	7.4E+08	4.6E+07	5,500	1.0E+09	8.8E+08	1.3E+08	95	<8.1	48	<7.8	110	<7.7	270
Fluorene	ug/kg	5,300	5.8E+08	1.3E+08	2.7E+07	5,300	1.0E+09	1.5E+08	8.7E+07	<25	<8.1	<24	<7.8	<24	<7.7	25
Indeno(1,2,3-cd)pyrene	ug/kg	none	none	none	20,000	none	none	none	80,000	36	<8.1	<24	<7.8	40	<7.7	67
Naphthalene	ug/kg	870	250,000	300,000	1.6E+07	870	470,000	350,000	5.2E+07	<25	<8.1	<24	<7.8	<24	<7.7	<24
Phenanthrene	ug/kg	5,300	2.8E+06	160,000	1.6E+06	5,300	5.1E+06	190,000	5.2E+06	38	<8.1	<24	<7.8	48	<7.7	190
Pyrene	ug/kg	480,000	1.0E+09	6.5E+08	2.9E+07	480,000	1.0E+09	7.8E+08	8.4E+07	83	<8.1	36	<7.8	88	<7.7	210
<b>VOCs (EPA Method 8260B)</b>																
1,2,4-Trimethylbenzene	ug/kg	570	110,000	2.1E+07	110,000	570	110,000	2.5E+07	110,000	<430	<250	<380	<230	<470	<250	<400
1,3,5-Trimethylbenzene	ug/kg	1,100	94,000	1.6E+07	94,000	1,100	94,000	1.9E+07	94,000	<430	<250	<380	<230	<470	<250	<400
Benzene	ug/kg	100	1,600	13,000	180,000	100	8,400	45,000	400,000	<86	<49	<76	<46	<94	<51	<80
Ethylbenzene	ug/kg	360	87,000	720,000	140,000 (C)	360	140,000 (C)	2.4E+06	140,000 (C)	<86	<49	<76	<46	<94	<51	<80
Toluene	ug/kg	2,800	250,000 (C)	2.8E+06	250,000 (C)	2,800	250,000 (C)	3.3E+06	250,000 (C)	<170	<99	<150	<91	<190	<100	<160
Xylenes, Total	ug/kg	700	150,000 (C)	4.6E+07	150,000 (C)	700	150,000 (C)	5.4E+07	150,000 (C)	<260	<150	<230	<140	<280	<150	<240

**GMPT - ROMULUS ENGINEERING CENTER  
AST / FUEL DISTRIBUTION AREA  
37350 ECORSE ROAD  
ROMULUS, MICHIGAN**

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**SOIL SAMPLE LABORATORY ANALYTICAL RESULTS**

Sample ID: Description of Sample Location:  Date Collected: Sample Depth (feet bgl): Analytical Parameter	Units	Michigan Part 201 (Environmental Remediation) & Part 213 (Leaking Underground Storage Tanks)								HA-4	HA-5	HA-5	HA-6	HA-6	HA-7	HA-7
		Residential and Commercial I Soil Cleanup Criteria and Risk Based Screening Levels				Industrial and Commercial II, III, & IV Soil Cleanup Criteria and Risk Based Screening Levels				Southeastern Portion of Wetland Area	Southern Portion of Wetland Area	Southern Portion of Wetland Area	South Central Portion of Wetland Area	South Central Portion of Wetland Area	Central Portion of Wetland Area	Central Portion of Wetland Area
		Ground- Water Protection	Indoor Air	Ambient Air	Direct Contact Criteria	Ground- Water Protection	Indoor Air	Ambient Air	Direct Contact Criteria	8/16/2007 1.5-2.5'	8/16/2007 0-0.25'	8/16/2007 1.5-2.5'	8/16/2007 0-0.25'	8/16/2007 1.5-2.5'	8/16/2007 0-0.25'	8/16/2007 1.5-2.5'
<b>TPH - DRO (EPA Method 8015B)</b>	mg/kg	none	none	none	none	none	none	none	none	18	290	31	89	22	110	32
<b>PAHs (EPA Method 8270C)</b>																
1-Methylnaphthalene	ug/kg	none	none	none	none	none	none	none	none	<7.5	<25	<7.3	<7.8	<8.3	<8.1	<7.7
2-Methylnaphthalene	ug/kg	57,000	none	none	8.1E+06	57,000	none	none	2.6E+07	<7.5	<25	<7.3	<7.8	<8.3	<8.1	<7.7
Acenaphthene	ug/kg	4,400	1.9E+08	8.1E+07	4.1E+07	4,400	3.5E+08	9.7E+07	1.3E+08	<7.5	<25	<7.3	<7.8	<8.3	<8.1	<7.7
Acenaphthylene	ug/kg	5,900	1.6E+06	2.2E+06	1.6E+06	5,900	3.0E+06	2.7E+06	5.2E+06	<7.5	<25	<7.3	<7.8	<8.3	<8.1	<7.7
Anthracene	ug/kg	41,000	1.0E+09	1.4E+09	2.3E+08	41,000	1.0E+09	1.6E+09	7.3E+08	<7.5	<25	<7.3	10	<8.3	9	<7.7
Benz(a)anthracene	ug/kg	none	none	none	20,000	none	none	none	80,000	<7.5	65	<7.3	40	<8.3	39	<7.7
Benzo(a)pyrene	ug/kg	none	none	1.5E+06	2,000	none	none	1.9E+06	8,000	<7.5	75	<7.3	48	<8.3	46	<7.7
Benzo(b)fluoranthene	ug/kg	none	none	none	20,000	none	none	none	80,000	<7.5	130	<7.3	85	<8.3	78	<7.7
Benzo(g,h,i)perylene	ug/kg	none	none	8.0E+08	2.5E+06	none	none	3.5E+08	7.0E+06	<7.5	72	<7.3	38	<8.3	36	<7.7
Benzo(k)fluoranthene	ug/kg	none	none	none	200,000	none	none	none	800,000	<7.5	46	<7.3	30	<8.3	26	<7.7
Chrysene	ug/kg	none	none	none	2.0E+06	none	none	none	8.0E+06	<7.5	97	<7.3	56	<8.3	52	<7.7
Dibenzo(a,h)anthracene	ug/kg	none	none	none	2,000	none	none	none	8,000	<7.5	<25	<7.3	11	<8.3	10	<7.7
Fluoranthene	ug/kg	5,500	1.0E+09	7.4E+08	4.6E+07	5,500	1.0E+09	8.8E+08	1.3E+08	<7.5	170	<7.3	110	<8.3	95	<7.7
Fluorene	ug/kg	5,300	5.8E+08	1.3E+08	2.7E+07	5,300	1.0E+09	1.5E+08	8.7E+07	<7.5	<25	<7.3	<7.8	<8.3	<8.1	<7.7
Indeno(1,2,3-cd)pyrene	ug/kg	none	none	none	20,000	none	none	none	80,000	<7.5	55	<7.3	37	<8.3	33	<7.7
Naphthalene	ug/kg	870	250,000	300,000	1.6E+07	870	470,000	350,000	5.2E+07	<7.5	<25	<7.3	<7.8	<8.3	<8.1	<7.7
Phenanthrene	ug/kg	5,300	2.8E+06	160,000	1.6E+06	5,300	5.1E+06	190,000	5.2E+06	<7.5	84	<7.3	42	<8.3	38	<7.7
Pyrene	ug/kg	480,000	1.0E+09	6.5E+08	2.9E+07	480,000	1.0E+09	7.8E+08	8.4E+07	<7.5	130	<7.3	86	<8.3	73	<7.7
<b>VOCs (EPA Method 8260B)</b>																
1,2,4-Trimethylbenzene	ug/kg	570	110,000	2.1E+07	110,000	570	110,000	2.5E+07	110,000	<260	<550	<240	<320	<280	<330	<230
1,3,5-Trimethylbenzene	ug/kg	1,100	94,000	1.6E+07	94,000	1,100	94,000	1.9E+07	94,000	<260	<550	<240	<320	<280	<330	<230
Benzene	ug/kg	100	1,600	13,000	180,000	100	8,400	45,000	400,000	<52	<69	<47	<65	<56	<65	<47
Ethylbenzene	ug/kg	360	87,000	720,000	140,000 (C)	360	140,000 (C)	2.4E+06	140,000 (C)	<52	<110	<47	<65	<56	<65	<47
Toluene	ug/kg	2,800	250,000 (C)	2.8E+06	250,000 (C)	2,800	250,000 (C)	3.3E+06	250,000 (C)	<100	<220	<95	<130	<110	<130	<94
Xylenes, Total	ug/kg	700	150,000 (C)	4.6E+07	150,000 (C)	700	150,000 (C)	5.4E+07	150,000 (C)	<160	<330	<140	<190	<170	<200	<140

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**SOIL SAMPLE LABORATORY ANALYTICAL RESULTS**

Sample ID: Description of Sample Location:  Date Collected: Sample Depth (feet bgl): Analytical Parameter	Units	Michigan Part 201 (Environmental Remediation) & Part 213 (Leaking Underground Storage Tanks)								HA-8	HA-8	HA-9	HA-9	HA-10	HA-11	HA-11
		Residential and Commercial I Soil Cleanup Criteria and Risk Based Screening Levels				Industrial and Commercial II, III, & IV Soil Cleanup Criteria and Risk Based Screening Levels				North Central Portion of Wetland Area	North Central Portion of Wetland Area	North Central Portion of Wetland Area	North Central Portion of Wetland Area	North of Wetland Area	Northwestern Portion of Wetland Area	Northwestern Portion of Wetland Area
		Ground- Water Protection	Indoor Air	Ambient Air	Direct Contact Criteria	Ground- Water Protection	Indoor Air	Ambient Air	Direct Contact Criteria	8/16/2007 0-0.25'	8/16/2007 1.5-2.5'	8/16/2007 0-0.25'	8/16/2007 1.5-2.5'	8/16/2007 1.5-2.5'	8/16/2007 0-0.25'	8/16/2007 1.5-2.5'
<b>TPH - DRO (EPA Method 8015B)</b>	mg/kg	none	none	none	none	none	none	none	none	<b>120</b>	<b>23</b>	<b>300</b>	<b>20</b>	<b>120</b>	<b>130</b>	<b>16</b>
<b>PAHs (EPA Method 8270C)</b>																
1-Methylnaphthalene	ug/kg	none	none	none	none	none	none	none	none	<9.1	<7.9	11	<7.5	<7.5	<7.8	<7.3
2-Methylnaphthalene	ug/kg	57,000	none	none	8.1E+06	57,000	none	none	2.6E+07	<9.1	<7.9	10	<7.5	<7.5	<7.8	<7.3
Acenaphthene	ug/kg	4,400	1.9E+08	8.1E+07	4.1E+07	4,400	3.5E+08	9.7E+07	1.3E+08	<9.1	<7.9	<9.0	<7.5	<7.5	<7.8	<7.3
Acenaphthylene	ug/kg	5,900	1.6E+06	2.2E+06	1.6E+06	5,900	3.0E+06	2.7E+06	5.2E+06	<9.1	<7.9	<9.0	<7.5	<7.5	<7.8	<7.3
Anthracene	ug/kg	41,000	1.0E+09	1.4E+09	2.3E+08	41,000	1.0E+09	1.6E+09	7.3E+08	<9.1	<7.9	18	<7.5	15	12	<7.3
Benz(a)anthracene	ug/kg	none	none	none	20,000	none	none	none	80,000	28	<7.9	50	13	34	56	<7.3
Benzo(a)pyrene	ug/kg	none	none	1.5E+06	2,000	none	none	1.9E+06	8,000	34	<7.9	57	12	41	53	<7.3
Benzo(b)fluoranthene	ug/kg	none	none	none	20,000	none	none	none	80,000	59	<7.9	94	14	51	94	<7.3
Benzo(g,h,i)perylene	ug/kg	none	none	8.0E+08	2.5E+06	none	none	3.5E+08	7.0E+06	30	<7.9	44	<7.5	33	50	<7.3
Benzo(k)fluoranthene	ug/kg	none	none	none	200,000	none	none	none	800,000	21	<7.9	34	8	22	36	<7.3
Chrysene	ug/kg	none	none	none	2.0E+06	none	none	none	8.0E+06	40	<7.9	75	16	49	78	<7.3
Dibenzo(a,h)anthracene	ug/kg	none	none	none	2,000	none	none	none	8,000	18	<7.9	<9.0	<7.5	<7.5	<7.8	<7.3
Fluoranthene	ug/kg	5,500	1.0E+09	7.4E+08	4.6E+07	5,500	1.0E+09	8.8E+08	1.3E+08	72	<7.9	110	28	95	99	<7.3
Fluorene	ug/kg	5,300	5.8E+08	1.3E+08	2.7E+07	5,300	1.0E+09	1.5E+08	8.7E+07	<9.1	<7.9	<9.0	<7.5	<7.5	<7.8	<7.3
Indeno(1,2,3-cd)pyrene	ug/kg	none	none	none	20,000	none	none	none	80,000	30	<7.9	36	<7.5	24	46	<7.3
Naphthalene	ug/kg	870	250,000	300,000	1.6E+07	870	470,000	350,000	5.2E+07	<9.1	<7.9	10	<7.5	<7.5	<7.8	<7.3
Phenanthrene	ug/kg	5,300	2.8E+06	160,000	1.6E+06	5,300	5.1E+06	190,000	5.2E+06	29	<7.9	56	19	70	47	<7.3
Pyrene	ug/kg	480,000	1.0E+09	6.5E+08	2.9E+07	480,000	1.0E+09	7.8E+08	8.4E+07	60	<7.9	85	23	88	87	<7.3
<b>VOCs (EPA Method 8260B)</b>																
1,2,4-Trimethylbenzene	ug/kg	570	110,000	2.1E+07	110,000	570	110,000	2.5E+07	110,000	<390	<220	<440	<240	NA	<270	<240
1,3,5-Trimethylbenzene	ug/kg	1,100	94,000	1.6E+07	94,000	1,100	94,000	1.9E+07	94,000	<390	<220	<440	<240	NA	<270	<240
Benzene	ug/kg	100	1,600	13,000	180,000	100	8,400	45,000	400,000	<78	<45	<89	<48	NA	<55	<49
Ethylbenzene	ug/kg	360	87,000	720,000	140,000 (C)	360	140,000 (C)	2.4E+06	140,000 (C)	<78	<45	<89	<48	NA	<55	<49
Toluene	ug/kg	2,800	250,000 (C)	2.8E+06	250,000 (C)	2,800	250,000 (C)	3.3E+06	250,000 (C)	<160	<89	<180	<96	NA	<110	<98
Xylenes, Total	ug/kg	700	150,000 (C)	4.6E+07	150,000 (C)	700	150,000 (C)	5.4E+07	150,000 (C)	<230	<130	<270	<140	NA	<160	<150

**GMPT - ROMULUS ENGINEERING CENTER  
AST / FUEL DISTRIBUTION AREA  
37350 ECORSE ROAD  
ROMULUS, MICHIGAN**

Privileged and Confidential, Prepared at the Request of Counsel

**SOIL SAMPLE LABORATORY ANALYTICAL RESULTS**

Sample ID: Description of Sample Location:  Date Collected: Sample Depth (feet bgl):  Analytical Parameter	Units	Michigan Part 201 (Environmental Remediation) & Part 213 (Leaking Underground Storage Tanks)								HA-12 Northwestern Portion of Wetland Area	HA-12 Northwestern Portion of Wetland Area
		Residential and Commercial I Soil Cleanup Criteria and Risk Based Screening Levels				Industrial and Commercial II, III, & IV Soil Cleanup Criteria and Risk Based Screening Levels				8/16/2007 0-0.25'	8/16/2007 1.5-2.5'
		Ground-Water Protection	Indoor Air	Ambient Air	Direct Contact Criteria	Ground-Water Protection	Indoor Air	Ambient Air	Direct Contact Criteria		
<b>TPH - DRO (EPA Method 8015B)</b>	mg/kg	none	none	none	none	none	none	none	none	<b>120</b>	21
<b>PAHs (EPA Method 8270C)</b>											
1-Methylnaphthalene	ug/kg	none	none	none	none	none	none	none	none	<8.8	<7.8
2-Methylnaphthalene	ug/kg	57,000	none	none	8.1E+06	57,000	none	none	2.6E+07	<8.8	<7.8
Acenaphthene	ug/kg	4,400	1.9E+08	8.1E+07	4.1E+07	4,400	3.5E+08	9.7E+07	1.3E+08	<8.8	<7.8
Acenaphthylene	ug/kg	5,900	1.6E+06	2.2E+06	1.6E+06	5,900	3.0E+06	2.7E+06	5.2E+06	<8.8	<7.8
Anthracene	ug/kg	41,000	1.0E+09	1.4E+09	2.3E+08	41,000	1.0E+09	1.6E+09	7.3E+08	15	<7.8
Benz(a)anthracene	ug/kg	none	none	none	20,000	none	none	none	80,000	52	<7.8
Benzo(a)pyrene	ug/kg	none	none	1.5E+06	2,000	none	none	1.9E+06	8,000	63	<7.8
Benzo(b)fluoranthene	ug/kg	none	none	none	20,000	none	none	none	80,000	92	<7.8
Benzo(g,h,i)perylene	ug/kg	none	none	8.0E+08	2.5E+06	none	none	3.5E+08	7.0E+06	51	<7.8
Benzo(k)fluoranthene	ug/kg	none	none	none	200,000	none	none	none	800,000	21	<7.8
Chrysene	ug/kg	none	none	none	2.0E+06	none	none	none	8.0E+06	72	<7.8
Dibenzo(a,h)anthracene	ug/kg	none	none	none	2,000	none	none	none	8,000	<8.8	<7.8
Fluoranthene	ug/kg	5,500	1.0E+09	7.4E+08	4.6E+07	5,500	1.0E+09	8.8E+08	1.3E+08	120	<7.8
Fluorene	ug/kg	5,300	5.8E+08	1.3E+08	2.7E+07	5,300	1.0E+09	1.5E+08	8.7E+07	<8.8	<7.8
Indeno(1,2,3-cd)pyrene	ug/kg	none	none	none	20,000	none	none	none	80,000	41	<7.8
Naphthalene	ug/kg	870	250,000	300,000	1.6E+07	870	470,000	350,000	5.2E+07	<8.8	<7.8
Phenanthrene	ug/kg	5,300	2.8E+06	160,000	1.6E+06	5,300	5.1E+06	190,000	5.2E+06	51	<7.8
Pyrene	ug/kg	480,000	1.0E+09	6.5E+08	2.9E+07	480,000	1.0E+09	7.8E+08	8.4E+07	100	<7.8
<b>VOCs (EPA Method 8260B)</b>											
1,2,4-Trimethylbenzene	ug/kg	570	110,000	2.1E+07	110,000	570	110,000	2.5E+07	110,000	<310	<260
1,3,5-Trimethylbenzene	ug/kg	1,100	94,000	1.6E+07	94,000	1,100	94,000	1.9E+07	94,000	<310	<260
Benzene	ug/kg	100	1,600	13,000	180,000	100	8,400	45,000	400,000	<61	<52
Ethylbenzene	ug/kg	360	87,000	720,000	140,000 (C)	360	140,000 (C)	2.4E+06	140,000 (C)	<61	<52
Toluene	ug/kg	2,800	250,000 (C)	2.8E+06	250,000 (C)	2,800	250,000 (C)	3.3E+06	250,000 (C)	<120	<100
Xylenes, Total	ug/kg	700	150,000 (C)	4.6E+07	150,000 (C)	700	150,000 (C)	5.4E+07	150,000 (C)	<180	<150

**GMPT - ROMULUS ENGINEERING CENTER  
AST / FUEL DISTRIBUTION AREA  
37350 ECORSE ROAD  
ROMULUS, MICHIGAN**

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**SOIL SAMPLE LABORATORY ANALYTICAL RESULTS**

Sample ID: Description of Sample Location:  Date Collected: Sample Depth (feet bgl): Analytical Parameter	Units	Michigan Part 201 (Environmental Remediation) & Part 213 (Leaking Underground Storage Tanks)								HA-13	HA-13	HA-14	HA-14	HA-15	HA-16	HA-17
		Residential and Commercial I Soil Cleanup Criteria and Risk Based Screening Levels				Industrial and Commercial II, III, & IV Soil Cleanup Criteria and Risk Based Screening Levels				Southwestern Portion of Wetland Area	Southwestern Portion of Wetland Area	Southwestern Portion of Wetland Area	Southwestern Portion of Wetland Area	West of Wetland Area	East of Wetland Area and SB-2	East of 20,000-gallon Diesel AST Farm and SB-3
		Ground-Water Protection	Indoor Air	Ambient Air	Direct Contact Criteria	Ground-Water Protection	Indoor Air	Ambient Air	Direct Contact Criteria	8/16/2007 0-0.25'	8/16/2007 1.5-2.5'	8/16/2007 0-0.25'	8/16/2007 1.5-2.5'	8/16/2007 1.5-2.5'	8/16/2007 1.5-2.5'	8/16/2007 1.5-2.5'
<b>TPH - DRO (EPA Method 8015B)</b>	mg/kg	none	none	none	none	none	none	none	none	<b>170</b>	<b>30</b>	<b>140</b>	<b>&lt;12</b>	<b>67</b>	<b>67</b>	<b>33</b>
<b>PAHs (EPA Method 8270C)</b>																
1-Methylnaphthalene	ug/kg	none	none	none	none	none	none	none	none	<8.2	<7.3	<8.1	<7.7	10	<8.5	8.3
2-Methylnaphthalene	ug/kg	57,000	none	none	8.1E+06	57,000	none	none	2.6E+07	11	<7.3	<8.1	<7.7	8.5	<8.5	8.4
Acenaphthene	ug/kg	4,400	1.9E+08	8.1E+07	4.1E+07	4,400	3.5E+08	9.7E+07	1.3E+08	<8.2	<7.3	<8.1	<7.7	17	<8.5	13
Acenaphthylene	ug/kg	5,900	1.6E+06	2.2E+06	1.6E+06	5,900	3.0E+06	2.7E+06	5.2E+06	<8.2	<7.3	<8.1	<7.7	19	15	<7.5
Anthracene	ug/kg	41,000	1.0E+09	1.4E+09	2.3E+08	41,000	1.0E+09	1.6E+09	7.3E+08	9	<7.3	11	<7.7	48	17	60
Benz(a)anthracene	ug/kg	none	none	none	20,000	none	none	none	80,000	36	<7.3	49	<7.7	190	79	160
Benzo(a)pyrene	ug/kg	none	none	1.5E+06	2,000	none	none	1.9E+06	8,000	48	<7.3	61	<7.7	180	100	140
Benzo(b)fluoranthene	ug/kg	none	none	none	20,000	none	none	none	80,000	79	<7.3	96	<7.7	240	150	140
Benzo(g,h,i)perylene	ug/kg	none	none	8.0E+08	2.5E+06	none	none	3.5E+08	7.0E+06	43	<7.3	47	<7.7	120	80	76
Benzo(k)fluoranthene	ug/kg	none	none	none	200,000	none	none	none	800,000	31	<7.3	47	<7.7	120	66	88
Chrysene	ug/kg	none	none	none	2.0E+06	none	none	none	8.0E+06	64	<7.3	76	<7.7	220	110	140
Dibenzo(a,h)anthracene	ug/kg	none	none	none	2,000	none	none	none	8,000	<8.2	<7.3	<8.1	<7.7	30	<8.5	18
Fluoranthene	ug/kg	5,500	1.0E+09	7.4E+08	4.6E+07	5,500	1.0E+09	8.8E+08	1.3E+08	86	<7.3	120	<7.7	440	130	320
Fluorene	ug/kg	5,300	5.8E+08	1.3E+08	2.7E+07	5,300	1.0E+09	1.5E+08	8.7E+07	<8.2	<7.3	10	<7.7	31	<8.5	33
Indeno(1,2,3-cd)pyrene	ug/kg	none	none	none	20,000	none	none	none	80,000	32	<7.3	40	<7.7	100	67	64
Naphthalene	ug/kg	870	250,000	300,000	1.6E+07	870	470,000	350,000	5.2E+07	11	<7.3	<8.1	<7.7	<7.4	<8.5	8.1
Phenanthrene	ug/kg	5,300	2.8E+06	160,000	1.6E+06	5,300	5.1E+06	190,000	5.2E+06	36	<7.3	49	<7.7	220	37	210
Pyrene	ug/kg	480,000	1.0E+09	6.5E+08	2.9E+07	480,000	1.0E+09	7.8E+08	8.4E+07	72	<7.3	93	<7.7	360	120	250
<b>VOCs (EPA Method 8260B)</b>																
1,2,4-Trimethylbenzene	ug/kg	570	110,000	2.1E+07	110,000	570	110,000	2.5E+07	110,000	<290	<230	<320	<210	<220	NA	NA
1,3,5-Trimethylbenzene	ug/kg	1,100	94,000	1.6E+07	94,000	1,100	94,000	1.9E+07	94,000	<290	<230	<320	<210	<220	NA	NA
Benzene	ug/kg	100	1,600	13,000	180,000	100	8,400	45,000	400,000	<58	<47	<64	<42	<45	NA	NA
Ethylbenzene	ug/kg	360	87,000	720,000	140,000 (C)	360	140,000 (C)	2.4E+06	140,000 (C)	<58	<47	<64	<42	<45	NA	NA
Toluene	ug/kg	2,800	250,000 (C)	2.8E+06	250,000 (C)	2,800	250,000 (C)	3.3E+06	250,000 (C)	<120	<93	<130	<84	<89	NA	NA
Xylenes, Total	ug/kg	700	150,000 (C)	4.6E+07	150,000 (C)	700	150,000 (C)	5.4E+07	150,000 (C)	<180	<140	<190	<130	<130	NA	NA

TABLE 1

DRAFT

**GMPT - ROMULUS ENGINEERING CENTER  
AST / FUEL DISTRIBUTION AREA  
37350 ECORSE ROAD  
ROMULUS, MICHIGAN**

Privileged and Confidential, Prepared at the Request of Counsel

**SOIL SAMPLE LABORATORY ANALYTICAL RESULTS**

Sample ID: Description of Sample Location:  Date Collected: Sample Depth (feet bgl):  Analytical Parameter	Units	Michigan Part 201 (Environmental Remediation) & Part 213 (Leaking Underground Storage Tanks)								HA-18 West of 20,000- gallon Diesel AST Farm and SB-4  8/16/2007 1.5-2.5'	SB-1 South of Wetland Area  8/16/2007 3-5'	SB-2 East of Wetland Area  8/16/2007 3-5'	SB-3 East of 20,000- gallon Diesel AST Farm  8/16/2007 3-5'	SB-4 West of 20,000- gallon Diesel AST Farm  8/16/2007 1-3'
		Residential and Commercial I Soil Cleanup Criteria and Risk Based Screening Levels				Industrial and Commercial II, III, & IV Soil Cleanup Criteria and Risk Based Screening Levels								
		Ground-Water Protection	Indoor Air	Ambient Air	Direct Contact Criteria	Ground-Water Protection	Indoor Air	Ambient Air	Direct Contact Criteria					
<b>TPH - DRO (EPA Method 8015B)</b>	mg/kg	none	none	none	none	none	none	none	none	21	34	87	40	34
<b>PAHs (EPA Method 8270C)</b>														
1-Methylnaphthalene	ug/kg	none	none	none	none	none	none	none	none	<7.3	<7.7	<22	<8.2	<8.4
2-Methylnaphthalene	ug/kg	57,000	none	none	8.1E+06	57,000	none	none	2.6E+07	<7.3	<7.7	<22	<8.2	<8.4
Acenaphthene	ug/kg	4,400	1.9E+08	8.1E+07	4.1E+07	4,400	3.5E+08	9.7E+07	1.3E+08	<7.3	<7.7	<22	<8.2	<8.4
Acenaphthylene	ug/kg	5,900	1.6E+06	2.2E+06	1.6E+06	5,900	3.0E+06	2.7E+06	5.2E+06	<7.3	<7.7	<22	<8.2	<8.4
Anthracene	ug/kg	41,000	1.0E+09	1.4E+09	2.3E+08	41,000	1.0E+09	1.6E+09	7.3E+08	<7.3	<7.7	<22	<8.2	<8.4
Benz(a)anthracene	ug/kg	none	none	none	20,000	none	none	none	80,000	<7.3	<7.7	27	<8.2	<8.4
Benzo(a)pyrene	ug/kg	none	none	1.5E+06	2,000	none	none	1.9E+06	8,000	<7.3	<7.7	23	<8.2	<8.4
Benzo(b)fluoranthene	ug/kg	none	none	none	20,000	none	none	none	80,000	<7.3	<7.7	41	<8.2	<8.4
Benzo(g,h,i)perylene	ug/kg	none	none	8.0E+08	2.5E+06	none	none	3.5E+08	7.0E+06	<7.3	<7.7	<22	<8.2	<8.4
Benzo(k)fluoranthene	ug/kg	none	none	none	200,000	none	none	none	800,000	<7.3	<7.7	<22	<8.2	<8.4
Chrysene	ug/kg	none	none	none	2.0E+06	none	none	none	8.0E+06	<7.3	<7.7	28	<8.2	<8.4
Dibenzo(a,h)anthracene	ug/kg	none	none	none	2,000	none	none	none	8,000	<7.3	<7.7	<22	<8.2	<8.4
Fluoranthene	ug/kg	5,500	1.0E+09	7.4E+08	4.6E+07	5,500	1.0E+09	8.8E+08	1.3E+08	<7.3	<7.7	50	<8.2	12
Fluorene	ug/kg	5,300	5.8E+08	1.3E+08	2.7E+07	5,300	1.0E+09	1.5E+08	8.7E+07	<7.3	<7.7	<22	<8.2	<8.4
Indeno(1,2,3-cd)pyrene	ug/kg	none	none	none	20,000	none	none	none	80,000	<7.3	<7.7	<22	<8.2	<8.4
Naphthalene	ug/kg	870	250,000	300,000	1.6E+07	870	470,000	350,000	5.2E+07	<7.3	<7.7	<22	<8.2	<8.4
Phenanthrene	ug/kg	5,300	2.8E+06	160,000	1.6E+06	5,300	5.1E+06	190,000	5.2E+06	<7.3	<7.7	25	<8.2	8.8
Pyrene	ug/kg	480,000	1.0E+09	6.5E+08	2.9E+07	480,000	1.0E+09	7.8E+08	8.4E+07	<7.3	<7.7	54	<8.2	9.5
<b>VOCs (EPA Method 8260B)</b>														
1,2,4-Trimethylbenzene	ug/kg	570	110,000	2.1E+07	110,000	570	110,000	2.5E+07	110,000	NA	<220	<370	<240	<230
1,3,5-Trimethylbenzene	ug/kg	1,100	94,000	1.6E+07	94,000	1,100	94,000	1.9E+07	94,000	NA	<220	<370	<240	<230
Benzene	ug/kg	100	1,600	13,000	180,000	100	8,400	45,000	400,000	NA	<43	<75	<49	<47
Ethylbenzene	ug/kg	360	87,000	720,000	140,000 (C)	360	140,000 (C)	2.4E+06	140,000 (C)	NA	<43	<75	<49	<47
Toluene	ug/kg	2,800	250,000 (C)	2.8E+06	250,000 (C)	2,800	250,000 (C)	3.3E+06	250,000 (C)	NA	<87	<150	<98	<93
Xylenes, Total	ug/kg	700	150,000 (C)	4.6E+07	150,000 (C)	700	150,000 (C)	5.4E+07	150,000 (C)	NA	<130	<220	<150	<140

Privileged and Confidential, Prepared at the Request of Counsel

## TABLE 1

**GMPT - ROMULUS ENGINEERING CENTER  
AST/FUEL DISTRIBUTION AREA  
37350 ECORSE ROAD  
ROMULUS, MICHIGAN**

**SOIL SAMPLE LABORATORY ANALYTICAL RESULTS**

Notes:

bgl: below ground level  
<: Below the detection Limit (value shown)  
NA: Not analyzed.

- Soil Cleanup Criteria: - Part 201 (Environmental Remediation) and Part 213 (Leaking Underground Storage Tanks) of the Michigan Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451 (Revised January 23, 2006). Referenced are both Residential & Commercial I and Industrial & Commercial II, III, IV Cleanup Criteria and Screening Levels.
- Groundwater Protection Criteria: Lowest value of Drinking Water Protection Criteria (DW), Groundwater/Surface Water Interface Protection Criteria (GSI), and Groundwater Contact Protection Criteria (GWC).
  - Indoor Air: Soil Volatilization to Indoor Air Inhalation Criteria.
  - Ambient Air: Lowest Value of Infinite Source Volatile Soil Inhalation Criteria, Finite Source 2,5 Meter Thickness, and Particulate Soil Inhalation Criteria.
  - Direct Contact: Lowest Value of Direct Contact Criteria and Soil Saturation Concentration Screening Levels.
- Criteria Exceedances: Cleanup Criteria and Risk Based Screening Level Exceedances are bold and double bordered.
- TPH-DRO: Criteria do not exist in Michigan for TPH or TPH fractions, but such detections are subjectively addressed for specific types of fuel spills in Michigan Department of Environmental Quality (MDEQ) Operational Memorandum #2, Attachment 8.
- Samples with TPH-DRO results greater than 100 mg/kg are displayed in bold font.
- (C): Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat) since the calculated risk-based criterion is greater than Csat. Concentrations greater than Csat are acceptable cleanup criteria for this pathway where a site-specific demonstration indicates that free-phase material containing a hazardous substance is not present.

**APPENDIX C**

**Laboratory Analytical Results**

IRAFIT

# STL

**STL North Canton**  
4101 Shuffel Drive NW  
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772  
www.stl-inc.com

## **ANALYTICAL REPORT**

REVISED

PROJECT NO. 24001056-0

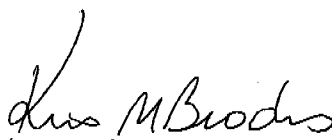
GM ROMULUS MI

Lot #: A7H200102

Brad Saunders

ARCADIS of New York Inc  
10559 Citation Drive  
Suite 100  
Brighton, MI 48116

TESTAMERICA LABORATORIES, INC.



Kris M. Brooks  
Project Manager

September 7, 2007

## CASE NARRATIVE

A7H200102

The following report contains the analytical results for thirty-five solid samples and one quality control sample submitted to TestAmerica (formerly STL North Canton) by Blasland Bouck & Lee from the GM Romulus MI Site, project number 24001056-0. The samples were received August 18, 2007, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by a dry weight adjustment footnote at the bottom of the analytical report page. The list of parameters, which are never reported on a dry weight basis, is included on the Sample Summary.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Kris M. Brooks, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT." The total number of pages in this report is 187.

## **CASE NARRATIVE (continued)**

### **SUPPLEMENTAL QC INFORMATION**

#### **SAMPLE RECEIVING**

The temperatures of the coolers upon sample receipt were 1.2, 1.3 and 1.7°C.

See TestAmerica's Cooler Receipt Form for additional information.

#### **GC/MS VOLATILES**

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 7235396 and 7239375. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

The surrogate recoveries were outside of criteria (high) for sample(s) HA-15 (1.5-2.5). Since the samples were ND, no corrective action was necessary.

#### **GC/MS SEMIVOLATILES**

Sample(s) SB-2 (3-5'), HA-1 (0-0.25), HA-2 (0-0.25), HA-3 (0-0.25), HA-4 (0-0.25), and HA-5 (0-0.25) had elevated reporting limits due to matrix interferences.

#### **EXTRACTABLE PETROLEUM HYDROCARBONS-8015**

The matrix spike/matrix spike duplicate(s) for SB-1 (3-5') had RPD's outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

The client specific or regulatory program requirements stated that corrective action must be performed for surrogate recoveries outside criteria. The reparation and reanalysis also had surrogate recoveries outside criteria confirming probable matrix interference; therefore, the original data are contained in the report for sample(s) HA-2 (1.5-2.5).

#### **GENERAL CHEMISTRY**

The analytical results met the requirements of the laboratory's QA/QC program.

**QUALITY CONTROL ELEMENTS NARRATIVE**

TestAmerica North Canton (formerly STL North Canton) conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

**QC BATCH**

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton (formerly STL North Canton) requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

**LABORATORY CONTROL SAMPLE**

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the reparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

**METHOD BLANK**

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

<b><u>Volatile (GC or GC/MS)</u></b>	<b><u>Semivolatile (GC/MS)</u></b>	<b><u>Metals ICP-MS</u></b>	<b><u>Metals ICP Trace</u></b>
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

**QUALITY CONTROL ELEMENTS NARRATIVE (continued)**

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.
- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

**MATRIX SPIKE/MATRIX SPIKE DUPLICATE**

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

**SURROGATE COMPOUNDS**

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

**TestAmerica North Canton (formerly STL North Canton) Certifications and Approvals:**

California (#01144CA), Connecticut (#PH-0590), Florida (#E87225),

Illinois (#200004), Kansas (#E10336), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio VAP (#CL0024), West Virginia (#210), Wisconsin (#999518190), NAVY, ARMY, USDA Soil Permit,

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**EXECUTIVE SUMMARY - Detection Highlights**

A7H200102

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
<b>SB-1 (3-5') 08/16/07 10:40 001</b>				
TPH (as Diesel)	34	12	mg/kg	SW846 8015B
Percent Solids	86.9	10.0	%	MCAWW 160.3 MOD
<b>SB-2 (3-5') 08/16/07 10:00 002</b>				
TPH (as Diesel)	87	27	mg/kg	SW846 8015B
Benzo(a)anthracene	27	22	ug/kg	SW846 8270C
Benzo(b)fluoranthene	41	22	ug/kg	SW846 8270C
Benzo(a)pyrene	23	22	ug/kg	SW846 8270C
Chrysene	28	22	ug/kg	SW846 8270C
Fluoranthene	50	22	ug/kg	SW846 8270C
Phenanthrene	25	22	ug/kg	SW846 8270C
Pyrene	54	22	ug/kg	SW846 8270C
Percent Solids	74.4	10.0	%	MCAWW 160.3 MOD
<b>SB-3 (3-5') 08/16/07 09:40 003</b>				
TPH (as Diesel)	40	12	mg/kg	SW846 8015B
Percent Solids	81.0	10.0	%	MCAWW 160.3 MOD
<b>SB-4 (1-3') 08/16/07 09:20 004</b>				
TPH (as Diesel)	34	13	mg/kg	SW846 8015B
Fluoranthene	12	8.4	ug/kg	SW846 8270C
Phenanthrene	8.8	8.4	ug/kg	SW846 8270C
Pyrene	9.5	8.4	ug/kg	SW846 8270C
Percent Solids	79.0	10.0	%	MCAWW 160.3 MOD
<b>HA-1 (0-0.25) 08/16/07 14:20 005</b>				
TPH (as Diesel)	240	76	mg/kg	SW846 8015B
Benzo(a)anthracene	40	25	ug/kg	SW846 8270C
Benzo(b)fluoranthene	88	25	ug/kg	SW846 8270C
Benzo(ghi)perylene	40	25	ug/kg	SW846 8270C
Benzo(a)pyrene	50	25	ug/kg	SW846 8270C
Chrysene	61	25	ug/kg	SW846 8270C
Fluoranthene	95	25	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	36	25	ug/kg	SW846 8270C
Phenanthrene	38	25	ug/kg	SW846 8270C
Pyrene	83	25	ug/kg	SW846 8270C
Percent Solids	66.1	10.0	%	MCAWW 160.3 MOD

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**EXECUTIVE SUMMARY - Detection Highlights**

A7H200102

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
<b>HA-1 (1.5-2.5) 08/16/07 14:21 006</b>				
TPH (as Diesel)	30	12	mg/kg	SW846 8015B
Percent Solids	82.5	10.0	%	MCAWW 160.3 MOD
<b>HA-2 (0-0.25) 08/16/07 14:25 007</b>				
TPH (as Diesel)	140	72	mg/kg	SW846 8015B
Benzo(b)fluoranthene	44	24	ug/kg	SW846 8270C
Benzo(a)pyrene	27	24	ug/kg	SW846 8270C
Chrysene	25	24	ug/kg	SW846 8270C
Fluoranthene	48	24	ug/kg	SW846 8270C
Pyrene	36	24	ug/kg	SW846 8270C
Percent Solids	69.9	10.0	%	MCAWW 160.3 MOD
<b>HA-2 (1.5-2.5) 08/16/07 14:26 008</b>				
Percent Solids	86.0	10.0	%	MCAWW 160.3 MOD
<b>HA-3 (0-0.25) 08/16/07 14:35 009</b>				
TPH (as Diesel)	140	73	mg/kg	SW846 8015B
Benzo(a)anthracene	47	24	ug/kg	SW846 8270C
Benzo(b)fluoranthene	85	24	ug/kg	SW846 8270C
Benzo(k)fluoranthene	39	24	ug/kg	SW846 8270C
Benzo(ghi)perylene	44	24	ug/kg	SW846 8270C
Benzo(a)pyrene	53	24	ug/kg	SW846 8270C
Chrysene	65	24	ug/kg	SW846 8270C
Fluoranthene	110	24	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	40	24	ug/kg	SW846 8270C
Phenanthrene	48	24	ug/kg	SW846 8270C
Pyrene	88	24	ug/kg	SW846 8270C
Percent Solids	68.2	10.0	%	MCAWW 160.3 MOD
<b>HA-3 (1.5-2.5) 08/16/07 14:36 010</b>				
TPH (as Diesel)	21	12	mg/kg	SW846 8015B
Percent Solids	86.8	10.0	%	MCAWW 160.3 MOD
<b>HA-4 (0-0.25) 08/16/07 14:45 011</b>				
TPH (as Diesel)	190	72	mg/kg	SW846 8015B
Anthracene	53	24	ug/kg	SW846 8270C
Benzo(a)anthracene	110	24	ug/kg	SW846 8270C
Benzo(b)fluoranthene	140	24	ug/kg	SW846 8270C

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**EXECUTIVE SUMMARY - Detection Highlights**

A7H200102

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
<b>HA-4 (0-0.25) 08/16/07 14:45 011</b>				
Benzo(k)fluoranthene	61	24	ug/kg	SW846 8270C
Benzo(ghi)perylene	72	24	ug/kg	SW846 8270C
Benzo(a)pyrene	100	24	ug/kg	SW846 8270C
Chrysene	110	24	ug/kg	SW846 8270C
Fluoranthene	270	24	ug/kg	SW846 8270C
Fluorene	25	24	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	67	24	ug/kg	SW846 8270C
Phenanthrene	190	24	ug/kg	SW846 8270C
Pyrene	210	24	ug/kg	SW846 8270C
Percent Solids	69.2	10.0	%	MCAWW 160.3 MOD
<b>HA-4 (1.5-2.5) 08/16/07 14:46 012</b>				
TPH (as Diesel)	18	11	mg/kg	SW846 8015B
Percent Solids	89.5	10.0	%	MCAWW 160.3 MOD
<b>HA-5 (0-0.25) 08/16/07 13:25 013</b>				
TPH (as Diesel)	290	74	mg/kg	SW846 8015B
Benzo(a)anthracene	65	25	ug/kg	SW846 8270C
Benzo(b)fluoranthene	130	25	ug/kg	SW846 8270C
Benzo(k)fluoranthene	46	25	ug/kg	SW846 8270C
Benzo(ghi)perylene	72	25	ug/kg	SW846 8270C
Benzo(a)pyrene	75	25	ug/kg	SW846 8270C
Chrysene	97	25	ug/kg	SW846 8270C
Fluoranthene	170	25	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	55	25	ug/kg	SW846 8270C
Phenanthrene	84	25	ug/kg	SW846 8270C
Pyrene	130	25	ug/kg	SW846 8270C
Percent Solids	67.2	10.0	%	MCAWW 160.3 MOD
<b>HA-5 (1.5-2.5) 08/16/07 13:26 014</b>				
TPH (as Diesel)	31	11	mg/kg	SW846 8015B
Percent Solids	91.1	10.0	%	MCAWW 160.3 MOD
<b>HA-6 (0-0.25) 08/16/07 13:35 015</b>				
TPH (as Diesel)	89	58	mg/kg	SW846 8015B
Anthracene	10	7.8	ug/kg	SW846 8270C
Benzo(a)anthracene	40	7.8	ug/kg	SW846 8270C
Benzo(b)fluoranthene	85	7.8	ug/kg	SW846 8270C
Benzo(k)fluoranthene	30	7.8	ug/kg	SW846 8270C

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**EXECUTIVE SUMMARY - Detection Highlights**

A7H200102

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
<b>HA-6 (0-0.25) 08/16/07 13:35 015</b>				
Benzo(ghi)perylene	38	7.8	ug/kg	SW846 8270C
Benzo(a)pyrene	48	7.8	ug/kg	SW846 8270C
Chrysene	56	7.8	ug/kg	SW846 8270C
Dibenz(a,h)anthracene	11	7.8	ug/kg	SW846 8270C
Fluoranthene	110	7.8	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	37	7.8	ug/kg	SW846 8270C
Phenanthrene	42	7.8	ug/kg	SW846 8270C
Pyrene	86	7.8	ug/kg	SW846 8270C
Percent Solids	86.0	10.0	%	MCAWW 160.3 MOD
<b>HA-6 (1.5-2.5) 08/16/07 13:36 016</b>				
TPH (as Diesel)	22	12	mg/kg	SW846 8015B
Percent Solids	80.5	10.0	%	MCAWW 160.3 MOD
<b>HA-7 (0-0.25) 08/16/07 13:45 017</b>				
TPH (as Diesel)	110	60	mg/kg	SW846 8015B
Anthracene	8.8	8.1	ug/kg	SW846 8270C
Benzo(a)anthracene	39	8.1	ug/kg	SW846 8270C
Benzo(b)fluoranthene	78	8.1	ug/kg	SW846 8270C
Benzo(k)fluoranthene	26	8.1	ug/kg	SW846 8270C
Benzo(ghi)perylene	36	8.1	ug/kg	SW846 8270C
Benzo(a)pyrene	46	8.1	ug/kg	SW846 8270C
Chrysene	52	8.1	ug/kg	SW846 8270C
Dibenz(a,h)anthracene	10	8.1	ug/kg	SW846 8270C
Fluoranthene	95	8.1	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	33	8.1	ug/kg	SW846 8270C
Phenanthrene	38	8.1	ug/kg	SW846 8270C
Pyrene	73	8.1	ug/kg	SW846 8270C
Percent Solids	82.8	10.0	%	MCAWW 160.3 MOD
<b>HA-7 (1.5-2.5) 08/16/07 13:46 018</b>				
TPH (as Diesel)	32	12	mg/kg	SW846 8015B
Percent Solids	86.4	10.0	%	MCAWW 160.3 MOD
<b>HA-8 (0-0.25) 08/16/07 14:05 019</b>				
TPH (as Diesel)	120	68	mg/kg	SW846 8015B
Benzo(a)anthracene	28	9.1	ug/kg	SW846 8270C
Benzo(b)fluoranthene	59	9.1	ug/kg	SW846 8270C
Benzo(k)fluoranthene	21	9.1	ug/kg	SW846 8270C

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**EXECUTIVE SUMMARY - Detection Highlights**

A7H200102

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
<b>HA-8 (0-0.25) 08/16/07 14:05 019</b>				
Benzo(ghi)perylene	30	9.1	ug/kg	SW846 8270C
Benzo(a)pyrene	34	9.1	ug/kg	SW846 8270C
Chrysene	40	9.1	ug/kg	SW846 8270C
Dibenz(a,h)anthracene	18	9.1	ug/kg	SW846 8270C
Fluoranthene	72	9.1	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	30	9.1	ug/kg	SW846 8270C
Phenanthrene	29	9.1	ug/kg	SW846 8270C
Pyrene	60	9.1	ug/kg	SW846 8270C
Percent Solids	73.5	10.0	%	MCAWW 160.3 MOD
<b>HA-8 (1.5-2.5) 08/16/07 14:06 020</b>				
TPH (as Diesel)	23	12	mg/kg	SW846 8015B
Percent Solids	84.9	10.0	%	MCAWW 160.3 MOD
<b>HA-9 (0-0.25) 08/16/07 14:10 021</b>				
TPH (as Diesel)	300	68	mg/kg	SW846 8015B
Anthracene	18	9.0	ug/kg	SW846 8270C
Benzo(a)anthracene	50	9.0	ug/kg	SW846 8270C
Benzo(b)fluoranthene	94	9.0	ug/kg	SW846 8270C
Benzo(k)fluoranthene	34	9.0	ug/kg	SW846 8270C
Benzo(ghi)perylene	44	9.0	ug/kg	SW846 8270C
Benzo(a)pyrene	57	9.0	ug/kg	SW846 8270C
Chrysene	75	9.0	ug/kg	SW846 8270C
Fluoranthene	110	9.0	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	36	9.0	ug/kg	SW846 8270C
2-Methylnaphthalene	10	9.0	ug/kg	SW846 8270C
1-Methylnaphthalene	11	9.0	ug/kg	SW846 8270C
Naphthalene	10	9.0	ug/kg	SW846 8270C
Phenanthrene	56	9.0	ug/kg	SW846 8270C
Pyrene	85	9.0	ug/kg	SW846 8270C
Percent Solids	74.0	10.0	%	MCAWW 160.3 MOD
<b>HA-9 (1.5-2.5) 08/16/07 14:11 022</b>				
TPH (as Diesel)	20	11	mg/kg	SW846 8015B
Benzo(a)anthracene	13	7.5	ug/kg	SW846 8270C
Benzo(b)fluoranthene	14	7.5	ug/kg	SW846 8270C
Benzo(k)fluoranthene	8.2	7.5	ug/kg	SW846 8270C
Benzo(a)pyrene	12	7.5	ug/kg	SW846 8270C
Chrysene	16	7.5	ug/kg	SW846 8270C
Fluoranthene	28	7.5	ug/kg	SW846 8270C

(Continued on next page)

**EXECUTIVE SUMMARY - Detection Highlights**

A7H200102

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
<b>HA-9 (1.5-2.5) 08/16/07 14:11 022</b>				
Phenanthrene	19	7.5	ug/kg	SW846 8270C
Pyrene	23	7.5	ug/kg	SW846 8270C
Percent Solids	88.5	10.0	%	MCAWW 160.3 MOD
<b>HA-10 (1.5-2.5) 08/16/07 15:05 023</b>				
TPH (as Diesel)	120	57	mg/kg	SW846 8015B
Anthracene	15	7.5	ug/kg	SW846 8270C
Benzo(a)anthracene	34	7.5	ug/kg	SW846 8270C
Benzo(b)fluoranthene	51	7.5	ug/kg	SW846 8270C
Benzo(k)fluoranthene	22	7.5	ug/kg	SW846 8270C
Benzo(ghi)perylene	33	7.5	ug/kg	SW846 8270C
Benzo(a)pyrene	41	7.5	ug/kg	SW846 8270C
Chrysene	49	7.5	ug/kg	SW846 8270C
Fluoranthene	95	7.5	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	24	7.5	ug/kg	SW846 8270C
Phenanthrene	70	7.5	ug/kg	SW846 8270C
Pyrene	88	7.5	ug/kg	SW846 8270C
Percent Solids	88.4	10.0	%	MCAWW 160.3 MOD
<b>HA-11 (0-0.25) 08/16/07 12:40 024</b>				
TPH (as Diesel)	130	58	mg/kg	SW846 8015B
Anthracene	12	7.8	ug/kg	SW846 8270C
Benzo(a)anthracene	56	7.8	ug/kg	SW846 8270C
Benzo(b)fluoranthene	94	7.8	ug/kg	SW846 8270C
Benzo(k)fluoranthene	36	7.8	ug/kg	SW846 8270C
Benzo(ghi)perylene	50	7.8	ug/kg	SW846 8270C
Benzo(a)pyrene	53	7.8	ug/kg	SW846 8270C
Chrysene	78	7.8	ug/kg	SW846 8270C
Fluoranthene	99	7.8	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	46	7.8	ug/kg	SW846 8270C
Phenanthrene	47	7.8	ug/kg	SW846 8270C
Pyrene	87	7.8	ug/kg	SW846 8270C
Percent Solids	85.9	10.0	%	MCAWW 160.3 MOD
<b>HA-11 (1.5-2.5) 08/16/07 12:41 025</b>				
TPH (as Diesel)	16	11	mg/kg	SW846 8015B
Percent Solids	90.8	10.0	%	MCAWW 160.3 MOD

(Continued on next page)

**EXECUTIVE SUMMARY - Detection Highlights**

A7H200102

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
<b>HA-12 (0-0.25) 08/16/07 12:55 026</b>				
TPH (as Diesel)	120	66	mg/kg	SW846 8015B
Anthracene	15	8.8	ug/kg	SW846 8270C
Benzo(a)anthracene	52	8.8	ug/kg	SW846 8270C
Benzo(b)fluoranthene	92	8.8	ug/kg	SW846 8270C
Benzo(k)fluoranthene	21	8.8	ug/kg	SW846 8270C
Benzo(ghi)perylene	51	8.8	ug/kg	SW846 8270C
Benzo(a)pyrene	63	8.8	ug/kg	SW846 8270C
Chrysene	72	8.8	ug/kg	SW846 8270C
Fluoranthene	120	8.8	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	41	8.8	ug/kg	SW846 8270C
Phenanthrene	51	8.8	ug/kg	SW846 8270C
Pyrene	100	8.8	ug/kg	SW846 8270C
Percent Solids	76.0	10.0	%	MCAWW 160.3 MOD
<b>HA-12 (1.5-2.5) 08/16/07 12:56 027</b>				
TPH (as Diesel)	21	12	mg/kg	SW846 8015B
Percent Solids	86.0	10.0	%	MCAWW 160.3 MOD
<b>HA-13 (0-0.25) 08/16/07 13:05 028</b>				
TPH (as Diesel)	170	61	mg/kg	SW846 8015B
Anthracene	8.5	8.2	ug/kg	SW846 8270C
Benzo(a)anthracene	36	8.2	ug/kg	SW846 8270C
Benzo(b)fluoranthene	79	8.2	ug/kg	SW846 8270C
Benzo(k)fluoranthene	31	8.2	ug/kg	SW846 8270C
Benzo(ghi)perylene	43	8.2	ug/kg	SW846 8270C
Benzo(a)pyrene	48	8.2	ug/kg	SW846 8270C
Chrysene	64	8.2	ug/kg	SW846 8270C
Fluoranthene	86	8.2	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	32	8.2	ug/kg	SW846 8270C
2-Methylnaphthalene	11	8.2	ug/kg	SW846 8270C
Naphthalene	11	8.2	ug/kg	SW846 8270C
Phenanthrene	36	8.2	ug/kg	SW846 8270C
Pyrene	72	8.2	ug/kg	SW846 8270C
Percent Solids	81.4	10.0	%	MCAWW 160.3 MOD
<b>HA-13 (1.5-2.5) 08/16/07 13:06 029</b>				
TPH (as Diesel)	30	11	mg/kg	SW846 8015B
Percent Solids	91.0	10.0	%	MCAWW 160.3 MOD

(Continued on next page)

**EXECUTIVE SUMMARY - Detection Highlights**

A7H200102

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
<b>HA-14 (0-0.25) 08/16/07 13:10 030</b>				
TPH (as Diesel)	140	61	mg/kg	SW846 8015B
Anthracene	11	8.1	ug/kg	SW846 8270C
Benzo(a)anthracene	49	8.1	ug/kg	SW846 8270C
Benzo(b)fluoranthene	96	8.1	ug/kg	SW846 8270C
Benzo(k)fluoranthene	47	8.1	ug/kg	SW846 8270C
Benzo(ghi)perylene	47	8.1	ug/kg	SW846 8270C
Benzo(a)pyrene	61	8.1	ug/kg	SW846 8270C
Chrysene	76	8.1	ug/kg	SW846 8270C
Fluoranthene	120	8.1	ug/kg	SW846 8270C
Fluorene	10	8.1	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	40	8.1	ug/kg	SW846 8270C
Phenanthrene	49	8.1	ug/kg	SW846 8270C
Pyrene	93	8.1	ug/kg	SW846 8270C
Percent Solids	82.4	10.0	%	MCAWW 160.3 MOD
<b>HA-14 (1.5-2.5) 08/16/07 13:11 031</b>				
Percent Solids	86.2	10.0	%	MCAWW 160.3 MOD
<b>HA-15 (1.5-2.5) 08/16/07 15:25 032</b>				
TPH (as Diesel)	67	22	mg/kg	SW846 8015B
Acenaphthene	17	7.4	ug/kg	SW846 8270C
Acenaphthylene	19	7.4	ug/kg	SW846 8270C
Anthracene	48	7.4	ug/kg	SW846 8270C
Benzo(a)anthracene	190	7.4	ug/kg	SW846 8270C
Benzo(b)fluoranthene	240	7.4	ug/kg	SW846 8270C
Benzo(k)fluoranthene	120	7.4	ug/kg	SW846 8270C
Benzo(ghi)perylene	120	7.4	ug/kg	SW846 8270C
Benzo(a)pyrene	180	7.4	ug/kg	SW846 8270C
Chrysene	220	7.4	ug/kg	SW846 8270C
Dibenz(a,h)anthracene	30	7.4	ug/kg	SW846 8270C
Fluoranthene	440	7.4	ug/kg	SW846 8270C
Fluorene	31	7.4	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	100	7.4	ug/kg	SW846 8270C
2-Methylnaphthalene	8.5	7.4	ug/kg	SW846 8270C
1-Methylnaphthalene	10	7.4	ug/kg	SW846 8270C
Phenanthrene	220	7.4	ug/kg	SW846 8270C
Pyrene	360	7.4	ug/kg	SW846 8270C
Percent Solids	89.6	10.0	%	MCAWW 160.3 MOD

(Continued on next page)

**EXECUTIVE SUMMARY - Detection Highlights**

A7H200102

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
<b>HA-16 (1.5-2.5) 08/16/07 15:45 033</b>				
TPH (as Diesel)	67	63	mg/kg	SW846 8015B
Acenaphthylene	15	8.5	ug/kg	SW846 8270C
Anthracene	17	8.5	ug/kg	SW846 8270C
Benzo(a)anthracene	79	8.5	ug/kg	SW846 8270C
Benzo(b)fluoranthene	150	8.5	ug/kg	SW846 8270C
Benzo(k)fluoranthene	66	8.5	ug/kg	SW846 8270C
Benzo(ghi)perylene	80	8.5	ug/kg	SW846 8270C
Benzo(a)pyrene	100	8.5	ug/kg	SW846 8270C
Chrysene	110	8.5	ug/kg	SW846 8270C
Fluoranthene	130	8.5	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	67	8.5	ug/kg	SW846 8270C
Phenanthrene	37	8.5	ug/kg	SW846 8270C
Pyrene	120	8.5	ug/kg	SW846 8270C
Percent Solids	78.8	10.0	%	MCAWW 160.3 MOD
<b>HA-17 (1.5-2.5) 08/16/07 15:35 034</b>				
TPH (as Diesel)	33	11	mg/kg	SW846 8015B
Acenaphthene	13	7.5	ug/kg	SW846 8270C
Anthracene	60	7.5	ug/kg	SW846 8270C
Benzo(a)anthracene	160	7.5	ug/kg	SW846 8270C
Benzo(b)fluoranthene	140	7.5	ug/kg	SW846 8270C
Benzo(k)fluoranthene	88	7.5	ug/kg	SW846 8270C
Benzo(ghi)perylene	76	7.5	ug/kg	SW846 8270C
Benzo(a)pyrene	140	7.5	ug/kg	SW846 8270C
Chrysene	140	7.5	ug/kg	SW846 8270C
Dibenz(a,h)anthracene	18	7.5	ug/kg	SW846 8270C
Fluoranthene	320	7.5	ug/kg	SW846 8270C
Fluorene	33	7.5	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	64	7.5	ug/kg	SW846 8270C
2-Methylnaphthalene	8.4	7.5	ug/kg	SW846 8270C
1-Methylnaphthalene	8.3	7.5	ug/kg	SW846 8270C
Naphthalene	8.1	7.5	ug/kg	SW846 8270C
Phenanthrene	210	7.5	ug/kg	SW846 8270C
Pyrene	250	7.5	ug/kg	SW846 8270C
Percent Solids	88.5	10.0	%	MCAWW 160.3 MOD
<b>HA-18 (1.5-2.5) 08/16/07 15:15 035</b>				
TPH (as Diesel)	21	11	mg/kg	SW846 8015B
Percent Solids	91.4	10.0	%	MCAWW 160.3 MOD

**ANALYTICAL METHODS SUMMARY**

A7H200102

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>
Extractable Petroleum Hydrocarbons	SW846 8015B
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Total Residue as Percent Solids	MCAWW 160.3 MOD
Volatile Organics by GC/MS	SW846 8260B

**References:**

- MCAWW "Methods for Chemical Analysis of Water and Wastes",  
EPA-600/4-79-020, March 1983 and subsequent revisions.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical  
Methods", Third Edition, November 1986 and its updates.

**SAMPLE SUMMARY**

A7H200102

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
J47H1	001	SB-1 (3-5')	08/16/07	10:40
J47H2	002	SB-2 (3-5')	08/16/07	10:00
J47H3	003	SB-3 (3-5')	08/16/07	09:40
J47H4	004	SB-4 (1-3')	08/16/07	09:20
J47H6	005	HA-1 (0-0.25)	08/16/07	14:20
J47H7	006	HA-1 (1.5-2.5)	08/16/07	14:21
J47H8	007	HA-2 (0-0.25)	08/16/07	14:25
J47JC	008	HA-2 (1.5-2.5)	08/16/07	14:26
J47JD	009	HA-3 (0-0.25)	08/16/07	14:35
J47JF	010	HA-3 (1.5-2.5)	08/16/07	14:36
J47JJ	011	HA-4 (0-0.25)	08/16/07	14:45
J47JK	012	HA-4 (1.5-2.5)	08/16/07	14:46
J47JL	013	HA-5 (0-0.25)	08/16/07	13:25
J47JN	014	HA-5 (1.5-2.5)	08/16/07	13:26
J47JP	015	HA-6 (0-0.25)	08/16/07	13:35
J47JQ	016	HA-6 (1.5-2.5)	08/16/07	13:36
J47J0	017	HA-7 (0-0.25)	08/16/07	13:45
J47J2	018	HA-7 (1.5-2.5)	08/16/07	13:46
J47J3	019	HA-8 (0-0.25)	08/16/07	14:05
J47J5	020	HA-8 (1.5-2.5)	08/16/07	14:06
J47J7	021	HA-9 (0-0.25)	08/16/07	14:10
J47KA	022	HA-9 (1.5-2.5)	08/16/07	14:11
J47KC	023	HA-10 (1.5-2.5)	08/16/07	15:05
J47KE	024	HA-11 (0-0.25)	08/16/07	12:40
J47KF	025	HA-11 (1.5-2.5)	08/16/07	12:41
J47KP	026	HA-12 (0-0.25)	08/16/07	12:55
J47KT	027	HA-12 (1.5-2.5)	08/16/07	12:56
J47KW	028	HA-13 (0-0.25)	08/16/07	13:05
J47KX	029	HA-13 (1.5-2.5)	08/16/07	13:06
J47K1	030	HA-14 (0-0.25)	08/16/07	13:10
J47K2	031	HA-14 (1.5-2.5)	08/16/07	13:11
J47K4	032	HA-15 (1.5-2.5)	08/16/07	15:25
J47K5	033	HA-16 (1.5-2.5)	08/16/07	15:45
J47K6	034	HA-17 (1.5-2.5)	08/16/07	15:35
J47K7	035	HA-18 (1.5-2.5)	08/16/07	15:15
J47K8	036	TRIP BLANK	08/16/07	

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### SAMPLE SUMMARY

A7H200102

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT</u>	<u>SAMPLE ID</u>	<u>SAMPLED</u>	<u>SAMP</u>
				<u>DATE</u>	<u>TIME</u>

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**NOTE(S) :**

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- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ARCADIS of New York Inc

Client Sample ID: SB-1 (3-5')

## GC/MS Volatiles

Lot-Sample #...: A7H200102-001    Work Order #...: J47H11AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 10:40    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 0.94  
 % Moisture.....: 13    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	43	ug/kg
Ethylbenzene	ND	43	ug/kg
Toluene	ND	87	ug/kg
1,2,4-Trimethylbenzene	ND	220	ug/kg
1,3,5-Trimethylbenzene	ND	220	ug/kg
Xylenes (total)	ND	130	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	94	(59 - 138)
1,2-Dichloroethane-d4	105	(61 - 130)
Toluene-d8	101	(60 - 143)
4-Bromofluorobenzene	100	(47 - 158)

**NOTE(S):**


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Results and reporting limits have been adjusted for dry weight.

## ARCADIS of New York Inc

Client Sample ID: SB-1 (3-5')

## GC/MS Semivolatiles

Lot-Sample #...: A7H200102-001    Work Order #...: J47H11AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 10:40    Date Received..: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 1  
 % Moisture.....: 13    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acenaphthene	ND	7.7	ug/kg
Acenaphthylene	ND	7.7	ug/kg
Anthracene	ND	7.7	ug/kg
Benzo(a)anthracene	ND	7.7	ug/kg
Benzo(b)fluoranthene	ND	7.7	ug/kg
Benzo(k)fluoranthene	ND	7.7	ug/kg
Benzo(ghi)perylene	ND	7.7	ug/kg
Benzo(a)pyrene	ND	7.7	ug/kg
Chrysene	ND	7.7	ug/kg
Dibenz(a,h)anthracene	ND	7.7	ug/kg
Fluoranthene	ND	7.7	ug/kg
Fluorene	ND	7.7	ug/kg
Indeno(1,2,3-cd)pyrene	ND	7.7	ug/kg
2-Methylnaphthalene	ND	7.7	ug/kg
1-Methylnaphthalene	ND	7.7	ug/kg
Naphthalene	ND	7.7	ug/kg
Phenanthrene	ND	7.7	ug/kg
Pyrene	ND	7.7	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	73	(24 - 112)
2-Fluorobiphenyl	72	(34 - 110)
Terphenyl-d14	102	(41 - 119)
Phenol-d5	84	(28 - 110)
2-Fluorophenol	83	(26 - 110)
2,4,6-Tribromophenol	86	(10 - 118)

**NOTE(S):**


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Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: SB-1 (3-5')

GC Semivolatiles

Lot-Sample #...: A7H200102-001    Work Order #...: J47H11AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 10:40    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 1  
 % Moisture.....: 13    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	34	12	mg/kg
	PERCENT	RECOVERY	
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>	
C9 (nonane)	29	(10 - 110)	

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: SB-1 (3-5')

General Chemistry

Lot-Sample #...: A7H200102-001    Work Order #...: J47H1    Matrix.....: SO  
 Date Sampled...: 08/16/07 10:40    Date Received...: 08/18/07  
 % Moisture.....: 13

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	86.9	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: SB-2 (3-5')

GC/MS Volatiles

Lot-Sample #...: A7H200102-002    Work Order #...: J47H21AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 10:00    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 1.39  
 % Moisture.....: 26    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	75	ug/kg
Ethylbenzene	ND	75	ug/kg
Toluene	ND	150	ug/kg
1,2,4-Trimethylbenzene	ND	370	ug/kg
1,3,5-Trimethylbenzene	ND	370	ug/kg
Xylenes (total)	ND	220	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	79	( 59 - 138 )
1,2-Dichloroethane-d4	88	( 61 - 130 )
Toluene-d8	87	( 60 - 143 )
4-Bromofluorobenzene	87	( 47 - 158 )

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: SB-2 (3-5')

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-002    Work Order #...: J47H21AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 10:00    Date Received..: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 2.5  
 % Moisture.....: 26    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acenaphthene	ND	22	ug/kg
Acenaphthylene	ND	22	ug/kg
Anthracene	ND	22	ug/kg
<b>Benzo(a)anthracene</b>	<b>27</b>	<b>22</b>	<b>ug/kg</b>
<b>Benzo(b)fluoranthene</b>	<b>41</b>	<b>22</b>	<b>ug/kg</b>
Benzo(k)fluoranthene	ND	22	ug/kg
Benzo(ghi)perylene	ND	22	ug/kg
<b>Benzo(a)pyrene</b>	<b>23</b>	<b>22</b>	<b>ug/kg</b>
<b>Chrysene</b>	<b>28</b>	<b>22</b>	<b>ug/kg</b>
Dibenz(a,h)anthracene	ND	22	ug/kg
<b>Fluoranthene</b>	<b>50</b>	<b>22</b>	<b>ug/kg</b>
Fluorene	ND	22	ug/kg
Indeno(1,2,3-cd)pyrene	ND	22	ug/kg
2-Methylnaphthalene	ND	22	ug/kg
1-Methylnaphthalene	ND	22	ug/kg
Naphthalene	ND	22	ug/kg
<b>Phenanthrene</b>	<b>25</b>	<b>22</b>	<b>ug/kg</b>
<b>Pyrene</b>	<b>54</b>	<b>22</b>	<b>ug/kg</b>

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	62 DIL	(24 - 112)
2-Fluorobiphenyl	67 DIL	(34 - 110)
Terphenyl-d14	95 DIL	(41 - 119)
Phenol-d5	72 DIL	(28 - 110)
2-Fluorophenol	73 DIL	(26 - 110)
2,4,6-Tribromophenol	89 DIL	(10 - 118)

**NOTE(S):**

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: SB-2 (3-5')

GC Semivolatiles

Lot-Sample #...: A7H200102-002    Work Order #...: J47H21AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 10:00    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/25/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 2  
 % Moisture.....: 26    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	87	27	mg/kg
	PERCENT	RECOVERY	
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>	
C9 (nonane)	16	(10 - 110)	

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: SB-2 (3-5')

General Chemistry

Lot-Sample #...: A7H200102-002    Work Order #...: J47H2    Matrix.....: SO  
 Date Sampled...: 08/16/07 10:00    Date Received...: 08/18/07  
 % Moisture.....: 26

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	74.4	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: SB-3 (3-5')

## GC/MS Volatiles

Lot-Sample #...: A7H200102-003    Work Order #...: J47H31AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 09:40    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 0.99  
 % Moisture.....: 19    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	49	ug/kg
Ethylbenzene	ND	49	ug/kg
Toluene	ND	98	ug/kg
1,2,4-Trimethylbenzene	ND	240	ug/kg
1,3,5-Trimethylbenzene	ND	240	ug/kg
Xylenes (total)	ND	150	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	93	(59 - 138)
1,2-Dichloroethane-d4	101	(61 - 130)
Toluene-d8	102	(60 - 143)
4-Bromofluorobenzene	100	(47 - 158)

**NOTE(S):**


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Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: SB-3 (3-5')

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-003    Work Order #...: J47H31AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 09:40    Date Received..: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 1  
 % Moisture.....: 19    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	8.2	ug/kg
Acenaphthylene	ND	8.2	ug/kg
Anthracene	ND	8.2	ug/kg
Benzo(a)anthracene	ND	8.2	ug/kg
Benzo(b)fluoranthene	ND	8.2	ug/kg
Benzo(k)fluoranthene	ND	8.2	ug/kg
Benzo(ghi)perylene	ND	8.2	ug/kg
Benzo(a)pyrene	ND	8.2	ug/kg
Chrysene	ND	8.2	ug/kg
Dibenz(a,h)anthracene	ND	8.2	ug/kg
Fluoranthene	ND	8.2	ug/kg
Fluorene	ND	8.2	ug/kg
Indeno(1,2,3-cd)pyrene	ND	8.2	ug/kg
2-Methylnaphthalene	ND	8.2	ug/kg
1-Methylnaphthalene	ND	8.2	ug/kg
Naphthalene	ND	8.2	ug/kg
Phenanthrene	ND	8.2	ug/kg
Pyrene	ND	8.2	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	64	(24 - 112)
2-Fluorobiphenyl	67	(34 - 110)
Terphenyl-d14	93	(41 - 119)
Phenol-d5	81	(28 - 110)
2-Fluorophenol	78	(26 - 110)
2,4,6-Tribromophenol	85	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: SB-3 (3-5')

GC Semivolatiles

**Lot-Sample #...**: A7H200102-003    **Work Order #...**: J47H31AE    **Matrix.....**: SO  
**Date Sampled...**: 08/16/07 09:40    **Date Received..**: 08/18/07  
**Prep Date.....**: 08/21/07    **Analysis Date..**: 08/23/07  
**Prep Batch #...**: 7233042  
**Dilution Factor**: 1  
**% Moisture.....**: 19    **Method.....**: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	40	12	mg/kg
	PERCENT	RECOVERY	
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>	
C9 (nonane)	25	(10 - 110)	

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: SB-3 (3-5')

General Chemistry

Lot-Sample #...: A7H200102-003    Work Order #...: J47H3    Matrix.....: SO  
 Date Sampled...: 08/16/07 09:40    Date Received...: 08/18/07  
 % Moisture.....: 19

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	81.0	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: SB-4 (1-3')

GC/MS Volatiles

Lot-Sample #...: A7H200102-004    Work Order #...: J47H41AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 09:20    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/24/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 0.92  
 % Moisture.....: 21    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	47	ug/kg
Ethylbenzene	ND	47	ug/kg
Toluene	ND	93	ug/kg
1,2,4-Trimethylbenzene	ND	230	ug/kg
1,3,5-Trimethylbenzene	ND	230	ug/kg
Xylenes (total)	ND	140	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	95	(59 - 138)
1,2-Dichloroethane-d4	108	(61 - 130)
Toluene-d8	106	(60 - 143)
4-Bromofluorobenzene	105	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: SB-4 (1-3')

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-004    Work Order #...: J47H41AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 09:20    Date Received..: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 1  
 % Moisture.....: 21    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	8.4	ug/kg
Acenaphthylene	ND	8.4	ug/kg
Anthracene	ND	8.4	ug/kg
Benzo(a)anthracene	ND	8.4	ug/kg
Benzo(b)fluoranthene	ND	8.4	ug/kg
Benzo(k)fluoranthene	ND	8.4	ug/kg
Benzo(ghi)perylene	ND	8.4	ug/kg
Benzo(a)pyrene	ND	8.4	ug/kg
Chrysene	ND	8.4	ug/kg
Dibenz(a,h)anthracene	ND	8.4	ug/kg
<b>Fluoranthene</b>	<b>12</b>	<b>8.4</b>	<b>ug/kg</b>
Fluorene	ND	8.4	ug/kg
Indeno(1,2,3-cd)pyrene	ND	8.4	ug/kg
2-Methylnaphthalene	ND	8.4	ug/kg
1-Methylnaphthalene	ND	8.4	ug/kg
Naphthalene	ND	8.4	ug/kg
<b>Phenanthrene</b>	<b>8.8</b>	<b>8.4</b>	<b>ug/kg</b>
<b>Pyrene</b>	<b>9.5</b>	<b>8.4</b>	<b>ug/kg</b>

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	78	(24 - 112)
2-Fluorobiphenyl	78	(34 - 110)
Terphenyl-d14	96	(41 - 119)
Phenol-d5	90	(28 - 110)
2-Fluorophenol	87	(26 - 110)
2,4,6-Tribromophenol	92	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: SB-4 (1-3')

GC Semivolatiles

Lot-Sample #...: A7H200102-004    Work Order #...: J47H41AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 09:20    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/23/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 1  
 % Moisture.....: 21    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	34	13	mg/kg
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
C9 (nonane)	25	(10 - 110)	

**NOTE(S):**

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Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: SB-4 (1-3')

General Chemistry

Lot-Sample #...: A7H200102-004    Work Order #...: J47H4    Matrix.....: SO  
 Date Sampled...: 08/16/07 09:20    Date Received...: 08/18/07  
 % Moisture.....: 21

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	79.0	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-1 (0-0.25)

GC/MS Volatiles

Lot-Sample #...: A7H200102-005    Work Order #...: J47H61AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:20    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/24/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 1.43  
 % Moisture.....: 34    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	86	ug/kg
Ethylbenzene	ND	86	ug/kg
Toluene	ND	170	ug/kg
1,2,4-Trimethylbenzene	ND	430	ug/kg
1,3,5-Trimethylbenzene	ND	430	ug/kg
Xylenes (total)	ND	260	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	81	(59 - 138)
1,2-Dichloroethane-d4	97	(61 - 130)
Toluene-d8	95	(60 - 143)
4-Bromofluorobenzene	91	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-1 (0-0.25)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-005    Work Order #...: J47H61AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:20    Date Received..: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 2.5  
 % Moisture.....: 34    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acenaphthene	ND	25	ug/kg
Acenaphthylene	ND	25	ug/kg
Anthracene	ND	25	ug/kg
<b>Benzo(a)anthracene</b>	<b>40</b>	<b>25</b>	<b>ug/kg</b>
<b>Benzo(b)fluoranthene</b>	<b>88</b>	<b>25</b>	<b>ug/kg</b>
Benzo(k)fluoranthene	ND	25	ug/kg
<b>Benzo(ghi)perylene</b>	<b>40</b>	<b>25</b>	<b>ug/kg</b>
<b>Benzo(a)pyrene</b>	<b>50</b>	<b>25</b>	<b>ug/kg</b>
<b>Chrysene</b>	<b>61</b>	<b>25</b>	<b>ug/kg</b>
Dibenz(a,h)anthracene	ND	25	ug/kg
<b>Fluoranthene</b>	<b>95</b>	<b>25</b>	<b>ug/kg</b>
Fluorene	ND	25	ug/kg
<b>Indeno(1,2,3-cd)pyrene</b>	<b>36</b>	<b>25</b>	<b>ug/kg</b>
2-Methylnaphthalene	ND	25	ug/kg
1-Methylnaphthalene	ND	25	ug/kg
Naphthalene	ND	25	ug/kg
<b>Phenanthrene</b>	<b>38</b>	<b>25</b>	<b>ug/kg</b>
<b>Pyrene</b>	<b>83</b>	<b>25</b>	<b>ug/kg</b>

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	78 DIL	(24 - 112)
2-Fluorobiphenyl	80 DIL	(34 - 110)
Terphenyl-d14	96 DIL	(41 - 119)
Phenol-d5	88 DIL	(28 - 110)
2-Fluorophenol	92 DIL	(26 - 110)
2,4,6-Tribromophenol	88 DIL	(10 - 118)

**NOTE(S):**

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-1 (0-0.25)

GC Semivolatiles

Lot-Sample #...: A7H200102-005    Work Order #...: J47H61AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:20    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 5  
 % Moisture.....: 34    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	240	76	mg/kg
	PERCENT	RECOVERY	
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>	
C9 (nonane)	14 DIL	(10 - 110)	

**NOTE(S):**

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DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-1 (0-0.25)

General Chemistry

Lot-Sample #...: A7H200102-005    Work Order #...: J47H6    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:20    Date Received...: 08/18/07  
 % Moisture.....: 34

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	66.1	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-1 (1.5-2.5)

GC/MS Volatiles

Lot-Sample #...: A7H200102-006    Work Order #...: J47H71AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:21    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 1.02  
 % Moisture.....: 18    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	49	ug/kg
Ethylbenzene	ND	49	ug/kg
Toluene	ND	99	ug/kg
1,2,4-Trimethylbenzene	ND	250	ug/kg
1,3,5-Trimethylbenzene	ND	250	ug/kg
Xylenes (total)	ND	150	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	78	( 59 - 138 )
1,2-Dichloroethane-d4	90	( 61 - 130 )
Toluene-d8	92	( 60 - 143 )
4-Bromofluorobenzene	90	( 47 - 158 )

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-1 (1.5-2.5)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-006    Work Order #...: J47H71AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:21    Date Received..: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 1  
 % Moisture.....: 18    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	8.1	ug/kg
Acenaphthylene	ND	8.1	ug/kg
Anthracene	ND	8.1	ug/kg
Benzo(a)anthracene	ND	8.1	ug/kg
Benzo(b)fluoranthene	ND	8.1	ug/kg
Benzo(k)fluoranthene	ND	8.1	ug/kg
Benzo(ghi)perylene	ND	8.1	ug/kg
Benzo(a)pyrene	ND	8.1	ug/kg
Chrysene	ND	8.1	ug/kg
Dibenz(a,h)anthracene	ND	8.1	ug/kg
Fluoranthene	ND	8.1	ug/kg
Fluorene	ND	8.1	ug/kg
Indeno(1,2,3-cd)pyrene	ND	8.1	ug/kg
2-Methylnaphthalene	ND	8.1	ug/kg
1-Methylnaphthalene	ND	8.1	ug/kg
Naphthalene	ND	8.1	ug/kg
Phenanthrene	ND	8.1	ug/kg
Pyrene	ND	8.1	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	68	(24 - 112)
2-Fluorobiphenyl	65	(34 - 110)
Terphenyl-d14	93	(41 - 119)
Phenol-d5	80	(28 - 110)
2-Fluorophenol	78	(26 - 110)
2,4,6-Tribromophenol	82	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-1 (1.5-2.5)

GC Semivolatiles

Lot-Sample #...: A7H200102-006    Work Order #...: J47H71AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:21    Date Received...: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/23/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 1  
 % Moisture.....: 18    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	30	12	mg/kg

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	24	(10 - 110)

**NOTE(S):**

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Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-1 (1.5-2.5)

General Chemistry

Lot-Sample #...: A7H200102-006    Work Order #...: J47H7    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:21    Date Received...: 08/18/07  
 % Moisture.....: 18

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	82.5	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-2 (0-0.25)

GC/MS Volatiles

Lot-Sample #...: A7H200102-007    Work Order #...: J47H81AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:25    Date Received...: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/24/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 1.33  
 % Moisture.....: 30    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	76	ug/kg
Ethylbenzene	ND	76	ug/kg
Toluene	ND	150	ug/kg
1,2,4-Trimethylbenzene	ND	380	ug/kg
1,3,5-Trimethylbenzene	ND	380	ug/kg
Xylenes (total)	ND	230	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	88	(59 - 138)
1,2-Dichloroethane-d4	100	(61 - 130)
Toluene-d8	98	(60 - 143)
4-Bromofluorobenzene	95	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-2 (0-0.25)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-007    Work Order #...: J47H81AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:25    Date Received..: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 2.5  
 % Moisture.....: 30    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	24	ug/kg
Acenaphthylene	ND	24	ug/kg
Anthracene	ND	24	ug/kg
Benzo(a)anthracene	ND	24	ug/kg
<b>Benzo(b)fluoranthene</b>	<b>44</b>	<b>24</b>	<b>ug/kg</b>
Benzo(k)fluoranthene	ND	24	ug/kg
Benzo(ghi)perylene	ND	24	ug/kg
<b>Benzo(a)pyrene</b>	<b>27</b>	<b>24</b>	<b>ug/kg</b>
<b>Chrysene</b>	<b>25</b>	<b>24</b>	<b>ug/kg</b>
Dibenz(a,h)anthracene	ND	24	ug/kg
<b>Fluoranthene</b>	<b>48</b>	<b>24</b>	<b>ug/kg</b>
Fluorene	ND	24	ug/kg
Indeno(1,2,3-cd)pyrene	ND	24	ug/kg
2-Methylnaphthalene	ND	24	ug/kg
1-Methylnaphthalene	ND	24	ug/kg
Naphthalene	ND	24	ug/kg
Phenanthrene	ND	24	ug/kg
<b>Pyrene</b>	<b>36</b>	<b>24</b>	<b>ug/kg</b>

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	66 DIL	(24 - 112)
2-Fluorobiphenyl	70 DIL	(34 - 110)
Terphenyl-d14	86 DIL	(41 - 119)
Phenol-d5	77 DIL	(28 - 110)
2-Fluorophenol	78 DIL	(26 - 110)
2,4,6-Tribromophenol	80 DIL	(10 - 118)

**NOTE(S):**

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-2 (0-0.25)

GC Semivolatiles

Lot-Sample #...: A7H200102-007    Work Order #...: J47H81AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:25    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 5  
 % Moisture.....: 30    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	140	72	mg/kg
	PERCENT	RECOVERY	
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>	
C9 (nonane)	13 DIL	(10 - 110)	

**NOTE(S):**

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DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-2 (0-0.25)

General Chemistry

Lot-Sample #...: A7H200102-007    Work Order #...: J47H8    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:25    Date Received...: 08/18/07  
 % Moisture.....: 30

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	69.9	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-2 (1.5-2.5)

GC/MS Volatiles

Lot-Sample #...: A7H200102-008    Work Order #...: J47JC1AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:26    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 0.98  
 % Moisture.....: 14    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	46	ug/kg
Ethylbenzene	ND	46	ug/kg
Toluene	ND	91	ug/kg
1,2,4-Trimethylbenzene	ND	230	ug/kg
1,3,5-Trimethylbenzene	ND	230	ug/kg
Xylenes (total)	ND	140	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	79	(59 - 138)
1,2-Dichloroethane-d4	90	(61 - 130)
Toluene-d8	93	(60 - 143)
4-Bromofluorobenzene	91	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

## ARCADIS of New York Inc

Client Sample ID: HA-2 (1.5-2.5)

## GC/MS Semivolatiles

Lot-Sample #...: A7H200102-008    Work Order #...: J47JC1AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:26    Date Received...: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date...: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 1  
 % Moisture.....: 14    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	7.8	ug/kg
Acenaphthylene	ND	7.8	ug/kg
Anthracene	ND	7.8	ug/kg
Benzo(a)anthracene	ND	7.8	ug/kg
Benzo(b)fluoranthene	ND	7.8	ug/kg
Benzo(k)fluoranthene	ND	7.8	ug/kg
Benzo(ghi)perylene	ND	7.8	ug/kg
Benzo(a)pyrene	ND	7.8	ug/kg
Chrysene	ND	7.8	ug/kg
Dibenz(a,h)anthracene	ND	7.8	ug/kg
Fluoranthene	ND	7.8	ug/kg
Fluorene	ND	7.8	ug/kg
Indeno(1,2,3-cd)pyrene	ND	7.8	ug/kg
2-Methylnaphthalene	ND	7.8	ug/kg
1-Methylnaphthalene	ND	7.8	ug/kg
Naphthalene	ND	7.8	ug/kg
Phenanthrene	ND	7.8	ug/kg
Pyrene	ND	7.8	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	64	(24 - 112)
2-Fluorobiphenyl	63	(34 - 110)
Terphenyl-d14	96	(41 - 119)
Phenol-d5	74	(28 - 110)
2-Fluorophenol	73	(26 - 110)
2,4,6-Tribromophenol	75	(10 - 118)

**NOTE(S):**


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Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-2 (1.5-2.5)

GC Semivolatiles

**Lot-Sample #...**: A7H200102-008    **Work Order #...**: J47JC1AE    **Matrix.....**: SO  
**Date Sampled...**: 08/16/07 14:26    **Date Received..**: 08/18/07  
**Prep Date.....**: 08/21/07    **Analysis Date..**: 08/23/07  
**Prep Batch #...**: 7233042  
**Dilution Factor**: 1  
**% Moisture.....**: 14    **Method.....**: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	ND	12	mg/kg
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
C9 (nonane)	3.3 *	(10 - 110)	

**NOTE(S):**

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\* Surrogate recovery is outside stated control limits.  
Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-2 (1.5-2.5)

General Chemistry

Lot-Sample #...: A7H200102-008    Work Order #...: J47JC    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:26    Date Received...: 08/18/07  
 % Moisture.....: 14

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	86.0	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-3 (0-0.25)

GC/MS Volatiles

Lot-Sample #...: A7H200102-009    Work Order #...: J47JD1AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:35    Date Received...: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/24/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 1.61  
 % Moisture.....: 32    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	94	ug/kg
Ethylbenzene	ND	94	ug/kg
Toluene	ND	190	ug/kg
1,2,4-Trimethylbenzene	ND	470	ug/kg
1,3,5-Trimethylbenzene	ND	470	ug/kg
Xylenes (total)	ND	280	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	81	(59 - 138)
1,2-Dichloroethane-d4	92	(61 - 130)
Toluene-d8	94	(60 - 143)
4-Bromofluorobenzene	92	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-3 (0-0.25)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-009    Work Order #...: J47JD1AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:35    Date Received..: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 2.5  
 % Moisture.....: 32    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acenaphthene	ND	24	ug/kg
Acenaphthylene	ND	24	ug/kg
Anthracene	ND	24	ug/kg
<b>Benzo(a)anthracene</b>	<b>47</b>	<b>24</b>	<b>ug/kg</b>
<b>Benzo(b)fluoranthene</b>	<b>85</b>	<b>24</b>	<b>ug/kg</b>
<b>Benzo(k)fluoranthene</b>	<b>39</b>	<b>24</b>	<b>ug/kg</b>
<b>Benzo(ghi)perylene</b>	<b>44</b>	<b>24</b>	<b>ug/kg</b>
<b>Benzo(a)pyrene</b>	<b>53</b>	<b>24</b>	<b>ug/kg</b>
<b>Chrysene</b>	<b>65</b>	<b>24</b>	<b>ug/kg</b>
Dibenz(a,h)anthracene	ND	24	ug/kg
<b>Fluoranthene</b>	<b>110</b>	<b>24</b>	<b>ug/kg</b>
Fluorene	ND	24	ug/kg
<b>Indeno(1,2,3-cd)pyrene</b>	<b>40</b>	<b>24</b>	<b>ug/kg</b>
2-Methylnaphthalene	ND	24	ug/kg
1-Methylnaphthalene	ND	24	ug/kg
Naphthalene	ND	24	ug/kg
<b>Phenanthrene</b>	<b>48</b>	<b>24</b>	<b>ug/kg</b>
<b>Pyrene</b>	<b>88</b>	<b>24</b>	<b>ug/kg</b>

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	66 DIL	(24 - 112)
2-Fluorobiphenyl	70 DIL	(34 - 110)
Terphenyl-d14	82 DIL	(41 - 119)
Phenol-d5	76 DIL	(28 - 110)
2-Fluorophenol	71 DIL	(26 - 110)
2,4,6-Tribromophenol	84 DIL	(10 - 118)

**NOTE(S):**

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-3 (0-0.25)

GC Semivolatiles

Lot-Sample #...: A7H200102-009    Work Order #...: J47JD1AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:35    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 5  
 % Moisture.....: 32    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	140	73	mg/kg
	PERCENT	RECOVERY	
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>	
C9 (nonane)	5.4 DIL, *	(10 - 110)	

**NOTE(S):**

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

\* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-3 (0-0.25)

General Chemistry

Lot-Sample #...: A7H200102-009    Work Order #...: J47JD    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:35    Date Received...: 08/18/07  
 % Moisture.....: 32

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	68.2	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

## ARCADIS of New York Inc

Client Sample ID: HA-3 (1.5-2.5)

## GC/MS Volatiles

Lot-Sample #...: A7H200102-010    Work Order #...: J47JF1AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:36    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 1.1  
 % Moisture.....: 13    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	51	ug/kg
Ethylbenzene	ND	51	ug/kg
Toluene	ND	100	ug/kg
1,2,4-Trimethylbenzene	ND	250	ug/kg
1,3,5-Trimethylbenzene	ND	250	ug/kg
Xylenes (total)	ND	150	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	77	(59 - 138)
1,2-Dichloroethane-d4	92	(61 - 130)
Toluene-d8	91	(60 - 143)
4-Bromofluorobenzene	89	(47 - 158)

**NOTE(S):**


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Results and reporting limits have been adjusted for dry weight.

## ARCADIS of New York Inc

Client Sample ID: HA-3 (1.5-2.5)

## GC/MS Semivolatiles

Lot-Sample #...: A7H200102-010    Work Order #...: J47JF1AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:36    Date Received..: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 1  
 % Moisture.....: 13    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	7.7	ug/kg
Acenaphthylene	ND	7.7	ug/kg
Anthracene	ND	7.7	ug/kg
Benzo(a)anthracene	ND	7.7	ug/kg
Benzo(b)fluoranthene	ND	7.7	ug/kg
Benzo(k)fluoranthene	ND	7.7	ug/kg
Benzo(ghi)perylene	ND	7.7	ug/kg
Benzo(a)pyrene	ND	7.7	ug/kg
Chrysene	ND	7.7	ug/kg
Dibenz(a,h)anthracene	ND	7.7	ug/kg
Fluoranthene	ND	7.7	ug/kg
Fluorene	ND	7.7	ug/kg
Indeno(1,2,3-cd)pyrene	ND	7.7	ug/kg
2-Methylnaphthalene	ND	7.7	ug/kg
1-Methylnaphthalene	ND	7.7	ug/kg
Naphthalene	ND	7.7	ug/kg
Phenanthrene	ND	7.7	ug/kg
Pyrene	ND	7.7	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	73	(24 - 112)
2-Fluorobiphenyl	72	(34 - 110)
Terphenyl-d14	95	(41 - 119)
Phenol-d5	79	(28 - 110)
2-Fluorophenol	84	(26 - 110)
2,4,6-Tribromophenol	69	(10 - 118)

**NOTE(S):**


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Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-3 (1.5-2.5)

GC Semivolatiles

Lot-Sample #...: A7H200102-010    Work Order #...: J47JF1AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:36    Date Received...: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/23/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 1  
 % Moisture.....: 13    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	21	12	mg/kg
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
C9 (nonane)	19	(10 - 110)	

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-3 (1.5-2.5)

General Chemistry

Lot-Sample #...: A7H200102-010    Work Order #...: J47JF    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:36    Date Received...: 08/18/07  
 % Moisture.....: 13

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	86.8	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-4 (0-0.25)

GC/MS Volatiles

Lot-Sample #...: A7H200102-011    Work Order #...: J47JJ1AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:45    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/24/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 1.39  
 % Moisture.....: 31    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	80	ug/kg
Ethylbenzene	ND	80	ug/kg
Toluene	ND	160	ug/kg
1,2,4-Trimethylbenzene	ND	400	ug/kg
1,3,5-Trimethylbenzene	ND	400	ug/kg
Xylenes (total)	ND	240	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	92	(59 - 138)
1,2-Dichloroethane-d4	109	(61 - 130)
Toluene-d8	109	(60 - 143)
4-Bromofluorobenzene	110	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-4 (0-0.25)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-011    Work Order #...: J47JJ1AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:45    Date Received..: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 2.5  
 % Moisture.....: 31    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acenaphthene	ND	24	ug/kg
Acenaphthylene	ND	24	ug/kg
<b>Anthracene</b>	<b>53</b>	<b>24</b>	<b>ug/kg</b>
<b>Benzo(a)anthracene</b>	<b>110</b>	<b>24</b>	<b>ug/kg</b>
<b>Benzo(b)fluoranthene</b>	<b>140</b>	<b>24</b>	<b>ug/kg</b>
<b>Benzo(k)fluoranthene</b>	<b>61</b>	<b>24</b>	<b>ug/kg</b>
<b>Benzo(ghi)perylene</b>	<b>72</b>	<b>24</b>	<b>ug/kg</b>
<b>Benzo(a)pyrene</b>	<b>100</b>	<b>24</b>	<b>ug/kg</b>
<b>Chrysene</b>	<b>110</b>	<b>24</b>	<b>ug/kg</b>
Dibenz(a,h)anthracene	ND	24	ug/kg
<b>Fluoranthene</b>	<b>270</b>	<b>24</b>	<b>ug/kg</b>
<b>Fluorene</b>	<b>25</b>	<b>24</b>	<b>ug/kg</b>
<b>Indeno(1,2,3-cd)pyrene</b>	<b>67</b>	<b>24</b>	<b>ug/kg</b>
2-Methylnaphthalene	ND	24	ug/kg
1-Methylnaphthalene	ND	24	ug/kg
Naphthalene	ND	24	ug/kg
<b>Phenanthrene</b>	<b>190</b>	<b>24</b>	<b>ug/kg</b>
<b>Pyrene</b>	<b>210</b>	<b>24</b>	<b>ug/kg</b>

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	64 DIL	(24 - 112)
2-Fluorobiphenyl	67 DIL	(34 - 110)
Terphenyl-d14	82 DIL	(41 - 119)
Phenol-d5	72 DIL	(28 - 110)
2-Fluorophenol	71 DIL	(26 - 110)
2,4,6-Tribromophenol	80 DIL	(10 - 118)

**NOTE(S):**

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-4 (0-0.25)

GC Semivolatiles

Lot-Sample #...: A7H200102-011    Work Order #...: J47JJ1AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:45    Date Received...: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/23/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 5  
 % Moisture.....: 31    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	190	72	mg/kg

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	9.5 DIL, *	(10 - 110)

**NOTE(S):**

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

\* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-4 (0-0.25)

General Chemistry

Lot-Sample #...: A7H200102-011    Work Order #...: J47JJ    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:45    Date Received...: 08/18/07  
 % Moisture.....: 31

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	69.2	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-4 (1.5-2.5)

GC/MS Volatiles

Lot-Sample #...: A7H200102-012    Work Order #...: J47JK1AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:46    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/25/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 1.16  
 % Moisture.....: 10    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	52	ug/kg
Ethylbenzene	ND	52	ug/kg
Toluene	ND	100	ug/kg
1,2,4-Trimethylbenzene	ND	260	ug/kg
1,3,5-Trimethylbenzene	ND	260	ug/kg
Xylenes (total)	ND	160	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	84	(59 - 138)
1,2-Dichloroethane-d4	97	(61 - 130)
Toluene-d8	99	(60 - 143)
4-Bromofluorobenzene	97	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-4 (1.5-2.5)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-012    Work Order #...: J47JK1AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:46    Date Received..: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 1  
 % Moisture.....: 10    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	7.5	ug/kg
Acenaphthylene	ND	7.5	ug/kg
Anthracene	ND	7.5	ug/kg
Benzo(a)anthracene	ND	7.5	ug/kg
Benzo(b)fluoranthene	ND	7.5	ug/kg
Benzo(k)fluoranthene	ND	7.5	ug/kg
Benzo(ghi)perylene	ND	7.5	ug/kg
Benzo(a)pyrene	ND	7.5	ug/kg
Chrysene	ND	7.5	ug/kg
Dibenz(a,h)anthracene	ND	7.5	ug/kg
Fluoranthene	ND	7.5	ug/kg
Fluorene	ND	7.5	ug/kg
Indeno(1,2,3-cd)pyrene	ND	7.5	ug/kg
2-Methylnaphthalene	ND	7.5	ug/kg
1-Methylnaphthalene	ND	7.5	ug/kg
Naphthalene	ND	7.5	ug/kg
Phenanthrene	ND	7.5	ug/kg
Pyrene	ND	7.5	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	74	(24 - 112)
2-Fluorobiphenyl	75	(34 - 110)
Terphenyl-d14	97	(41 - 119)
Phenol-d5	81	(28 - 110)
2-Fluorophenol	82	(26 - 110)
2,4,6-Tribromophenol	85	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-4 (1.5-2.5)

GC Semivolatiles

Lot-Sample #...: A7H200102-012    Work Order #...: J47JK1AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:46    Date Received...: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/23/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 1  
 % Moisture.....: 10    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	18	11	mg/kg

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	27	(10 - 110)

**NOTE(S):**

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Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-4 (1.5-2.5)

General Chemistry

Lot-Sample #...: A7H200102-012    Work Order #...: J47JK    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:46    Date Received...: 08/18/07  
 % Moisture.....: 10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	89.5	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-5 (0-0.25)

GC/MS Volatiles

Lot-Sample #...: A7H200102-013    Work Order #...: J47JL1AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:25    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/25/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 1.85  
 % Moisture.....: 33    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	69	ug/kg
Ethylbenzene	ND	110	ug/kg
Toluene	ND	220	ug/kg
1,2,4-Trimethylbenzene	ND	550	ug/kg
1,3,5-Trimethylbenzene	ND	550	ug/kg
Xylenes (total)	ND	330	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	68	(59 - 138)
1,2-Dichloroethane-d4	81	(61 - 130)
Toluene-d8	80	(60 - 143)
4-Bromofluorobenzene	81	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-5 (0-0.25)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-013    Work Order #...: J47JL1AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:25    Date Received..: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 2.5  
 % Moisture.....: 33    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acenaphthene	ND	25	ug/kg
Acenaphthylene	ND	25	ug/kg
Anthracene	ND	25	ug/kg
<b>Benzo(a)anthracene</b>	<b>65</b>	<b>25</b>	<b>ug/kg</b>
<b>Benzo(b)fluoranthene</b>	<b>130</b>	<b>25</b>	<b>ug/kg</b>
<b>Benzo(k)fluoranthene</b>	<b>46</b>	<b>25</b>	<b>ug/kg</b>
<b>Benzo(ghi)perylene</b>	<b>72</b>	<b>25</b>	<b>ug/kg</b>
<b>Benzo(a)pyrene</b>	<b>75</b>	<b>25</b>	<b>ug/kg</b>
<b>Chrysene</b>	<b>97</b>	<b>25</b>	<b>ug/kg</b>
Dibenz(a,h)anthracene	ND	25	ug/kg
<b>Fluoranthene</b>	<b>170</b>	<b>25</b>	<b>ug/kg</b>
Fluorene	ND	25	ug/kg
<b>Indeno(1,2,3-cd)pyrene</b>	<b>55</b>	<b>25</b>	<b>ug/kg</b>
2-Methylnaphthalene	ND	25	ug/kg
1-Methylnaphthalene	ND	25	ug/kg
Naphthalene	ND	25	ug/kg
<b>Phenanthrene</b>	<b>84</b>	<b>25</b>	<b>ug/kg</b>
<b>Pyrene</b>	<b>130</b>	<b>25</b>	<b>ug/kg</b>

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	69 DIL	(24 - 112)
2-Fluorobiphenyl	74 DIL	(34 - 110)
Terphenyl-d14	89 DIL	(41 - 119)
Phenol-d5	80 DIL	(28 - 110)
2-Fluorophenol	79 DIL	(26 - 110)
2,4,6-Tribromophenol	83 DIL	(10 - 118)

**NOTE(S):**

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-5 (0-0.25)

GC Semivolatiles

Lot-Sample #...: A7H200102-013    Work Order #...: J47JL1AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:25    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 5  
 % Moisture.....: 33    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	290	74	mg/kg

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	14 DIL	(10 - 110)

**NOTE(S):**

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DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-5 (0-0.25)

General Chemistry

Lot-Sample #...: A7H200102-013    Work Order #...: J47JL    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:25    Date Received...: 08/18/07  
 % Moisture.....: 33

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	67.2	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-5 (1.5-2.5)

GC/MS Volatiles

Lot-Sample #...: A7H200102-014    Work Order #...: J47JN1AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:26    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/25/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 1.08  
 % Moisture.....: 8.9    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	47	ug/kg
Ethylbenzene	ND	47	ug/kg
Toluene	ND	95	ug/kg
1,2,4-Trimethylbenzene	ND	240	ug/kg
1,3,5-Trimethylbenzene	ND	240	ug/kg
Xylenes (total)	ND	140	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	78	(59 - 138)
1,2-Dichloroethane-d4	93	(61 - 130)
Toluene-d8	94	(60 - 143)
4-Bromofluorobenzene	93	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-5 (1.5-2.5)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-014    Work Order #...: J47JN1AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:26    Date Received...: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date...: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 1  
 % Moisture.....: 8.9    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	7.3	ug/kg
Acenaphthylene	ND	7.3	ug/kg
Anthracene	ND	7.3	ug/kg
Benzo(a)anthracene	ND	7.3	ug/kg
Benzo(b)fluoranthene	ND	7.3	ug/kg
Benzo(k)fluoranthene	ND	7.3	ug/kg
Benzo(ghi)perylene	ND	7.3	ug/kg
Benzo(a)pyrene	ND	7.3	ug/kg
Chrysene	ND	7.3	ug/kg
Dibenz(a,h)anthracene	ND	7.3	ug/kg
Fluoranthene	ND	7.3	ug/kg
Fluorene	ND	7.3	ug/kg
Indeno(1,2,3-cd)pyrene	ND	7.3	ug/kg
2-Methylnaphthalene	ND	7.3	ug/kg
1-Methylnaphthalene	ND	7.3	ug/kg
Naphthalene	ND	7.3	ug/kg
Phenanthrene	ND	7.3	ug/kg
Pyrene	ND	7.3	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	71	(24 - 112)
2-Fluorobiphenyl	73	(34 - 110)
Terphenyl-d14	93	(41 - 119)
Phenol-d5	79	(28 - 110)
2-Fluorophenol	77	(26 - 110)
2,4,6-Tribromophenol	80	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-5 (1.5-2.5)

GC Semivolatiles

**Lot-Sample #...**: A7H200102-014    **Work Order #...**: J47JN1AE    **Matrix.....**: SO  
**Date Sampled...**: 08/16/07 13:26    **Date Received..**: 08/18/07  
**Prep Date.....**: 08/21/07    **Analysis Date..**: 08/23/07  
**Prep Batch #...**: 7233042  
**Dilution Factor**: 1  
**% Moisture.....**: 8.9    **Method.....**: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	31	11	mg/kg

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	20	(10 - 110)

**NOTE(S):**

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Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-5 (1.5-2.5)

General Chemistry

Lot-Sample #...: A7H200102-014    Work Order #...: J47JN    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:26    Date Received...: 08/18/07  
 % Moisture.....: 8.9

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	91.1	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-6 (0-0.25)

GC/MS Volatiles

Lot-Sample #...: A7H200102-015    Work Order #...: J47JP1AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:35    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/25/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 1.39  
 % Moisture.....: 14    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	65	ug/kg
Ethylbenzene	ND	65	ug/kg
Toluene	ND	130	ug/kg
1,2,4-Trimethylbenzene	ND	320	ug/kg
1,3,5-Trimethylbenzene	ND	320	ug/kg
Xylenes (total)	ND	190	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	82	(59 - 138)
1,2-Dichloroethane-d4	96	(61 - 130)
Toluene-d8	97	(60 - 143)
4-Bromofluorobenzene	95	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-6 (0-0.25)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-015    Work Order #...: J47JP1AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:35    Date Received..: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 1  
 % Moisture.....: 14    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	7.8	ug/kg
Acenaphthylene	ND	7.8	ug/kg
<b>Anthracene</b>	<b>10</b>	<b>7.8</b>	<b>ug/kg</b>
<b>Benzo(a)anthracene</b>	<b>40</b>	<b>7.8</b>	<b>ug/kg</b>
<b>Benzo(b)fluoranthene</b>	<b>85</b>	<b>7.8</b>	<b>ug/kg</b>
<b>Benzo(k)fluoranthene</b>	<b>30</b>	<b>7.8</b>	<b>ug/kg</b>
<b>Benzo(ghi)perylene</b>	<b>38</b>	<b>7.8</b>	<b>ug/kg</b>
<b>Benzo(a)pyrene</b>	<b>48</b>	<b>7.8</b>	<b>ug/kg</b>
<b>Chrysene</b>	<b>56</b>	<b>7.8</b>	<b>ug/kg</b>
<b>Dibenz(a,h)anthracene</b>	<b>11</b>	<b>7.8</b>	<b>ug/kg</b>
<b>Fluoranthene</b>	<b>110</b>	<b>7.8</b>	<b>ug/kg</b>
Fluorene	ND	7.8	ug/kg
<b>Indeno(1,2,3-cd)pyrene</b>	<b>37</b>	<b>7.8</b>	<b>ug/kg</b>
2-Methylnaphthalene	ND	7.8	ug/kg
1-Methylnaphthalene	ND	7.8	ug/kg
Naphthalene	ND	7.8	ug/kg
<b>Phenanthrene</b>	<b>42</b>	<b>7.8</b>	<b>ug/kg</b>
<b>Pyrene</b>	<b>86</b>	<b>7.8</b>	<b>ug/kg</b>

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	75	(24 - 112)
2-Fluorobiphenyl	76	(34 - 110)
Terphenyl-d14	95	(41 - 119)
Phenol-d5	89	(28 - 110)
2-Fluorophenol	90	(26 - 110)
2,4,6-Tribromophenol	94	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-6 (0-0.25)

GC Semivolatiles

Lot-Sample #...: A7H200102-015    Work Order #...: J47JP1AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:35    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 5  
 % Moisture.....: 14    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	89	58	mg/kg
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
C9 (nonane)	13 DIL	(10 - 110)	

**NOTE(S):**

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DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-6 (0-0.25)

General Chemistry

Lot-Sample #...: A7H200102-015    Work Order #...: J47JP    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:35    Date Received...: 08/18/07  
 % Moisture.....: 14

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	86.0	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-6 (1.5-2.5)

GC/MS Volatiles

Lot-Sample #...: A7H200102-016    Work Order #...: J47JQ1AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:36    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/25/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 1.12  
 % Moisture.....: 20    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	56	ug/kg
Ethylbenzene	ND	56	ug/kg
Toluene	ND	110	ug/kg
1,2,4-Trimethylbenzene	ND	280	ug/kg
1,3,5-Trimethylbenzene	ND	280	ug/kg
Xylenes (total)	ND	170	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	76	(59 - 138)
1,2-Dichloroethane-d4	92	(61 - 130)
Toluene-d8	93	(60 - 143)
4-Bromofluorobenzene	92	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

## ARCADIS of New York Inc

Client Sample ID: HA-6 (1.5-2.5)

## GC/MS Semivolatiles

Lot-Sample #...: A7H200102-016    Work Order #...: J47JQ1AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:36    Date Received...: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date...: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 1  
 % Moisture.....: 20    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	8.3	ug/kg
Acenaphthylene	ND	8.3	ug/kg
Anthracene	ND	8.3	ug/kg
Benzo(a)anthracene	ND	8.3	ug/kg
Benzo(b)fluoranthene	ND	8.3	ug/kg
Benzo(k)fluoranthene	ND	8.3	ug/kg
Benzo(ghi)perylene	ND	8.3	ug/kg
Benzo(a)pyrene	ND	8.3	ug/kg
Chrysene	ND	8.3	ug/kg
Dibenz(a,h)anthracene	ND	8.3	ug/kg
Fluoranthene	ND	8.3	ug/kg
Fluorene	ND	8.3	ug/kg
Indeno(1,2,3-cd)pyrene	ND	8.3	ug/kg
2-Methylnaphthalene	ND	8.3	ug/kg
1-Methylnaphthalene	ND	8.3	ug/kg
Naphthalene	ND	8.3	ug/kg
Phenanthrene	ND	8.3	ug/kg
Pyrene	ND	8.3	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	60	(24 - 112)
2-Fluorobiphenyl	58	(34 - 110)
Terphenyl-d14	89	(41 - 119)
Phenol-d5	70	(28 - 110)
2-Fluorophenol	72	(26 - 110)
2,4,6-Tribromophenol	78	(10 - 118)

**NOTE(S):**


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Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-6 (1.5-2.5)

GC Semivolatiles

Lot-Sample #...: A7H200102-016    Work Order #...: J47JQ1AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:36    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 1  
 % Moisture.....: 20    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	22	12	mg/kg
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
C9 (nonane)	24	(10 - 110)	

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-6 (1.5-2.5)

General Chemistry

Lot-Sample #...: A7H200102-016    Work Order #...: J47JQ    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:36    Date Received...: 08/18/07  
 % Moisture.....: 20

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	80.5	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-7 (0-0.25)

GC/MS Volatiles

Lot-Sample #...: A7H200102-017    Work Order #...: J47J01AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:45    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/25/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 1.35  
 % Moisture.....: 17    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	65	ug/kg
Ethylbenzene	ND	65	ug/kg
Toluene	ND	130	ug/kg
1,2,4-Trimethylbenzene	ND	330	ug/kg
1,3,5-Trimethylbenzene	ND	330	ug/kg
Xylenes (total)	ND	200	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	82	(59 - 138)
1,2-Dichloroethane-d4	100	(61 - 130)
Toluene-d8	102	(60 - 143)
4-Bromofluorobenzene	99	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-7 (0-0.25)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-017    Work Order #...: J47J01AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:45    Date Received..: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 1  
 % Moisture.....: 17    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acenaphthene	ND	8.1	ug/kg
Acenaphthylene	ND	8.1	ug/kg
<b>Anthracene</b>	<b>8.8</b>	<b>8.1</b>	<b>ug/kg</b>
<b>Benzo(a)anthracene</b>	<b>39</b>	<b>8.1</b>	<b>ug/kg</b>
<b>Benzo(b)fluoranthene</b>	<b>78</b>	<b>8.1</b>	<b>ug/kg</b>
<b>Benzo(k)fluoranthene</b>	<b>26</b>	<b>8.1</b>	<b>ug/kg</b>
<b>Benzo(ghi)perylene</b>	<b>36</b>	<b>8.1</b>	<b>ug/kg</b>
<b>Benzo(a)pyrene</b>	<b>46</b>	<b>8.1</b>	<b>ug/kg</b>
<b>Chrysene</b>	<b>52</b>	<b>8.1</b>	<b>ug/kg</b>
<b>Dibenz(a,h)anthracene</b>	<b>10</b>	<b>8.1</b>	<b>ug/kg</b>
<b>Fluoranthene</b>	<b>95</b>	<b>8.1</b>	<b>ug/kg</b>
Fluorene	ND	8.1	ug/kg
<b>Indeno(1,2,3-cd)pyrene</b>	<b>33</b>	<b>8.1</b>	<b>ug/kg</b>
2-Methylnaphthalene	ND	8.1	ug/kg
1-Methylnaphthalene	ND	8.1	ug/kg
Naphthalene	ND	8.1	ug/kg
<b>Phenanthrene</b>	<b>38</b>	<b>8.1</b>	<b>ug/kg</b>
<b>Pyrene</b>	<b>73</b>	<b>8.1</b>	<b>ug/kg</b>

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	72	(24 - 112)
2-Fluorobiphenyl	70	(34 - 110)
Terphenyl-d14	87	(41 - 119)
Phenol-d5	83	(28 - 110)
2-Fluorophenol	84	(26 - 110)
2,4,6-Tribromophenol	84	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-7 (0-0.25)

GC Semivolatiles

Lot-Sample #...: A7H200102-017    Work Order #...: J47J01AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:45    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 5  
 % Moisture.....: 17    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	110	60	mg/kg
	PERCENT	RECOVERY	
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>	
C9 (nonane)	14 DIL	(10 - 110)	

**NOTE(S):**

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DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-7 (0-0.25)

General Chemistry

Lot-Sample #...: A7H200102-017    Work Order #...: J47J0    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:45    Date Received...: 08/18/07  
 % Moisture.....: 17

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	82.8	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-7 (1.5-2.5)

GC/MS Volatiles

Lot-Sample #...: A7H200102-018    Work Order #...: J47J21AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:46    Date Received...: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/25/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 1.01  
 % Moisture.....: 14    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	47	ug/kg
Ethylbenzene	ND	47	ug/kg
Toluene	ND	94	ug/kg
1,2,4-Trimethylbenzene	ND	230	ug/kg
1,3,5-Trimethylbenzene	ND	230	ug/kg
Xylenes (total)	ND	140	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	76	(59 - 138)
1,2-Dichloroethane-d4	93	(61 - 130)
Toluene-d8	96	(60 - 143)
4-Bromofluorobenzene	94	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

## ARCADIS of New York Inc

Client Sample ID: HA-7 (1.5-2.5)

## GC/MS Semivolatiles

Lot-Sample #...: A7H200102-018    Work Order #...: J47J21AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:46    Date Received...: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date...: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 1  
 % Moisture.....: 14    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	7.7	ug/kg
Acenaphthylene	ND	7.7	ug/kg
Anthracene	ND	7.7	ug/kg
Benzo(a)anthracene	ND	7.7	ug/kg
Benzo(b)fluoranthene	ND	7.7	ug/kg
Benzo(k)fluoranthene	ND	7.7	ug/kg
Benzo(ghi)perylene	ND	7.7	ug/kg
Benzo(a)pyrene	ND	7.7	ug/kg
Chrysene	ND	7.7	ug/kg
Dibenz(a,h)anthracene	ND	7.7	ug/kg
Fluoranthene	ND	7.7	ug/kg
Fluorene	ND	7.7	ug/kg
Indeno(1,2,3-cd)pyrene	ND	7.7	ug/kg
2-Methylnaphthalene	ND	7.7	ug/kg
1-Methylnaphthalene	ND	7.7	ug/kg
Naphthalene	ND	7.7	ug/kg
Phenanthrene	ND	7.7	ug/kg
Pyrene	ND	7.7	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	65	(24 - 112)
2-Fluorobiphenyl	65	(34 - 110)
Terphenyl-d14	97	(41 - 119)
Phenol-d5	78	(28 - 110)
2-Fluorophenol	80	(26 - 110)
2,4,6-Tribromophenol	81	(10 - 118)

**NOTE(S):**


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Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-7 (1.5-2.5)

GC Semivolatiles

Lot-Sample #...: A7H200102-018    Work Order #...: J47J21AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:46    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/23/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 1  
 % Moisture.....: 14    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	32	12	mg/kg

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	23	(10 - 110)

**NOTE(S):**

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Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-7 (1.5-2.5)

General Chemistry

Lot-Sample #...: A7H200102-018    Work Order #...: J47J2    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:46    Date Received...: 08/18/07  
 % Moisture.....: 14

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	86.4	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-8 (0-0.25)

GC/MS Volatiles

Lot-Sample #...: A7H200102-019    Work Order #...: J47J31AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:05    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/25/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 1.43  
 % Moisture.....: 27    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	78	ug/kg
Ethylbenzene	ND	78	ug/kg
Toluene	ND	160	ug/kg
1,2,4-Trimethylbenzene	ND	390	ug/kg
1,3,5-Trimethylbenzene	ND	390	ug/kg
Xylenes (total)	ND	230	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	76	(59 - 138)
1,2-Dichloroethane-d4	91	(61 - 130)
Toluene-d8	92	(60 - 143)
4-Bromofluorobenzene	91	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-8 (0-0.25)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-019    Work Order #...: J47J31AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:05    Date Received..: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 1  
 % Moisture.....: 27    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acenaphthene	ND	9.1	ug/kg
Acenaphthylene	ND	9.1	ug/kg
Anthracene	ND	9.1	ug/kg
<b>Benzo(a)anthracene</b>	<b>28</b>	<b>9.1</b>	<b>ug/kg</b>
<b>Benzo(b)fluoranthene</b>	<b>59</b>	<b>9.1</b>	<b>ug/kg</b>
<b>Benzo(k)fluoranthene</b>	<b>21</b>	<b>9.1</b>	<b>ug/kg</b>
<b>Benzo(ghi)perylene</b>	<b>30</b>	<b>9.1</b>	<b>ug/kg</b>
<b>Benzo(a)pyrene</b>	<b>34</b>	<b>9.1</b>	<b>ug/kg</b>
<b>Chrysene</b>	<b>40</b>	<b>9.1</b>	<b>ug/kg</b>
<b>Dibenz(a,h)anthracene</b>	<b>18</b>	<b>9.1</b>	<b>ug/kg</b>
<b>Fluoranthene</b>	<b>72</b>	<b>9.1</b>	<b>ug/kg</b>
Fluorene	ND	9.1	ug/kg
<b>Indeno(1,2,3-cd)pyrene</b>	<b>30</b>	<b>9.1</b>	<b>ug/kg</b>
2-Methylnaphthalene	ND	9.1	ug/kg
1-Methylnaphthalene	ND	9.1	ug/kg
Naphthalene	ND	9.1	ug/kg
<b>Phenanthrene</b>	<b>29</b>	<b>9.1</b>	<b>ug/kg</b>
<b>Pyrene</b>	<b>60</b>	<b>9.1</b>	<b>ug/kg</b>

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	69	(24 - 112)
2-Fluorobiphenyl	70	(34 - 110)
Terphenyl-d14	90	(41 - 119)
Phenol-d5	84	(28 - 110)
2-Fluorophenol	82	(26 - 110)
2,4,6-Tribromophenol	89	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-8 (0-0.25)

GC Semivolatiles

Lot-Sample #...: A7H200102-019    Work Order #...: J47J31AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:05    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 5  
 % Moisture.....: 27    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	120	68	mg/kg

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	11 DIL	(10 - 110)

**NOTE(S):**

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DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-8 (0-0.25)

General Chemistry

Lot-Sample #...: A7H200102-019    Work Order #...: J47J3    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:05    Date Received...: 08/18/07  
 % Moisture.....: 27

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	73.5	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-8 (1.5-2.5)

GC/MS Volatiles

Lot-Sample #...: A7H200102-020    Work Order #...: J47J51AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:06    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/25/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 0.95  
 % Moisture.....: 15    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	45	ug/kg
Ethylbenzene	ND	45	ug/kg
Toluene	ND	89	ug/kg
1,2,4-Trimethylbenzene	ND	220	ug/kg
1,3,5-Trimethylbenzene	ND	220	ug/kg
Xylenes (total)	ND	130	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	76	(59 - 138)
1,2-Dichloroethane-d4	89	(61 - 130)
Toluene-d8	92	(60 - 143)
4-Bromofluorobenzene	90	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-8 (1.5-2.5)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-020    Work Order #...: J47J51AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:06    Date Received..: 08/18/07  
 Prep Date.....: 08/20/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 1  
 % Moisture.....: 15    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	7.9	ug/kg
Acenaphthylene	ND	7.9	ug/kg
Anthracene	ND	7.9	ug/kg
Benzo(a)anthracene	ND	7.9	ug/kg
Benzo(b)fluoranthene	ND	7.9	ug/kg
Benzo(k)fluoranthene	ND	7.9	ug/kg
Benzo(ghi)perylene	ND	7.9	ug/kg
Benzo(a)pyrene	ND	7.9	ug/kg
Chrysene	ND	7.9	ug/kg
Dibenz(a,h)anthracene	ND	7.9	ug/kg
Fluoranthene	ND	7.9	ug/kg
Fluorene	ND	7.9	ug/kg
Indeno(1,2,3-cd)pyrene	ND	7.9	ug/kg
2-Methylnaphthalene	ND	7.9	ug/kg
1-Methylnaphthalene	ND	7.9	ug/kg
Naphthalene	ND	7.9	ug/kg
Phenanthrene	ND	7.9	ug/kg
Pyrene	ND	7.9	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	62	(24 - 112)
2-Fluorobiphenyl	62	(34 - 110)
Terphenyl-d14	99	(41 - 119)
Phenol-d5	75	(28 - 110)
2-Fluorophenol	77	(26 - 110)
2,4,6-Tribromophenol	78	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-8 (1.5-2.5)

GC Semivolatiles

Lot-Sample #...: A7H200102-020    Work Order #...: J47J51AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:06    Date Received...: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/24/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 1  
 % Moisture.....: 15    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	23	12	mg/kg

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	19	(10 - 110)

**NOTE(S):**

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Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-8 (1.5-2.5)

General Chemistry

Lot-Sample #...: A7H200102-020    Work Order #...: J47J5    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:06    Date Received...: 08/18/07  
 % Moisture.....: 15

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	84.9	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233083

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-9 (0-0.25)

GC/MS Volatiles

Lot-Sample #...: A7H200102-021    Work Order #...: J47J71AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:10    Date Received...: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/22/07  
 Prep Batch #...: 7235396  
 Dilution Factor: 1.64  
 % Moisture.....: 26    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	89	ug/kg
Ethylbenzene	ND	89	ug/kg
Toluene	ND	180	ug/kg
1,2,4-Trimethylbenzene	ND	440	ug/kg
1,3,5-Trimethylbenzene	ND	440	ug/kg
Xylenes (total)	ND	270	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	79	(59 - 138)
1,2-Dichloroethane-d4	87	(61 - 130)
Toluene-d8	81	(60 - 143)
4-Bromofluorobenzene	80	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-9 (0-0.25)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-021    Work Order #...: J47J71AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:10    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/22/07  
 Prep Batch #...: 7233044  
 Dilution Factor: 1  
 % Moisture.....: 26    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acenaphthene	ND	9.0	ug/kg
Acenaphthylene	ND	9.0	ug/kg
<b>Anthracene</b>	<b>18</b>	<b>9.0</b>	<b>ug/kg</b>
<b>Benzo(a)anthracene</b>	<b>50</b>	<b>9.0</b>	<b>ug/kg</b>
<b>Benzo(b)fluoranthene</b>	<b>94</b>	<b>9.0</b>	<b>ug/kg</b>
<b>Benzo(k)fluoranthene</b>	<b>34</b>	<b>9.0</b>	<b>ug/kg</b>
<b>Benzo(ghi)perylene</b>	<b>44</b>	<b>9.0</b>	<b>ug/kg</b>
<b>Benzo(a)pyrene</b>	<b>57</b>	<b>9.0</b>	<b>ug/kg</b>
<b>Chrysene</b>	<b>75</b>	<b>9.0</b>	<b>ug/kg</b>
Dibenz(a,h)anthracene	ND	9.0	ug/kg
<b>Fluoranthene</b>	<b>110</b>	<b>9.0</b>	<b>ug/kg</b>
Fluorene	ND	9.0	ug/kg
<b>Indeno(1,2,3-cd)pyrene</b>	<b>36</b>	<b>9.0</b>	<b>ug/kg</b>
<b>2-Methylnaphthalene</b>	<b>10</b>	<b>9.0</b>	<b>ug/kg</b>
<b>1-Methylnaphthalene</b>	<b>11</b>	<b>9.0</b>	<b>ug/kg</b>
<b>Naphthalene</b>	<b>10</b>	<b>9.0</b>	<b>ug/kg</b>
<b>Phenanthrene</b>	<b>56</b>	<b>9.0</b>	<b>ug/kg</b>
<b>Pyrene</b>	<b>85</b>	<b>9.0</b>	<b>ug/kg</b>

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	65	(24 - 112)
2-Fluorobiphenyl	69	(34 - 110)
Terphenyl-d14	81	(41 - 119)
Phenol-d5	72	(28 - 110)
2-Fluorophenol	72	(26 - 110)
2,4,6-Tribromophenol	77	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-9 (0-0.25)

GC Semivolatiles

Lot-Sample #...: A7H200102-021    Work Order #...: J47J71AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:10    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7233043  
 Dilution Factor: 5  
 % Moisture.....: 26    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	300	68	mg/kg

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	10 DIL	(10 - 110)

**NOTE(S):**

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DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-9 (0-0.25)

General Chemistry

Lot-Sample #...: A7H200102-021    Work Order #...: J47J7    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:10    Date Received...: 08/18/07  
 % Moisture.....: 26

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	74.0	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233085
		Dilution Factor: 1				

ARCADIS of New York Inc

Client Sample ID: HA-9 (1.5-2.5)

GC/MS Volatiles

Lot-Sample #...: A7H200102-022    Work Order #...: J47KA1AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:11    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/22/07  
 Prep Batch #...: 7235396  
 Dilution Factor: 1.06  
 % Moisture.....: 12    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	48	ug/kg
Ethylbenzene	ND	48	ug/kg
Toluene	ND	96	ug/kg
1,2,4-Trimethylbenzene	ND	240	ug/kg
1,3,5-Trimethylbenzene	ND	240	ug/kg
Xylenes (total)	ND	140	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	85	(59 - 138)
1,2-Dichloroethane-d4	97	(61 - 130)
Toluene-d8	90	(60 - 143)
4-Bromofluorobenzene	91	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-9 (1.5-2.5)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-022    Work Order #...: J47KA1AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:11    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7233044  
 Dilution Factor: 1  
 % Moisture.....: 12    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	7.5	ug/kg
Acenaphthylene	ND	7.5	ug/kg
Anthracene	ND	7.5	ug/kg
<b>Benzo(a)anthracene</b>	<b>13</b>	<b>7.5</b>	<b>ug/kg</b>
<b>Benzo(b)fluoranthene</b>	<b>14</b>	<b>7.5</b>	<b>ug/kg</b>
<b>Benzo(k)fluoranthene</b>	<b>8.2</b>	<b>7.5</b>	<b>ug/kg</b>
Benzo(ghi)perylene	ND	7.5	ug/kg
<b>Benzo(a)pyrene</b>	<b>12</b>	<b>7.5</b>	<b>ug/kg</b>
<b>Chrysene</b>	<b>16</b>	<b>7.5</b>	<b>ug/kg</b>
Dibenz(a,h)anthracene	ND	7.5	ug/kg
<b>Fluoranthene</b>	<b>28</b>	<b>7.5</b>	<b>ug/kg</b>
Fluorene	ND	7.5	ug/kg
Indeno(1,2,3-cd)pyrene	ND	7.5	ug/kg
2-Methylnaphthalene	ND	7.5	ug/kg
1-Methylnaphthalene	ND	7.5	ug/kg
Naphthalene	ND	7.5	ug/kg
<b>Phenanthrene</b>	<b>19</b>	<b>7.5</b>	<b>ug/kg</b>
<b>Pyrene</b>	<b>23</b>	<b>7.5</b>	<b>ug/kg</b>

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	70	(24 - 112)
2-Fluorobiphenyl	77	(34 - 110)
Terphenyl-d14	101	(41 - 119)
Phenol-d5	68	(28 - 110)
2-Fluorophenol	76	(26 - 110)
2,4,6-Tribromophenol	79	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-9 (1.5-2.5)

GC Semivolatiles

Lot-Sample #...: A7H200102-022    Work Order #...: J47KA1AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:11    Date Received...: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/23/07  
 Prep Batch #...: 7233043  
 Dilution Factor: 1  
 % Moisture.....: 12    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	20	11	mg/kg
	PERCENT	RECOVERY	
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>	
C9 (nonane)	30	(10 - 110)	

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-9 (1.5-2.5)

General Chemistry

Lot-Sample #...: A7H200102-022    Work Order #...: J47KA    Matrix.....: SO  
 Date Sampled...: 08/16/07 14:11    Date Received...: 08/18/07  
 % Moisture.....: 12

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	88.5	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233085

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-10 (1.5-2.5)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-023    Work Order #...: J47KC1AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 15:05    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7233044  
 Dilution Factor: 1  
 % Moisture.....: 12    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acenaphthene	ND	7.5	ug/kg
Acenaphthylene	ND	7.5	ug/kg
<b>Anthracene</b>	<b>15</b>	<b>7.5</b>	<b>ug/kg</b>
<b>Benzo(a)anthracene</b>	<b>34</b>	<b>7.5</b>	<b>ug/kg</b>
<b>Benzo(b)fluoranthene</b>	<b>51</b>	<b>7.5</b>	<b>ug/kg</b>
<b>Benzo(k)fluoranthene</b>	<b>22</b>	<b>7.5</b>	<b>ug/kg</b>
<b>Benzo(ghi)perylene</b>	<b>33</b>	<b>7.5</b>	<b>ug/kg</b>
<b>Benzo(a)pyrene</b>	<b>41</b>	<b>7.5</b>	<b>ug/kg</b>
<b>Chrysene</b>	<b>49</b>	<b>7.5</b>	<b>ug/kg</b>
Dibenz(a,h)anthracene	ND	7.5	ug/kg
<b>Fluoranthene</b>	<b>95</b>	<b>7.5</b>	<b>ug/kg</b>
Fluorene	ND	7.5	ug/kg
<b>Indeno(1,2,3-cd)pyrene</b>	<b>24</b>	<b>7.5</b>	<b>ug/kg</b>
2-Methylnaphthalene	ND	7.5	ug/kg
1-Methylnaphthalene	ND	7.5	ug/kg
Naphthalene	ND	7.5	ug/kg
<b>Phenanthrene</b>	<b>70</b>	<b>7.5</b>	<b>ug/kg</b>
<b>Pyrene</b>	<b>88</b>	<b>7.5</b>	<b>ug/kg</b>

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	81	(24 - 112)
2-Fluorobiphenyl	80	(34 - 110)
Terphenyl-d14	101	(41 - 119)
Phenol-d5	83	(28 - 110)
2-Fluorophenol	92	(26 - 110)
2,4,6-Tribromophenol	78	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-10 (1.5-2.5)

GC Semivolatiles

Lot-Sample #...: A7H200102-023    Work Order #...: J47KC2AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 15:05    Date Received..: 08/18/07  
 Prep Date.....: 08/27/07    Analysis Date..: 08/30/07  
 Prep Batch #...: 7239026  
 Dilution Factor: 5  
 % Moisture.....: 12    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	120	57	mg/kg
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
C9 (nonane)	16 DIL	(10 - 110)	

**NOTE(S):**

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DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-10 (1.5-2.5)

General Chemistry

Lot-Sample #...: A7H200102-023    Work Order #...: J47KC    Matrix.....: SO  
 Date Sampled...: 08/16/07 15:05    Date Received...: 08/18/07  
 % Moisture.....: 12

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	88.4	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233085

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-11 (0-0.25)

GC/MS Volatiles

Lot-Sample #...: A7H200102-024    Work Order #...: J47KE1AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 12:40    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/22/07  
 Prep Batch #...: 7235396  
 Dilution Factor: 1.18  
 % Moisture.....: 14    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	55	ug/kg
Ethylbenzene	ND	55	ug/kg
Toluene	ND	110	ug/kg
1,2,4-Trimethylbenzene	ND	270	ug/kg
1,3,5-Trimethylbenzene	ND	270	ug/kg
Xylenes (total)	ND	160	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	81	(59 - 138)
1,2-Dichloroethane-d4	92	(61 - 130)
Toluene-d8	88	(60 - 143)
4-Bromofluorobenzene	86	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-11 (0-0.25)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-024    Work Order #...: J47KE1AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 12:40    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/26/07  
 Prep Batch #...: 7233044  
 Dilution Factor: 1  
 % Moisture.....: 14    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acenaphthene	ND	7.8	ug/kg
Acenaphthylene	ND	7.8	ug/kg
<b>Anthracene</b>	<b>12</b>	<b>7.8</b>	<b>ug/kg</b>
<b>Benzo(a)anthracene</b>	<b>56</b>	<b>7.8</b>	<b>ug/kg</b>
<b>Benzo(b)fluoranthene</b>	<b>94</b>	<b>7.8</b>	<b>ug/kg</b>
<b>Benzo(k)fluoranthene</b>	<b>36</b>	<b>7.8</b>	<b>ug/kg</b>
<b>Benzo(ghi)perylene</b>	<b>50</b>	<b>7.8</b>	<b>ug/kg</b>
<b>Benzo(a)pyrene</b>	<b>53</b>	<b>7.8</b>	<b>ug/kg</b>
<b>Chrysene</b>	<b>78</b>	<b>7.8</b>	<b>ug/kg</b>
Dibenz(a,h)anthracene	ND	7.8	ug/kg
<b>Fluoranthene</b>	<b>99</b>	<b>7.8</b>	<b>ug/kg</b>
Fluorene	ND	7.8	ug/kg
<b>Indeno(1,2,3-cd)pyrene</b>	<b>46</b>	<b>7.8</b>	<b>ug/kg</b>
2-Methylnaphthalene	ND	7.8	ug/kg
1-Methylnaphthalene	ND	7.8	ug/kg
Naphthalene	ND	7.8	ug/kg
<b>Phenanthrene</b>	<b>47</b>	<b>7.8</b>	<b>ug/kg</b>
<b>Pyrene</b>	<b>87</b>	<b>7.8</b>	<b>ug/kg</b>

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	71	(24 - 112)
2-Fluorobiphenyl	69	(34 - 110)
Terphenyl-d14	83	(41 - 119)
Phenol-d5	71	(28 - 110)
2-Fluorophenol	76	(26 - 110)
2,4,6-Tribromophenol	63	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-11 (0-0.25)

GC Semivolatiles

Lot-Sample #...: A7H200102-024    Work Order #...: J47KE1AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 12:40    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7233043  
 Dilution Factor: 5  
 % Moisture.....: 14    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	130	58	mg/kg
	PERCENT	RECOVERY	
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>	
C9 (nonane)	19 DIL	(10 - 110)	

**NOTE(S):**

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DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-11 (0-0.25)

General Chemistry

Lot-Sample #...: A7H200102-024    Work Order #...: J47KE    Matrix.....: SO  
 Date Sampled...: 08/16/07 12:40    Date Received...: 08/18/07  
 % Moisture.....: 14

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	85.9	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233085

Dilution Factor: 1

## ARCADIS of New York Inc

Client Sample ID: HA-11 (1.5-2.5)

## GC/MS Volatiles

Lot-Sample #...: A7H200102-025    Work Order #...: J47KF1AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 12:41    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/22/07  
 Prep Batch #...: 7235396  
 Dilution Factor: 1.11  
 % Moisture.....: 9.2    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	49	ug/kg
Ethylbenzene	ND	49	ug/kg
Toluene	ND	98	ug/kg
1,2,4-Trimethylbenzene	ND	240	ug/kg
1,3,5-Trimethylbenzene	ND	240	ug/kg
Xylenes (total)	ND	150	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	82	(59 - 138)
1,2-Dichloroethane-d4	96	(61 - 130)
Toluene-d8	92	(60 - 143)
4-Bromofluorobenzene	91	(47 - 158)

**NOTE(S):**


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Results and reporting limits have been adjusted for dry weight.

## ARCADIS of New York Inc

Client Sample ID: HA-11 (1.5-2.5)

## GC/MS Semivolatiles

Lot-Sample #...: A7H200102-025    Work Order #...: J47KF1AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 12:41    Date Received...: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/23/07  
 Prep Batch #...: 7233044  
 Dilution Factor: 1  
 % Moisture.....: 9.2    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	7.3	ug/kg
Acenaphthylene	ND	7.3	ug/kg
Anthracene	ND	7.3	ug/kg
Benzo(a)anthracene	ND	7.3	ug/kg
Benzo(b)fluoranthene	ND	7.3	ug/kg
Benzo(k)fluoranthene	ND	7.3	ug/kg
Benzo(ghi)perylene	ND	7.3	ug/kg
Benzo(a)pyrene	ND	7.3	ug/kg
Chrysene	ND	7.3	ug/kg
Dibenz(a,h)anthracene	ND	7.3	ug/kg
Fluoranthene	ND	7.3	ug/kg
Fluorene	ND	7.3	ug/kg
Indeno(1,2,3-cd)pyrene	ND	7.3	ug/kg
2-Methylnaphthalene	ND	7.3	ug/kg
1-Methylnaphthalene	ND	7.3	ug/kg
Naphthalene	ND	7.3	ug/kg
Phenanthrene	ND	7.3	ug/kg
Pyrene	ND	7.3	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	81	(24 - 112)
2-Fluorobiphenyl	81	(34 - 110)
Terphenyl-d14	105	(41 - 119)
Phenol-d5	75	(28 - 110)
2-Fluorophenol	84	(26 - 110)
2,4,6-Tribromophenol	83	(10 - 118)

**NOTE(S):**


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Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-11 (1.5-2.5)

GC Semivolatiles

Lot-Sample #...: A7H200102-025    Work Order #...: J47KF1AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 12:41    Date Received...: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/23/07  
 Prep Batch #...: 7233043  
 Dilution Factor: 1  
 % Moisture.....: 9.2    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	16	11	mg/kg
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
C9 (nonane)	17	(10 - 110)	

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-11 (1.5-2.5)

General Chemistry

Lot-Sample #...: A7H200102-025    Work Order #...: J47KF    Matrix.....: SO  
 Date Sampled...: 08/16/07 12:41    Date Received...: 08/18/07  
 % Moisture.....: 9.2

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	90.8	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233085

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-12 (0-0.25)

GC/MS Volatiles

Lot-Sample #...: A7H200102-026    Work Order #...: J47KP1AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 12:55    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/22/07  
 Prep Batch #...: 7235396  
 Dilution Factor: 1.16  
 % Moisture.....: 24    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	61	ug/kg
Ethylbenzene	ND	61	ug/kg
Toluene	ND	120	ug/kg
1,2,4-Trimethylbenzene	ND	310	ug/kg
1,3,5-Trimethylbenzene	ND	310	ug/kg
Xylenes (total)	ND	180	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	93	(59 - 138)
1,2-Dichloroethane-d4	107	(61 - 130)
Toluene-d8	103	(60 - 143)
4-Bromofluorobenzene	104	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-12 (0-0.25)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-026    Work Order #...: J47KP1AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 12:55    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7233044  
 Dilution Factor: 1  
 % Moisture.....: 24    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acenaphthene	ND	8.8	ug/kg
Acenaphthylene	ND	8.8	ug/kg
<b>Anthracene</b>	<b>15</b>	<b>8.8</b>	<b>ug/kg</b>
<b>Benzo(a)anthracene</b>	<b>52</b>	<b>8.8</b>	<b>ug/kg</b>
<b>Benzo(b)fluoranthene</b>	<b>92</b>	<b>8.8</b>	<b>ug/kg</b>
<b>Benzo(k)fluoranthene</b>	<b>21</b>	<b>8.8</b>	<b>ug/kg</b>
<b>Benzo(ghi)perylene</b>	<b>51</b>	<b>8.8</b>	<b>ug/kg</b>
<b>Benzo(a)pyrene</b>	<b>63</b>	<b>8.8</b>	<b>ug/kg</b>
<b>Chrysene</b>	<b>72</b>	<b>8.8</b>	<b>ug/kg</b>
Dibenz(a,h)anthracene	ND	8.8	ug/kg
<b>Fluoranthene</b>	<b>120</b>	<b>8.8</b>	<b>ug/kg</b>
Fluorene	ND	8.8	ug/kg
<b>Indeno(1,2,3-cd)pyrene</b>	<b>41</b>	<b>8.8</b>	<b>ug/kg</b>
2-Methylnaphthalene	ND	8.8	ug/kg
1-Methylnaphthalene	ND	8.8	ug/kg
Naphthalene	ND	8.8	ug/kg
<b>Phenanthrene</b>	<b>51</b>	<b>8.8</b>	<b>ug/kg</b>
<b>Pyrene</b>	<b>100</b>	<b>8.8</b>	<b>ug/kg</b>

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	66	(24 - 112)
2-Fluorobiphenyl	68	(34 - 110)
Terphenyl-d14	83	(41 - 119)
Phenol-d5	75	(28 - 110)
2-Fluorophenol	79	(26 - 110)
2,4,6-Tribromophenol	77	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-12 (0-0.25)

GC Semivolatiles

Lot-Sample #...: A7H200102-026    Work Order #...: J47KP1AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 12:55    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7233043  
 Dilution Factor: 5  
 % Moisture.....: 24    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	120	66	mg/kg
	PERCENT	RECOVERY	
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>	
C9 (nonane)	13 DIL	(10 - 110)	

**NOTE(S):**

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DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-12 (0-0.25)

General Chemistry

Lot-Sample #...: A7H200102-026    Work Order #...: J47KP    Matrix.....: SO  
 Date Sampled...: 08/16/07 12:55    Date Received...: 08/18/07  
 % Moisture.....: 24

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	76.0	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233085

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-12 (1.5-2.5)

GC/MS Volatiles

Lot-Sample #...: A7H200102-027    Work Order #...: J47KT1AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 12:56    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/23/07  
 Prep Batch #...: 7235396  
 Dilution Factor: 1.11  
 % Moisture.....: 14    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	52	ug/kg
Ethylbenzene	ND	52	ug/kg
Toluene	ND	100	ug/kg
1,2,4-Trimethylbenzene	ND	260	ug/kg
1,3,5-Trimethylbenzene	ND	260	ug/kg
Xylenes (total)	ND	150	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	81	(59 - 138)
1,2-Dichloroethane-d4	96	(61 - 130)
Toluene-d8	89	(60 - 143)
4-Bromofluorobenzene	90	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-12 (1.5-2.5)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-027    Work Order #...: J47KT1AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 12:56    Date Received...: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/23/07  
 Prep Batch #...: 7233044  
 Dilution Factor: 1  
 % Moisture.....: 14    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	7.8	ug/kg
Acenaphthylene	ND	7.8	ug/kg
Anthracene	ND	7.8	ug/kg
Benzo(a)anthracene	ND	7.8	ug/kg
Benzo(b)fluoranthene	ND	7.8	ug/kg
Benzo(k)fluoranthene	ND	7.8	ug/kg
Benzo(ghi)perylene	ND	7.8	ug/kg
Benzo(a)pyrene	ND	7.8	ug/kg
Chrysene	ND	7.8	ug/kg
Dibenz(a,h)anthracene	ND	7.8	ug/kg
Fluoranthene	ND	7.8	ug/kg
Fluorene	ND	7.8	ug/kg
Indeno(1,2,3-cd)pyrene	ND	7.8	ug/kg
2-Methylnaphthalene	ND	7.8	ug/kg
1-Methylnaphthalene	ND	7.8	ug/kg
Naphthalene	ND	7.8	ug/kg
Phenanthrene	ND	7.8	ug/kg
Pyrene	ND	7.8	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	71	(24 - 112)
2-Fluorobiphenyl	73	(34 - 110)
Terphenyl-d14	104	(41 - 119)
Phenol-d5	74	(28 - 110)
2-Fluorophenol	80	(26 - 110)
2,4,6-Tribromophenol	72	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-12 (1.5-2.5)

GC Semivolatiles

Lot-Sample #...: A7H200102-027    Work Order #...: J47KT2AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 12:56    Date Received..: 08/18/07  
 Prep Date.....: 08/27/07    Analysis Date..: 08/29/07  
 Prep Batch #...: 7239026  
 Dilution Factor: 1  
 % Moisture.....: 14    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	21	12	mg/kg

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	19	(10 - 110)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-12 (1.5-2.5)

General Chemistry

Lot-Sample #...: A7H200102-027    Work Order #...: J47KT    Matrix.....: SO  
 Date Sampled...: 08/16/07 12:56    Date Received...: 08/18/07  
 % Moisture.....: 14

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	86.0	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233085

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-13 (0-0.25)

GC/MS Volatiles

Lot-Sample #...: A7H200102-028    Work Order #...: J47KW1AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:05    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/23/07  
 Prep Batch #...: 7235396  
 Dilution Factor: 1.19  
 % Moisture.....: 19    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	58	ug/kg
Ethylbenzene	ND	58	ug/kg
Toluene	ND	120	ug/kg
1,2,4-Trimethylbenzene	ND	290	ug/kg
1,3,5-Trimethylbenzene	ND	290	ug/kg
Xylenes (total)	ND	180	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	86	(59 - 138)
1,2-Dichloroethane-d4	103	(61 - 130)
Toluene-d8	98	(60 - 143)
4-Bromofluorobenzene	100	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-13 (0-0.25)

## GC/MS Semivolatiles

Lot-Sample #...: A7H200102-028    Work Order #...: J47KW1AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:05    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7233044  
 Dilution Factor: 1  
 % Moisture.....: 19    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acenaphthene	ND	8.2	ug/kg
Acenaphthylene	ND	8.2	ug/kg
<b>Anthracene</b>	<b>8.5</b>	<b>8.2</b>	<b>ug/kg</b>
<b>Benzo(a)anthracene</b>	<b>36</b>	<b>8.2</b>	<b>ug/kg</b>
<b>Benzo(b)fluoranthene</b>	<b>79</b>	<b>8.2</b>	<b>ug/kg</b>
<b>Benzo(k)fluoranthene</b>	<b>31</b>	<b>8.2</b>	<b>ug/kg</b>
<b>Benzo(ghi)perylene</b>	<b>43</b>	<b>8.2</b>	<b>ug/kg</b>
<b>Benzo(a)pyrene</b>	<b>48</b>	<b>8.2</b>	<b>ug/kg</b>
<b>Chrysene</b>	<b>64</b>	<b>8.2</b>	<b>ug/kg</b>
Dibenz(a,h)anthracene	ND	8.2	ug/kg
<b>Fluoranthene</b>	<b>86</b>	<b>8.2</b>	<b>ug/kg</b>
Fluorene	ND	8.2	ug/kg
<b>Indeno(1,2,3-cd)pyrene</b>	<b>32</b>	<b>8.2</b>	<b>ug/kg</b>
<b>2-Methylnaphthalene</b>	<b>11</b>	<b>8.2</b>	<b>ug/kg</b>
1-Methylnaphthalene	ND	8.2	ug/kg
<b>Naphthalene</b>	<b>11</b>	<b>8.2</b>	<b>ug/kg</b>
<b>Phenanthrene</b>	<b>36</b>	<b>8.2</b>	<b>ug/kg</b>
<b>Pyrene</b>	<b>72</b>	<b>8.2</b>	<b>ug/kg</b>

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	75	(24 - 112)
2-Fluorobiphenyl	69	(34 - 110)
Terphenyl-d14	88	(41 - 119)
Phenol-d5	83	(28 - 110)
2-Fluorophenol	84	(26 - 110)
2,4,6-Tribromophenol	80	(10 - 118)

**NOTE(S):**


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Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-13 (0-0.25)

GC Semivolatiles

Lot-Sample #...: A7H200102-028    Work Order #...: J47KW1AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:05    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7233043  
 Dilution Factor: 5  
 % Moisture.....: 19    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	170	61	mg/kg

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	14 DIL	(10 - 110)

**NOTE(S):**

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DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-13 (0-0.25)

General Chemistry

Lot-Sample #...: A7H200102-028    Work Order #...: J47KW    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:05    Date Received...: 08/18/07  
 % Moisture.....: 19

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	81.4	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233085

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-13 (1.5-2.5)

GC/MS Volatiles

Lot-Sample #...: A7H200102-029    Work Order #...: J47KX1AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:06    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7235396  
 Dilution Factor: 1.06  
 % Moisture.....: 9.0    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	47	ug/kg
Ethylbenzene	ND	47	ug/kg
Toluene	ND	93	ug/kg
1,2,4-Trimethylbenzene	ND	230	ug/kg
1,3,5-Trimethylbenzene	ND	230	ug/kg
Xylenes (total)	ND	140	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	80	(59 - 138)
1,2-Dichloroethane-d4	98	(61 - 130)
Toluene-d8	95	(60 - 143)
4-Bromofluorobenzene	94	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-13 (1.5-2.5)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-029    Work Order #...: J47KX1AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:06    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7233044  
 Dilution Factor: 1  
 % Moisture.....: 9.0    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	7.3	ug/kg
Acenaphthylene	ND	7.3	ug/kg
Anthracene	ND	7.3	ug/kg
Benzo(a)anthracene	ND	7.3	ug/kg
Benzo(b)fluoranthene	ND	7.3	ug/kg
Benzo(k)fluoranthene	ND	7.3	ug/kg
Benzo(ghi)perylene	ND	7.3	ug/kg
Benzo(a)pyrene	ND	7.3	ug/kg
Chrysene	ND	7.3	ug/kg
Dibenz(a,h)anthracene	ND	7.3	ug/kg
Fluoranthene	ND	7.3	ug/kg
Fluorene	ND	7.3	ug/kg
Indeno(1,2,3-cd)pyrene	ND	7.3	ug/kg
2-Methylnaphthalene	ND	7.3	ug/kg
1-Methylnaphthalene	ND	7.3	ug/kg
Naphthalene	ND	7.3	ug/kg
Phenanthrene	ND	7.3	ug/kg
Pyrene	ND	7.3	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	80	(24 - 112)
2-Fluorobiphenyl	78	(34 - 110)
Terphenyl-d14	101	(41 - 119)
Phenol-d5	76	(28 - 110)
2-Fluorophenol	86	(26 - 110)
2,4,6-Tribromophenol	70	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-13 (1.5-2.5)

GC Semivolatiles

Lot-Sample #...: A7H200102-029    Work Order #...: J47KX2AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:06    Date Received...: 08/18/07  
 Prep Date.....: 08/27/07    Analysis Date...: 08/29/07  
 Prep Batch #...: 7239026  
 Dilution Factor: 1  
 % Moisture.....: 9.0    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	30	11	mg/kg
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
C9 (nonane)	24	(10 - 110)	

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-13 (1.5-2.5)

General Chemistry

Lot-Sample #...: A7H200102-029    Work Order #...: J47KX    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:06    Date Received...: 08/18/07  
 % Moisture.....: 9.0

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	91.0	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233085

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-14 (0-0.25)

GC/MS Volatiles

Lot-Sample #...: A7H200102-030    Work Order #...: J47K11AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:10    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/23/07  
 Prep Batch #...: 7235396  
 Dilution Factor: 1.32  
 % Moisture.....: 18    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	64	ug/kg
Ethylbenzene	ND	64	ug/kg
Toluene	ND	130	ug/kg
1,2,4-Trimethylbenzene	ND	320	ug/kg
1,3,5-Trimethylbenzene	ND	320	ug/kg
Xylenes (total)	ND	190	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	80	(59 - 138)
1,2-Dichloroethane-d4	97	(61 - 130)
Toluene-d8	90	(60 - 143)
4-Bromofluorobenzene	89	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-14 (0-0.25)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-030    Work Order #...: J47K11AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:10    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/24/07  
 Prep Batch #...: 7233044  
 Dilution Factor: 1  
 % Moisture.....: 18    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acenaphthene	ND	8.1	ug/kg
Acenaphthylene	ND	8.1	ug/kg
<b>Anthracene</b>	<b>11</b>	<b>8.1</b>	<b>ug/kg</b>
<b>Benzo(a)anthracene</b>	<b>49</b>	<b>8.1</b>	<b>ug/kg</b>
<b>Benzo(b)fluoranthene</b>	<b>96</b>	<b>8.1</b>	<b>ug/kg</b>
<b>Benzo(k)fluoranthene</b>	<b>47</b>	<b>8.1</b>	<b>ug/kg</b>
<b>Benzo(ghi)perylene</b>	<b>47</b>	<b>8.1</b>	<b>ug/kg</b>
<b>Benzo(a)pyrene</b>	<b>61</b>	<b>8.1</b>	<b>ug/kg</b>
<b>Chrysene</b>	<b>76</b>	<b>8.1</b>	<b>ug/kg</b>
Dibenz(a,h)anthracene	ND	8.1	ug/kg
<b>Fluoranthene</b>	<b>120</b>	<b>8.1</b>	<b>ug/kg</b>
<b>Fluorene</b>	<b>10</b>	<b>8.1</b>	<b>ug/kg</b>
<b>Indeno(1,2,3-cd)pyrene</b>	<b>40</b>	<b>8.1</b>	<b>ug/kg</b>
2-Methylnaphthalene	ND	8.1	ug/kg
1-Methylnaphthalene	ND	8.1	ug/kg
Naphthalene	ND	8.1	ug/kg
<b>Phenanthrene</b>	<b>49</b>	<b>8.1</b>	<b>ug/kg</b>
<b>Pyrene</b>	<b>93</b>	<b>8.1</b>	<b>ug/kg</b>

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	87	(24 - 112)
2-Fluorobiphenyl	77	(34 - 110)
Terphenyl-d14	93	(41 - 119)
Phenol-d5	93	(28 - 110)
2-Fluorophenol	92	(26 - 110)
2,4,6-Tribromophenol	89	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-14 (0-0.25)

GC Semivolatiles

**Lot-Sample #...**: A7H200102-030    **Work Order #...**: J47K11AE    **Matrix.....**: SO  
**Date Sampled...**: 08/16/07 13:10    **Date Received..**: 08/18/07  
**Prep Date.....**: 08/21/07    **Analysis Date..**: 08/23/07  
**Prep Batch #...**: 7233043  
**Dilution Factor**: 5  
**% Moisture.....**: 18    **Method.....**: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	140	61	mg/kg
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
C9 (nonane)	15 DIL	(10 - 110)	

**NOTE(S):**

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DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-14 (0-0.25)

General Chemistry

Lot-Sample #...: A7H200102-030    Work Order #...: J47K1    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:10    Date Received...: 08/18/07  
 % Moisture.....: 18

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	82.4	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233085

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-14 (1.5-2.5)

GC/MS Volatiles

Lot-Sample #...: A7H200102-031    Work Order #...: J47K21AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:11    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/23/07  
 Prep Batch #...: 7235396  
 Dilution Factor: 0.91  
 % Moisture.....: 14    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	42	ug/kg
Ethylbenzene	ND	42	ug/kg
Toluene	ND	84	ug/kg
1,2,4-Trimethylbenzene	ND	210	ug/kg
1,3,5-Trimethylbenzene	ND	210	ug/kg
Xylenes (total)	ND	130	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	86	(59 - 138)
1,2-Dichloroethane-d4	101	(61 - 130)
Toluene-d8	98	(60 - 143)
4-Bromofluorobenzene	97	(47 - 158)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-14 (1.5-2.5)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-031    Work Order #...: J47K21AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:11    Date Received...: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/23/07  
 Prep Batch #...: 7233044  
 Dilution Factor: 1  
 % Moisture.....: 14    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	7.7	ug/kg
Acenaphthylene	ND	7.7	ug/kg
Anthracene	ND	7.7	ug/kg
Benzo(a)anthracene	ND	7.7	ug/kg
Benzo(b)fluoranthene	ND	7.7	ug/kg
Benzo(k)fluoranthene	ND	7.7	ug/kg
Benzo(ghi)perylene	ND	7.7	ug/kg
Benzo(a)pyrene	ND	7.7	ug/kg
Chrysene	ND	7.7	ug/kg
Dibenz(a,h)anthracene	ND	7.7	ug/kg
Fluoranthene	ND	7.7	ug/kg
Fluorene	ND	7.7	ug/kg
Indeno(1,2,3-cd)pyrene	ND	7.7	ug/kg
2-Methylnaphthalene	ND	7.7	ug/kg
1-Methylnaphthalene	ND	7.7	ug/kg
Naphthalene	ND	7.7	ug/kg
Phenanthrene	ND	7.7	ug/kg
Pyrene	ND	7.7	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	79	(24 - 112)
2-Fluorobiphenyl	78	(34 - 110)
Terphenyl-d14	98	(41 - 119)
Phenol-d5	81	(28 - 110)
2-Fluorophenol	89	(26 - 110)
2,4,6-Tribromophenol	75	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-14 (1.5-2.5)

GC Semivolatiles

**Lot-Sample #...**: A7H200102-031    **Work Order #...**: J47K21AE    **Matrix.....**: SO  
**Date Sampled...**: 08/16/07 13:11    **Date Received..**: 08/18/07  
**Prep Date.....**: 08/21/07    **Analysis Date..**: 08/23/07  
**Prep Batch #...**: 7233043  
**Dilution Factor**: 1  
**% Moisture.....**: 14    **Method.....**: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	ND	12	mg/kg
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
C9 (nonane)	22	(10 - 110)	

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-14 (1.5-2.5)

General Chemistry

Lot-Sample #...: A7H200102-031    Work Order #...: J47K2    Matrix.....: SO  
 Date Sampled...: 08/16/07 13:11    Date Received...: 08/18/07  
 % Moisture.....: 14

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	86.2	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233085

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-15 (1.5-2.5)

GC/MS Volatiles

Lot-Sample #...: A7H200102-032    Work Order #...: J47K41AC    Matrix.....: SO  
 Date Sampled...: 08/16/07 15:25    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/23/07  
 Prep Batch #...: 7235396  
 Dilution Factor: 1  
 % Moisture.....: 10    Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Benzene	ND	45	ug/kg
Ethylbenzene	ND	45	ug/kg
Toluene	ND	89	ug/kg
1,2,4-Trimethylbenzene	ND	220	ug/kg
1,3,5-Trimethylbenzene	ND	220	ug/kg
Xylenes (total)	ND	130	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	111	(59 - 138)
1,2-Dichloroethane-d4	136 *	(61 - 130)
Toluene-d8	131	(60 - 143)
4-Bromofluorobenzene	127	(47 - 158)

**NOTE(S):**

\* Surrogate recovery is outside stated control limits.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-15 (1.5-2.5)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-032    Work Order #...: J47K41AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 15:25    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/26/07  
 Prep Batch #...: 7233044  
 Dilution Factor: 1  
 % Moisture.....: 10    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acenaphthene	17	7.4	ug/kg
Acenaphthylene	19	7.4	ug/kg
Anthracene	48	7.4	ug/kg
Benzo(a)anthracene	190	7.4	ug/kg
Benzo(b)fluoranthene	240	7.4	ug/kg
Benzo(k)fluoranthene	120	7.4	ug/kg
Benzo(ghi)perylene	120	7.4	ug/kg
Benzo(a)pyrene	180	7.4	ug/kg
Chrysene	220	7.4	ug/kg
Dibenz(a,h)anthracene	30	7.4	ug/kg
Fluoranthene	440	7.4	ug/kg
Fluorene	31	7.4	ug/kg
Indeno(1,2,3-cd)pyrene	100	7.4	ug/kg
2-Methylnaphthalene	8.5	7.4	ug/kg
1-Methylnaphthalene	10	7.4	ug/kg
Naphthalene	ND	7.4	ug/kg
Phenanthrene	220	7.4	ug/kg
Pyrene	360	7.4	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	81	(24 - 112)
2-Fluorobiphenyl	78	(34 - 110)
Terphenyl-d14	95	(41 - 119)
Phenol-d5	85	(28 - 110)
2-Fluorophenol	90	(26 - 110)
2,4,6-Tribromophenol	82	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-15 (1.5-2.5)

GC Semivolatiles

Lot-Sample #...: A7H200102-032    Work Order #...: J47K41AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 15:25    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/25/07  
 Prep Batch #...: 7233043  
 Dilution Factor: 2  
 % Moisture.....: 10    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	67	22	mg/kg
<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>	
	<u>RECOVERY</u>	<u>LIMITS</u>	
C9 (nonane)	21	(10 - 110)	

**NOTE(S):**

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Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-15 (1.5-2.5)

General Chemistry

Lot-Sample #...: A7H200102-032    Work Order #...: J47K4    Matrix.....: SO  
 Date Sampled...: 08/16/07 15:25    Date Received...: 08/18/07  
 % Moisture.....: 10

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	89.6	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233085

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-16 (1.5-2.5)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-033    Work Order #...: J47K51AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 15:45    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/26/07  
 Prep Batch #...: 7233044  
 Dilution Factor: 1  
 % Moisture.....: 21    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	8.5	ug/kg
<b>Acenaphthylene</b>	<b>15</b>	<b>8.5</b>	<b>ug/kg</b>
<b>Anthracene</b>	<b>17</b>	<b>8.5</b>	<b>ug/kg</b>
<b>Benzo(a)anthracene</b>	<b>79</b>	<b>8.5</b>	<b>ug/kg</b>
<b>Benzo(b)fluoranthene</b>	<b>150</b>	<b>8.5</b>	<b>ug/kg</b>
<b>Benzo(k)fluoranthene</b>	<b>66</b>	<b>8.5</b>	<b>ug/kg</b>
<b>Benzo(ghi)perylene</b>	<b>80</b>	<b>8.5</b>	<b>ug/kg</b>
<b>Benzo(a)pyrene</b>	<b>100</b>	<b>8.5</b>	<b>ug/kg</b>
<b>Chrysene</b>	<b>110</b>	<b>8.5</b>	<b>ug/kg</b>
Dibenz(a,h)anthracene	ND	8.5	ug/kg
<b>Fluoranthene</b>	<b>130</b>	<b>8.5</b>	<b>ug/kg</b>
Fluorene	ND	8.5	ug/kg
<b>Indeno(1,2,3-cd)pyrene</b>	<b>67</b>	<b>8.5</b>	<b>ug/kg</b>
2-Methylnaphthalene	ND	8.5	ug/kg
1-Methylnaphthalene	ND	8.5	ug/kg
Naphthalene	ND	8.5	ug/kg
<b>Phenanthrene</b>	<b>37</b>	<b>8.5</b>	<b>ug/kg</b>
<b>Pyrene</b>	<b>120</b>	<b>8.5</b>	<b>ug/kg</b>

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	77	(24 - 112)
2-Fluorobiphenyl	74	(34 - 110)
Terphenyl-d14	97	(41 - 119)
Phenol-d5	81	(28 - 110)
2-Fluorophenol	83	(26 - 110)
2,4,6-Tribromophenol	92	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-16 (1.5-2.5)

GC Semivolatiles

Lot-Sample #...: A7H200102-033    Work Order #...: J47K51AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 15:45    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7233043  
 Dilution Factor: 5  
 % Moisture.....: 21    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	67	63	mg/kg

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	16 DIL	(10 - 110)

**NOTE(S):**

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DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.  
 Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-16 (1.5-2.5)

General Chemistry

Lot-Sample #...: A7H200102-033    Work Order #...: J47K5    Matrix.....: SO  
 Date Sampled...: 08/16/07 15:45    Date Received...: 08/18/07  
 % Moisture.....: 21

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	78.8	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233085

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-17 (1.5-2.5)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-034    Work Order #...: J47K61AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 15:35    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/26/07  
 Prep Batch #...: 7233044  
 Dilution Factor: 1  
 % Moisture.....: 11    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acenaphthene	13	7.5	ug/kg
Acenaphthylene	ND	7.5	ug/kg
Anthracene	60	7.5	ug/kg
Benzo(a)anthracene	160	7.5	ug/kg
Benzo(b)fluoranthene	140	7.5	ug/kg
Benzo(k)fluoranthene	88	7.5	ug/kg
Benzo(ghi)perylene	76	7.5	ug/kg
Benzo(a)pyrene	140	7.5	ug/kg
Chrysene	140	7.5	ug/kg
Dibenz(a,h)anthracene	18	7.5	ug/kg
Fluoranthene	320	7.5	ug/kg
Fluorene	33	7.5	ug/kg
Indeno(1,2,3-cd)pyrene	64	7.5	ug/kg
2-Methylnaphthalene	8.4	7.5	ug/kg
1-Methylnaphthalene	8.3	7.5	ug/kg
Naphthalene	8.1	7.5	ug/kg
Phenanthrene	210	7.5	ug/kg
Pyrene	250	7.5	ug/kg

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	68	(24 - 112)
2-Fluorobiphenyl	68	(34 - 110)
Terphenyl-d14	86	(41 - 119)
Phenol-d5	77	(28 - 110)
2-Fluorophenol	74	(26 - 110)
2,4,6-Tribromophenol	64	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-17 (1.5-2.5)

GC Semivolatiles

Lot-Sample #...: A7H200102-034    Work Order #...: J47K61AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 15:35    Date Received...: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date...: 08/25/07  
 Prep Batch #...: 7233043  
 Dilution Factor: 1  
 % Moisture.....: 11    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	33	11	mg/kg
<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>	
	<u>RECOVERY</u>	<u>LIMITS</u>	
C9 (nonane)	18	(10 - 110)	

**NOTE(S):**

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Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-17 (1.5-2.5)

General Chemistry

Lot-Sample #...: A7H200102-034    Work Order #...: J47K6    Matrix.....: SO  
 Date Sampled...: 08/16/07 15:35    Date Received...: 08/18/07  
 % Moisture.....: 11

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	88.5	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233085

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: HA-18 (1.5-2.5)

GC/MS Semivolatiles

Lot-Sample #...: A7H200102-035    Work Order #...: J47K71AD    Matrix.....: SO  
 Date Sampled...: 08/16/07 15:15    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7233044  
 Dilution Factor: 1  
 % Moisture.....: 8.6    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Acenaphthene	ND	7.3	ug/kg
Acenaphthylene	ND	7.3	ug/kg
Anthracene	ND	7.3	ug/kg
Benzo(a)anthracene	ND	7.3	ug/kg
Benzo(b)fluoranthene	ND	7.3	ug/kg
Benzo(k)fluoranthene	ND	7.3	ug/kg
Benzo(ghi)perylene	ND	7.3	ug/kg
Benzo(a)pyrene	ND	7.3	ug/kg
Chrysene	ND	7.3	ug/kg
Dibenz(a,h)anthracene	ND	7.3	ug/kg
Fluoranthene	ND	7.3	ug/kg
Fluorene	ND	7.3	ug/kg
Indeno(1,2,3-cd)pyrene	ND	7.3	ug/kg
2-Methylnaphthalene	ND	7.3	ug/kg
1-Methylnaphthalene	ND	7.3	ug/kg
Naphthalene	ND	7.3	ug/kg
Phenanthrene	ND	7.3	ug/kg
Pyrene	ND	7.3	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Nitrobenzene-d5	85	(24 - 112)
2-Fluorobiphenyl	86	(34 - 110)
Terphenyl-d14	102	(41 - 119)
Phenol-d5	85	(28 - 110)
2-Fluorophenol	96	(26 - 110)
2,4,6-Tribromophenol	92	(10 - 118)

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-18 (1.5-2.5)

GC Semivolatiles

Lot-Sample #...: A7H200102-035    Work Order #...: J47K72AE    Matrix.....: SO  
 Date Sampled...: 08/16/07 15:15    Date Received...: 08/18/07  
 Prep Date.....: 08/27/07    Analysis Date...: 08/29/07  
 Prep Batch #...: 7239026  
 Dilution Factor: 1  
 % Moisture.....: 8.6    Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	21	11	mg/kg

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	14	(10 - 110)

**NOTE(S):**

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Results and reporting limits have been adjusted for dry weight.

ARCADIS of New York Inc

Client Sample ID: HA-18 (1.5-2.5)

General Chemistry

Lot-Sample #...: A7H200102-035    Work Order #...: J47K7    Matrix.....: SO  
 Date Sampled...: 08/16/07 15:15    Date Received...: 08/18/07  
 % Moisture.....: 8.6

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	91.4	10.0	%	MCAWW 160.3 MOD	08/20-08/21/07	7233085

Dilution Factor: 1

ARCADIS of New York Inc

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A7H200102-036    Work Order #...: J47K81AA    Matrix.....: SQ  
 Date Sampled...: 08/16/07    Date Received..: 08/18/07  
 Prep Date.....: 08/21/07    Analysis Date..: 08/23/07  
 Prep Batch #...: 7235396  
 Dilution Factor: 1  
 % Moisture.....:    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	40	ug/kg
Ethylbenzene	ND	40	ug/kg
Toluene	ND	80	ug/kg
1,2,4-Trimethylbenzene	ND	200	ug/kg
1,3,5-Trimethylbenzene	ND	200	ug/kg
Xylenes (total)	ND	120	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	81	(59 - 138)
1,2-Dichloroethane-d4	98	(61 - 130)
Toluene-d8	96	(60 - 143)
4-Bromofluorobenzene	94	(47 - 158)

# ***QUALITY CONTROL SECTION***

## METHOD BLANK REPORT

## GC/MS Volatiles

Client Lot #...: A7H200102      Work Order #...: J5GK71AA      Matrix.....: SOLID  
 MB Lot-Sample #: A7H230000-396  
 Prep Date.....: 08/21/07  
 Analysis Date..: 08/22/07      Prep Batch #...: 7235396  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Benzene	ND	40	ug/kg	SW846 8260B
Ethylbenzene	ND	40	ug/kg	SW846 8260B
Toluene	ND	80	ug/kg	SW846 8260B
1,2,4-Trimethylbenzene	ND	200	ug/kg	SW846 8260B
1,3,5-Trimethylbenzene	ND	200	ug/kg	SW846 8260B
Xylenes (total)	ND	120	ug/kg	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	102	(59 - 138)
1,2-Dichloroethane-d4	110	(61 - 130)
Toluene-d8	100	(60 - 143)
4-Bromofluorobenzene	101	(47 - 158)

**NOTE(S):**


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Calculations are performed before rounding to avoid round-off errors in calculated results.

## METHOD BLANK REPORT

## GC/MS Volatiles

Client Lot #...: A7H200102  
 MB Lot-Sample #: A7H270000-375

Work Order #...: J5NT21AA

Matrix.....: SOLID

Prep Date.....: 08/21/07

Analysis Date..: 08/24/07

Prep Batch #...: 7239375

Dilution Factor: 1

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Benzene	ND	25	ug/kg	SW846 8260B
Ethylbenzene	ND	40	ug/kg	SW846 8260B
Toluene	ND	80	ug/kg	SW846 8260B
1,2,4-Trimethylbenzene	ND	200	ug/kg	SW846 8260B
1,3,5-Trimethylbenzene	ND	200	ug/kg	SW846 8260B
Xylenes (total)	ND	120	ug/kg	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	96	(59 - 138)
1,2-Dichloroethane-d4	109	(61 - 130)
Toluene-d8	105	(60 - 143)
4-Bromofluorobenzene	104	(47 - 158)

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

## METHOD BLANK REPORT

## GC/MS Semivolatiles

Client Lot #...: A7H200102  
 MB Lot-Sample #: A7H200000-380

Work Order #...: J47941AE

Matrix.....: SOLID

Prep Date.....: 08/20/07

Analysis Date...: 08/29/07

Prep Batch #...: 7232380

Dilution Factor: 1

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Acenaphthene	ND	6.7	ug/kg	SW846 8270C
Acenaphthylene	ND	6.7	ug/kg	SW846 8270C
Anthracene	ND	6.7	ug/kg	SW846 8270C
Benzo(a)anthracene	ND	6.7	ug/kg	SW846 8270C
Benzo(b)fluoranthene	ND	6.7	ug/kg	SW846 8270C
Benzo(k)fluoranthene	ND	6.7	ug/kg	SW846 8270C
Benzo(ghi)perylene	ND	6.7	ug/kg	SW846 8270C
Benzo(a)pyrene	ND	6.7	ug/kg	SW846 8270C
Chrysene	ND	6.7	ug/kg	SW846 8270C
Dibenz(a,h)anthracene	ND	6.7	ug/kg	SW846 8270C
Fluoranthene	ND	6.7	ug/kg	SW846 8270C
Fluorene	ND	6.7	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	6.7	ug/kg	SW846 8270C
2-Methylnaphthalene	ND	6.7	ug/kg	SW846 8270C
1-Methylnaphthalene	ND	6.7	ug/kg	SW846 8270C
Naphthalene	ND	6.7	ug/kg	SW846 8270C
Phenanthrene	ND	6.7	ug/kg	SW846 8270C
Pyrene	ND	6.7	ug/kg	SW846 8270C

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	86	(24 - 112)
2-Fluorobiphenyl	82	(34 - 110)
Terphenyl-d14	108	(41 - 119)
Phenol-d5	92	(28 - 110)
2-Fluorophenol	95	(26 - 110)
2,4,6-Tribromophenol	76	(10 - 118)

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

## METHOD BLANK REPORT

## GC/MS Semivolatiles

Client Lot #...: A7H200102  
 MB Lot-Sample #: A7H210000-044

Work Order #...: J485T1AA

Matrix.....: SOLID

Prep Date.....: 08/21/07

Analysis Date...: 08/22/07

Prep Batch #...: 7233044

Dilution Factor: 1

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Acenaphthene	ND	6.7	ug/kg	SW846 8270C
Acenaphthylene	ND	6.7	ug/kg	SW846 8270C
Anthracene	ND	6.7	ug/kg	SW846 8270C
Benzo(a)anthracene	ND	6.7	ug/kg	SW846 8270C
Benzo(b)fluoranthene	ND	6.7	ug/kg	SW846 8270C
Benzo(k)fluoranthene	ND	6.7	ug/kg	SW846 8270C
Benzo(ghi)perylene	ND	6.7	ug/kg	SW846 8270C
Benzo(a)pyrene	ND	6.7	ug/kg	SW846 8270C
Chrysene	ND	6.7	ug/kg	SW846 8270C
Dibenz(a,h)anthracene	ND	6.7	ug/kg	SW846 8270C
Fluoranthene	ND	6.7	ug/kg	SW846 8270C
Fluorene	ND	6.7	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	6.7	ug/kg	SW846 8270C
2-Methylnaphthalene	ND	6.7	ug/kg	SW846 8270C
1-Methylnaphthalene	ND	6.7	ug/kg	SW846 8270C
Naphthalene	ND	6.7	ug/kg	SW846 8270C
Phenanthrene	ND	6.7	ug/kg	SW846 8270C
Pyrene	ND	6.7	ug/kg	SW846 8270C

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	83	(24 - 112)
2-Fluorobiphenyl	80	(34 - 110)
Terphenyl-d14	99	(41 - 119)
Phenol-d5	88	(28 - 110)
2-Fluorophenol	91	(26 - 110)
2,4,6-Tribromophenol	76	(10 - 118)

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A7H200102      Work Order #...: J485Q1AA      Matrix.....: SOLID  
 MB Lot-Sample #: A7H210000-042  
 Prep Date.....: 08/21/07  
 Analysis Date..: 08/24/07      Prep Batch #...: 7233042  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>	
TPH (as Diesel)	ND	10	mg/kg	SW846 8015B
	<u>PERCENT</u>	<u>RECOVERY</u>		
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>		
C9 (nonane)	20	(10 - 110)		

**NOTE(S):**

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Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A7H200102      Work Order #...: J485R1AA      Matrix.....: SOLID  
 MB Lot-Sample #: A7H210000-043  
 Prep Date.....: 08/21/07  
 Analysis Date..: 08/23/07      Prep Batch #...: 7233043  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>	
TPH (as Diesel)	ND	10	mg/kg	SW846 8015B
	<u>PERCENT</u>	<u>RECOVERY</u>		
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>		
C9 (nonane)	20	(10 - 110)		

**NOTE(S):**

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Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A7H200102      Work Order #...: J5MVL1AD      Matrix.....: SOLID  
 MB Lot-Sample #: A7H270000-026  
 Prep Date.....: 08/27/07  
 Analysis Date..: 08/30/07      Prep Batch #...: 7239026  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>	
TPH (as Diesel)	ND	10	mg/kg	SW846 8015B
		<u>RECOVERY</u>		
		<u>PERCENT</u>	<u>LIMITS</u>	
C9 (nonane)	30		(10 - 110)	

**NOTE(S):**

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Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A7H200102

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING		METHOD	PREPARATION-	PREP
		LIMIT	UNITS		ANALYSIS DATE	BATCH #
Percent Solids	ND	Work Order #: J488G1AA	MB Lot-Sample #: A7H210000-083	MCAWW 160.3 MOD	08/20-08/21/07	7233083
		10.0	%			
		Dilution Factor: 1				
Percent Solids	ND	Work Order #: J488K1AA	MB Lot-Sample #: A7H210000-085	MCAWW 160.3 MOD	08/20-08/21/07	7233085
		10.0	%			
		Dilution Factor: 1				

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

## GC/MS Volatiles

Client Lot #...: A7H200102      Work Order #...: J5GK71AC-LCS      Matrix.....: SOLID  
 LCS Lot-Sample#: A7H230000-396      J5GK71AD-LCSD  
 Prep Date.....: 08/21/07      Analysis Date...: 08/22/07  
 Prep Batch #...: 7235396  
 Dilution Factor: 1

<u>PARAMETER</u>	PERCENT	RECOVERY	RPD		<u>METHOD</u>
	<u>RECOVERY</u>	<u>LIMITS</u>	<u>RPD</u>	<u>LIMITS</u>	
<b>Benzene</b>	97	(75 - 129)			<b>SW846 8260B</b>
	98	(75 - 129)	0.93	(0-20)	<b>SW846 8260B</b>
<b>1,1-Dichloroethene</b>	81	(55 - 142)			<b>SW846 8260B</b>
	83	(55 - 142)	2.7	(0-27)	<b>SW846 8260B</b>
<b>Toluene</b>	96	(71 - 130)			<b>SW846 8260B</b>
	95	(71 - 130)	0.24	(0-24)	<b>SW846 8260B</b>
<b>Trichloroethene</b>	108	(70 - 131)			<b>SW846 8260B</b>
	103	(70 - 131)	4.3	(0-23)	<b>SW846 8260B</b>
<b>Chlorobenzene</b>	95	(75 - 127)			<b>SW846 8260B</b>
	94	(75 - 127)	1.4	(0-22)	<b>SW846 8260B</b>

<u>SURROGATE</u>	PERCENT	RECOVERY
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	109	(59 - 138)
	107	(59 - 138)
1,2-Dichloroethane-d4	109	(61 - 130)
	113	(61 - 130)
Toluene-d8	101	(60 - 143)
	102	(60 - 143)
4-Bromofluorobenzene	105	(47 - 158)
	104	(47 - 158)

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7H200102      Work Order #...: J5NT21AC-LCS      Matrix.....: SOLID  
 LCS Lot-Sample#: A7H270000-375      J5NT21AD-LCSD  
 Prep Date.....: 08/21/07      Analysis Date...: 08/24/07  
 Prep Batch #...: 7239375  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
Benzene	93	(75 - 129)			SW846 8260B
	94	(75 - 129)	0.93	(0-20)	SW846 8260B
1,1-Dichloroethene	80	(55 - 142)			SW846 8260B
	81	(55 - 142)	0.74	(0-27)	SW846 8260B
Toluene	95	(71 - 130)			SW846 8260B
	96	(71 - 130)	0.24	(0-24)	SW846 8260B
Trichloroethene	102	(70 - 131)			SW846 8260B
	106	(70 - 131)	3.8	(0-23)	SW846 8260B
Chlorobenzene	97	(75 - 127)			SW846 8260B
	97	(75 - 127)	0.010	(0-22)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	103	(59 - 138)
	104	(59 - 138)
1,2-Dichloroethane-d4	111	(61 - 130)
	109	(61 - 130)
Toluene-d8	105	(60 - 143)
	104	(60 - 143)
4-Bromofluorobenzene	106	(47 - 158)
	106	(47 - 158)

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

## GC/MS Semivolatiles

Client Lot #...: A7H200102      Work Order #...: J47941AF      Matrix.....: SOLID  
 LCS Lot-Sample#: A7H200000-380  
 Prep Date.....: 08/20/07      Analysis Date...: 08/29/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 1

<u>PARAMETER</u>	PERCENT <u>RECOVERY</u>	RECOVERY <u>LIMITS</u>	<u>METHOD</u>
1,2,4-Trichloro- benzene	71	(43 - 110)	SW846 8270C
2,4-Dinitrotoluene	93	(55 - 116)	SW846 8270C
Acenaphthene	70	(46 - 110)	SW846 8270C
N-Nitrosodi-n-propyl- amine	77	(40 - 114)	SW846 8270C
1,4-Dichlorobenzene	69	(38 - 110)	SW846 8270C
Pentachlorophenol	53	(10 - 110)	SW846 8270C
Phenol	76	(39 - 110)	SW846 8270C
2-Chlorophenol	72	(39 - 110)	SW846 8270C
4-Chloro-3-methylphenol	83	(42 - 110)	SW846 8270C
4-Nitrophenol	101	(24 - 117)	SW846 8270C
Pyrene	89	(58 - 113)	SW846 8270C

<u>SURROGATE</u>	PERCENT <u>RECOVERY</u>	RECOVERY <u>LIMITS</u>
Nitrobenzene-d5	78	(24 - 112)
2-Fluorobiphenyl	73	(34 - 110)
Terphenyl-d14	100	(41 - 119)
Phenol-d5	80	(28 - 110)
2-Fluorophenol	82	(26 - 110)
2,4,6-Tribromophenol	82	(10 - 118)

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

## GC/MS Semivolatiles

Client Lot #...: A7H200102      Work Order #...: J485T1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: A7H210000-044  
 Prep Date.....: 08/21/07      Analysis Date...: 08/22/07  
 Prep Batch #...: 7233044  
 Dilution Factor: 1

<u>PARAMETER</u>	PERCENT <u>RECOVERY</u>	RECOVERY <u>LIMITS</u>	<u>METHOD</u>
1,2,4-Trichloro- benzene	80	(43 - 110)	SW846 8270C
2,4-Dinitrotoluene	101	(55 - 116)	SW846 8270C
Acenaphthene	83	(46 - 110)	SW846 8270C
N-Nitrosodi-n-propyl- amine	86	(40 - 114)	SW846 8270C
1,4-Dichlorobenzene	80	(38 - 110)	SW846 8270C
Pentachlorophenol	62	(10 - 110)	SW846 8270C
Phenol	90	(39 - 110)	SW846 8270C
2-Chlorophenol	89	(39 - 110)	SW846 8270C
4-Chloro-3-methylphenol	93	(42 - 110)	SW846 8270C
4-Nitrophenol	88	(24 - 117)	SW846 8270C
Pyrene	93	(58 - 113)	SW846 8270C

<u>SURROGATE</u>	PERCENT <u>RECOVERY</u>	RECOVERY <u>LIMITS</u>
Nitrobenzene-d5	83	(24 - 112)
2-Fluorobiphenyl	89	(34 - 110)
Terphenyl-d14	102	(41 - 119)
Phenol-d5	95	(28 - 110)
2-Fluorophenol	95	(26 - 110)
2,4,6-Tribromophenol	93	(10 - 118)

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A7H200102      Work Order #...: J485Q1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: A7H210000-042  
 Prep Date.....: 08/21/07      Analysis Date...: 08/24/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
TPH (as Diesel)	110	(47 - 138)	SW846 8015B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	11	(10 - 110)

**NOTE(S):**

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Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A7H200102      Work Order #...: J485R1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: A7H210000-043  
 Prep Date.....: 08/21/07      Analysis Date...: 08/23/07  
 Prep Batch #...: 7233043  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
TPH (as Diesel)	118	(47 - 138)	SW846 8015B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	26	(10 - 110)

**NOTE(S):**

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Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A7H200102      Work Order #...: J5MVL1AE      Matrix.....: SOLID  
 LCS Lot-Sample#: A7H270000-026  
 Prep Date.....: 08/27/07      Analysis Date...: 08/30/07  
 Prep Batch #...: 7239026  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
TPH (as Diesel)	108	(47 - 138)	SW846 8015B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	28	(10 - 110)

**NOTE(S):**

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Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7H200102      Work Order #...: J47H11AF-MS      Matrix.....: SO  
 MS Lot-Sample #: A7H200102-001      J47H11AG-MSD  
 Date Sampled...: 08/16/07 10:40      Date Received...: 08/18/07  
 Prep Date.....: 08/20/07      Analysis Date...: 08/24/07  
 Prep Batch #...: 7232380  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
1,2,4-Trichloro-benzene	73 a	(33 - 110)			SW846 8270C
	74 a	(33 - 110)	2.4	(0-30)	SW846 8270C
2,4-Dinitrotoluene	95 a	(42 - 118)			SW846 8270C
	96 a	(42 - 118)	1.4	(0-30)	SW846 8270C
Acenaphthene	74	(10 - 200)			SW846 8270C
	77	(10 - 200)	4.0	(0-30)	SW846 8270C
N-Nitrosodi-n-propyl-amine	77 a	(30 - 121)			SW846 8270C
	82 a	(30 - 121)	6.5	(0-30)	SW846 8270C
1,4-Dichlorobenzene	63 a	(26 - 110)			SW846 8270C
	65 a	(26 - 110)	3.2	(0-30)	SW846 8270C
Pentachlorophenol	45 a	(10 - 182)			SW846 8270C
	45 a	(10 - 182)	0.43	(0-30)	SW846 8270C
Phenol	79 a	(10 - 144)			SW846 8270C
	85 a	(10 - 144)	7.0	(0-30)	SW846 8270C
2-Chlorophenol	79 a	(32 - 110)			SW846 8270C
	83 a	(32 - 110)	5.6	(0-30)	SW846 8270C
4-Chloro-3-methylphenol	88 a	(32 - 117)			SW846 8270C
	91 a	(32 - 117)	3.2	(0-30)	SW846 8270C
4-Nitrophenol	87 a	(10 - 125)			SW846 8270C
	95 a	(10 - 125)	8.7	(0-30)	SW846 8270C
Pyrene	88	(10 - 200)			SW846 8270C
	89	(10 - 200)	1.2	(0-30)	SW846 8270C

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Nitrobenzene-d5	79	(24 - 112)
	79	(24 - 112)
2-Fluorobiphenyl	75	(34 - 110)
	78	(34 - 110)
Terphenyl-d14	100	(41 - 119)
	100	(41 - 119)
Phenol-d5	87	(28 - 110)
	91	(28 - 110)
2-Fluorophenol	79	(26 - 110)
	92	(26 - 110)

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7H200102      Work Order #...: J47H11AF-MS      Matrix.....: SO  
MS Lot-Sample #: A7H200102-001      J47H11AG-MSD

<u>SURROGATE</u>	PERCENT <u>RECOVERY</u>	RECOVERY <u>LIMITS</u>
2,4,6-Tribromophenol	93	(10 - 118)
	96	(10 - 118)

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7H200102      Work Order #...: J47J71AH-MS      Matrix.....: SO  
 MS Lot-Sample #: A7H200102-021      J47J71AJ-MSD  
 Date Sampled...: 08/16/07 14:10      Date Received...: 08/18/07  
 Prep Date.....: 08/21/07      Analysis Date...: 08/22/07  
 Prep Batch #...: 7233044  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
1,2,4-Trichloro-benzene	69 a	(33 - 110)			SW846 8270C
	77 a	(33 - 110)	9.9	(0-30)	SW846 8270C
2,4-Dinitrotoluene	71 a	(42 - 118)			SW846 8270C
	90 a	(42 - 118)	23	(0-30)	SW846 8270C
Acenaphthene	70	(10 - 200)			SW846 8270C
	79	(10 - 200)	12	(0-30)	SW846 8270C
N-Nitrosodi-n-propyl-amine	75 a	(30 - 121)			SW846 8270C
	92 a	(30 - 121)	20	(0-30)	SW846 8270C
1,4-Dichlorobenzene	66 a	(26 - 110)			SW846 8270C
	74 a	(26 - 110)	12	(0-30)	SW846 8270C
Pentachlorophenol	62 a	(10 - 182)			SW846 8270C
	62 a	(10 - 182)	0.55	(0-30)	SW846 8270C
Phenol	80 a	(10 - 144)			SW846 8270C
	90 a	(10 - 144)	12	(0-30)	SW846 8270C
2-Chlorophenol	78 a	(32 - 110)			SW846 8270C
	90 a	(32 - 110)	14	(0-30)	SW846 8270C
4-Chloro-3-methylphenol	88 a	(32 - 117)			SW846 8270C
	95 a	(32 - 117)	7.5	(0-30)	SW846 8270C
4-Nitrophenol	75 a	(10 - 125)			SW846 8270C
	86 a	(10 - 125)	14	(0-30)	SW846 8270C
Pyrene	84	(10 - 200)			SW846 8270C
	91	(10 - 200)	7.1	(0-30)	SW846 8270C

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Nitrobenzene-d5	71	(24 - 112)
	66	(24 - 112)
2-Fluorobiphenyl	69	(34 - 110)
	68	(34 - 110)
Terphenyl-d14	88	(41 - 119)
	90	(41 - 119)
Phenol-d5	81	(28 - 110)
	82	(28 - 110)
2-Fluorophenol	78	(26 - 110)
	79	(26 - 110)

(Continued on next page)



MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A7H200102      Work Order #...: J47H11AH-MS      Matrix.....: SO  
 MS Lot-Sample #: A7H200102-001      J47H11AJ-MSD  
 Date Sampled...: 08/16/07 10:40      Date Received...: 08/18/07  
 Prep Date.....: 08/21/07      Analysis Date...: 08/23/07  
 Prep Batch #...: 7233042  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
TPH (as Diesel)	<b>42</b>	(10 - 199)			<b>SW846 8015B</b>
	129 p	(10 - 199)	33	(0-30)	SW846 8015B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	4.0 *	(10 - 110)
	21	(10 - 110)

**NOTE(S):**

- 
- Calculations are performed before rounding to avoid round-off errors in calculated results.
  - Bold print denotes control parameters
  - p Relative percent difference (RPD) is outside stated control limits.
  - Results and reporting limits have been adjusted for dry weight.
  - \* Surrogate recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A7H200102      Work Order #...: J47KX1AF-MS      Matrix.....: SO  
 MS Lot-Sample #: A7H200102-029      J47KX1AG-MSD  
 Date Sampled...: 08/16/07 13:06      Date Received...: 08/18/07  
 Prep Date.....: 08/21/07      Analysis Date...: 08/23/07  
 Prep Batch #...: 7233043  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
TPH (as Diesel)	<b>65</b>	(10 - 199)			<b>SW846 8015B</b>
	75	(10 - 199)	5.7	(0-30)	SW846 8015B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	16	(10 - 110)
	29	(10 - 110)

**NOTE(S):**

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Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters  
 Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A7H200102      Work Order #...: J47KT1AF-MS      Matrix.....: SO  
 MS Lot-Sample #: A7H200102-027      J47KT1AG-MSD  
 Date Sampled...: 08/16/07 12:56      Date Received...: 08/18/07  
 Prep Date.....: 08/27/07      Analysis Date...: 08/29/07  
 Prep Batch #...: 7239026  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
TPH (as Diesel)	<b>140</b>	(10 - 199)			<b>SW846 8015B</b>
	82	(10 - 199)	26	(0-30)	SW846 8015B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
C9 (nonane)	26	(10 - 110)
	11	(10 - 110)

**NOTE(S):**

---

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters  
 Results and reporting limits have been adjusted for dry weight.











**Chain of Custody Record**



**STL**

4124 (0901) Project Manager **BRAD SAUNDERS**

Client **ECADIS B&B** Telephone Number (Area Code)/Fax Number  
**(810) 229-8954 / (810) 229-8837**

Address **359 CANTON DE STE 100** Lab Number **8/16/2007**

City **WELTON** State **MI** Zip Code **48116** Date **8/16/2007**

Project Name and Location (State) **3M - ROMULUS, MI** Carrier/Waybill Number

Contract/Purchase Order/Quote No. **24001056-0** Lab Contact

Sample I.D. No. and Description **Containers for each sample may be combined on one line)** Analysis (Attach list if more space is needed)

Sample I.D. No. and Description	Date	Time	Air	Matrix			Containers & Preservatives						Special Instructions/ Conditions of Receipt						
				Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		MEOH					
HA-5 (0-0.25)	8/16/07	13:25				X													
HA-5 (1.5-2.5)		13:26				X													
HA-6 (0-0.25)		13:35				X													
HA-6 (1.5-2.5)		13:36				X													
HA-7 (0-0.25)		13:45				X													
HA-7 (1.5-2.5)		13:46				X													
HA-8 (0-0.25)		14:05				X													
HA-8 (1.5-2.5)		14:06				X													
HA-9 (0-0.25)		14:10				X													
HA-9 (1.5-2.5)		14:11				X													
HA-10 (1.5-2.5)		15:05				X													
HA-11 (0-0.25)		1240				X													

Possible Hazard Identification  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months  
 (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required  
 24 Hours  48 Hours  7 Days  4 Days  21 Days  Other \_\_\_\_\_

1. Relinquished By **Adam Jaborek** Date **8/16/07** Time **17:00**  
 2. Relinquished By **Jim Williams** Date **8/17/07** Time **17:30**  
 3. Relinquished By \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

1. Received By **Jim Williams** Date **8/17/07** Time **11:00**  
 2. Received By **Jim Williams** Date **8/17/07** Time **17:30**  
 3. Received By \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Comments \_\_\_\_\_

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

**Chain of Custody**  
**Test Record**

**SEVERN**  
**TRENT**  
**STL**  
Severn Trent Laboratories, Inc.

4124 (09/01)

Project Manager: **BRAD SKUNDERS**  
Telephone Number (Area Code)/Fax Number: **(810) 229-8954 / (810) 229-8837**

Address: **PCAPIS BBL**  
**0559 CITATION Dr. STE 100**  
State: **MI** Zip Code: **48116**

Carrier/Waybill Number: \_\_\_\_\_  
Lab Contact: \_\_\_\_\_

Date: **8/16/07** Lab Number: \_\_\_\_\_  
Chain of Custody Number: **357374**  
Page **3** of **3**

Object Name and Location (State):  
**RIGHTION**

Contract/Purchase Order/Quote No.:  
**24001056-0**

Sample I.D. No. and Description:  
Containers for each sample may be combined on one line)

Sample I.D. No. and Description	Date	Time	Matrix				Containers & Preservatives							Analysis (Attach list if more space is needed)	Special Instructions/Conditions of Receipt				
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	MeOH						
HA-11 (1.5-2.5)	8/16/07	12:41					X	X	X	X	X	X	X	X	X	X	X		
HA-12 (1.5-2.5)		12:53					X	X	X	X	X	X	X	X	X	X	X		
HA-13 (1.5-2.5)		12:56					X	X	X	X	X	X	X	X	X	X	X		
HA-13 (1.5-2.5)		13:05					X	X	X	X	X	X	X	X	X	X	X		
HA-13 (1.5-2.5)		13:06					X	X	X	X	X	X	X	X	X	X	X		
HA-14 (0-0.25)		13:10					X	X	X	X	X	X	X	X	X	X	X		
HA-14 (1.5-2.5)		13:11					X	X	X	X	X	X	X	X	X	X	X		
HA-14 (1.5-2.5)		15:25					X	X	X	X	X	X	X	X	X	X	X		
HA-15 (1.5-2.5)		15:25					X	X	X	X	X	X	X	X	X	X	X		
HA-16 (1.5-2.5)		15:45					X	X	X	X	X	X	X	X	X	X	X		
HA-17 (1.5-2.5)		15:35					X	X	X	X	X	X	X	X	X	X	X		
HA-18 (1.5-2.5)		15:15					X	X	X	X	X	X	X	X	X	X	X		

Possible Hazard Identification:  
 Non-Hazard  
 Flammable  
 Skin Irritant  
 Poison-B  
 Unknown

Sample Disposal:  
 Return To Client  
 Disposal By Lab  
 Archive For \_\_\_\_\_ Months

QC Requirements (Specify):  
 (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required:  
 24 Hours  
 48 Hours  
 7 Days  
 14 Days  
 21 Days  
 Other \_\_\_\_\_

Relinquished By: **Adam Spadonville** Date: **8/16/07** Time: **17:00**  
 Relinquished By: **Melissa** Date: **8/17/07** Time: **17:30**  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received By: **Melissa** Date: **8/17/07** Time: **11:00**  
 Received By: **Jerry Talcott** Date: **8/16/07** Time: **11:25**  
 Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Comments: \_\_\_\_\_  
 DISTRIBUTION: WHITE - Returned to Client with Report. CANARY - Stays with the Sample. PINK - Field Copy







***END OF REPORT***

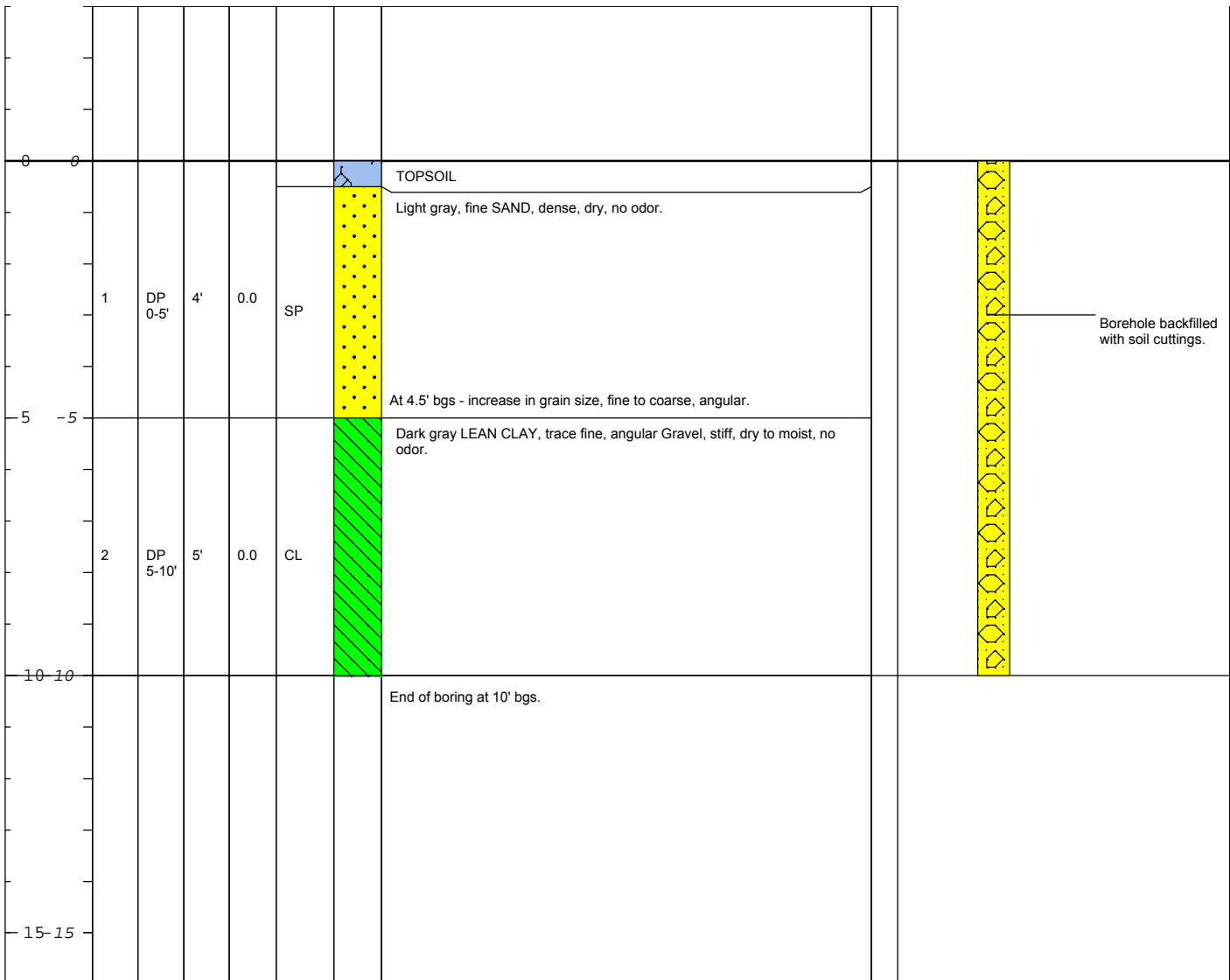
**APPENDIX D**

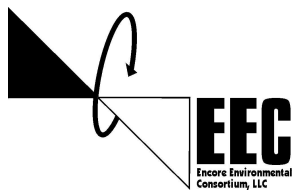
**Lithologic Logs**

DRAFT

<b>Date Start/Finish:</b> 8/16/07 <b>Drilling Company:</b> Altech <b>Driller's Name:</b> Nick Simmons <b>Drilling Method:</b> Direct Push <b>Sampler Size:</b> 5' acetate liner	<b>Northing:</b> NA <b>Easting:</b> NA <b>Casing Elevation:</b> NA  <b>Borehole Depth:</b> 10' bgs <b>Surface Elevation:</b> NA  <b>Descriptions By:</b> Wayne Patterson	<b>Boring ID:</b> SB-1  <b>Client:</b> General Motors Corporation  <b>Location:</b> GMPT - Romulus Engineering Center AST and Fuel Distribution Area Romulus, Michigan
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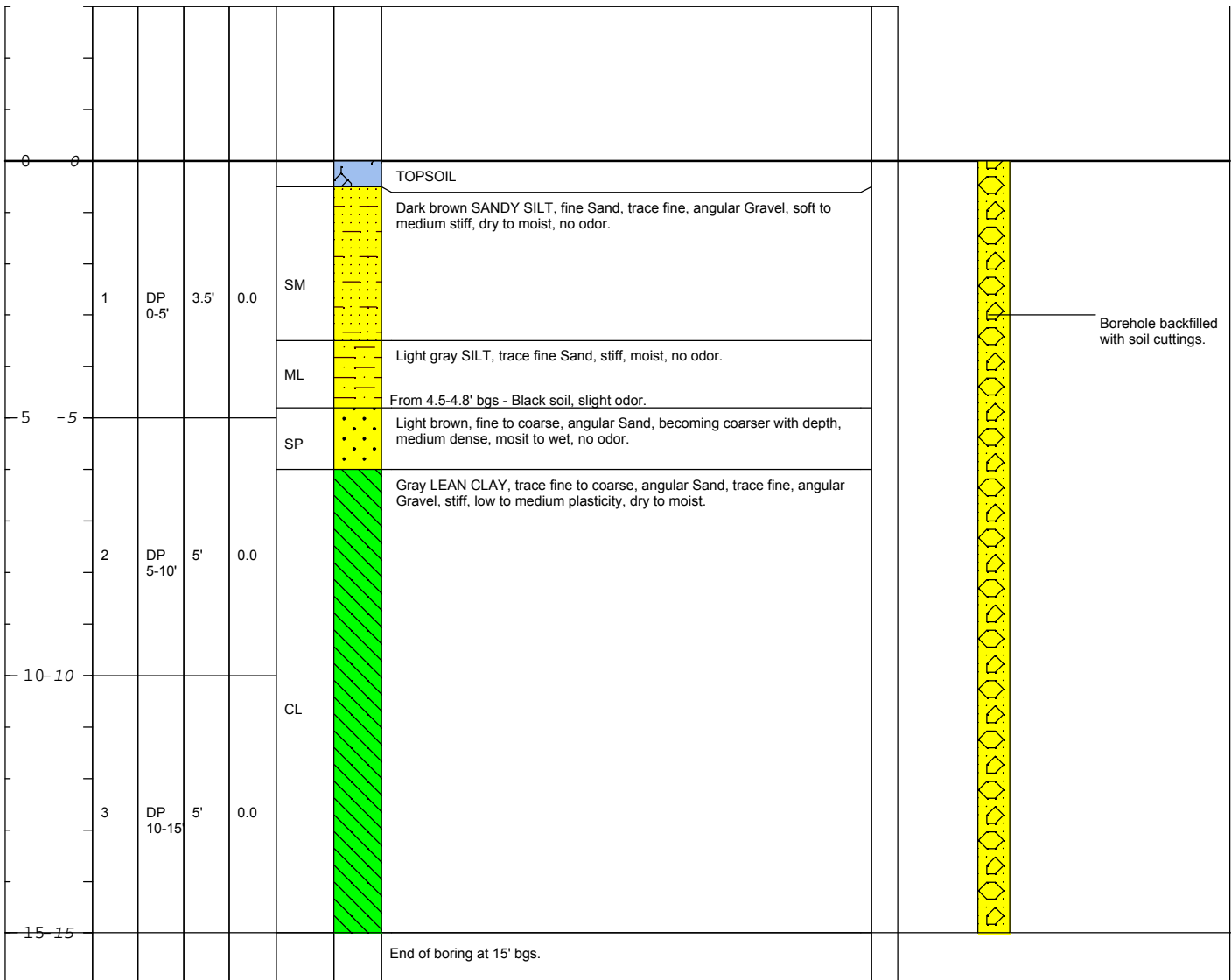
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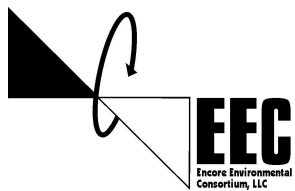


	<b>Remarks:</b> NA = not applicable/ not available bgs = below ground surface 6610 DT trackmounted Geoprobe used for direct push. DP = direct push
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<b>Date Start/Finish:</b> 8/16/07 <b>Drilling Company:</b> Altech <b>Driller's Name:</b> Nick Simmons <b>Drilling Method:</b> Direct Push <b>Sampler Size:</b> 5' acetate liner	<b>Northing:</b> NA <b>Easting:</b> NA <b>Casing Elevation:</b> NA  <b>Borehole Depth:</b> 15' bgs <b>Surface Elevation:</b> NA  <b>Descriptions By:</b> Wayne Patterson	<b>Boring ID:</b> SB-2  <b>Client:</b> General Motors Corporation  <b>Location:</b> GMPT - Romulus Engineering Center AST and Fuel Distribution Area Romulus, Michigan
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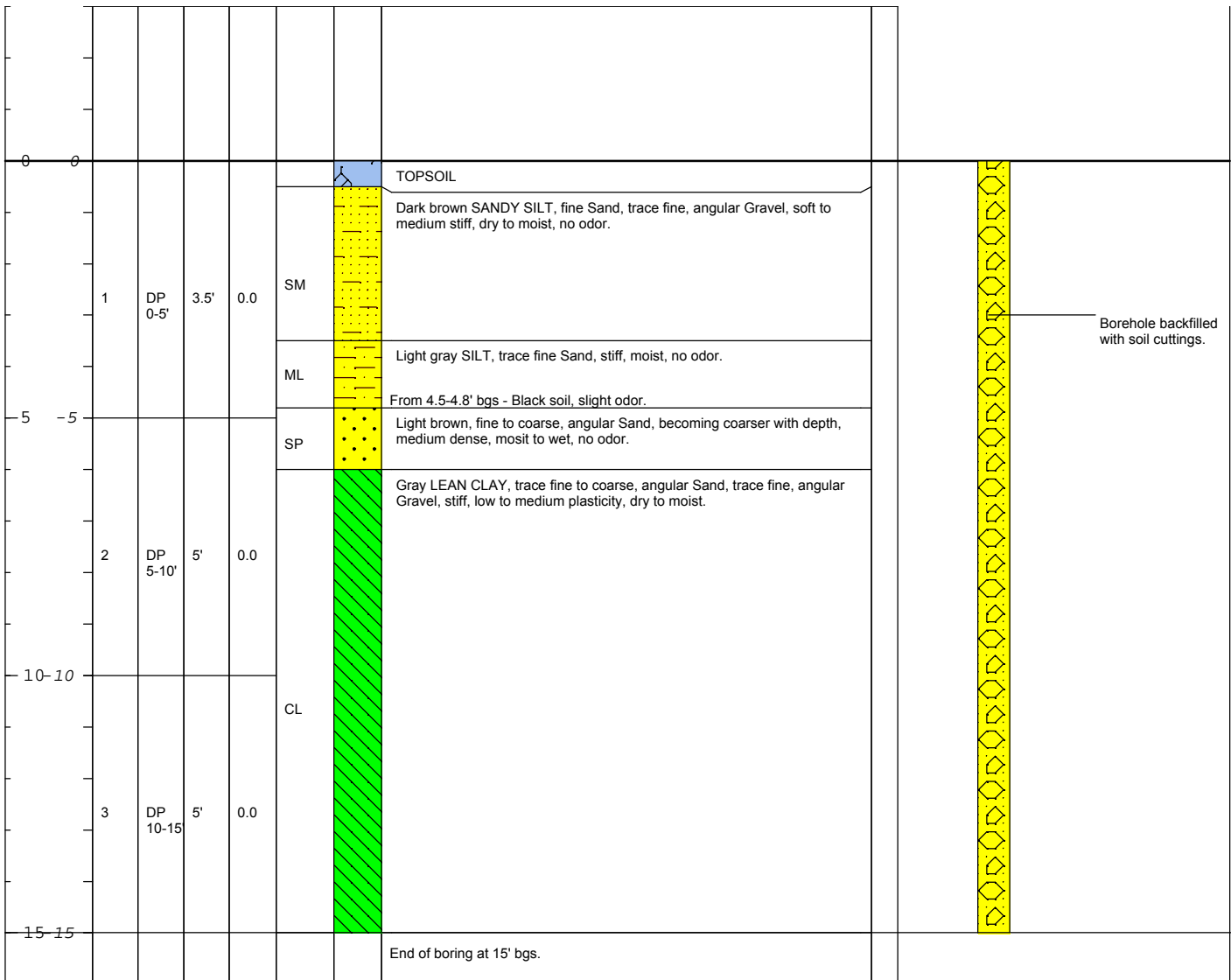
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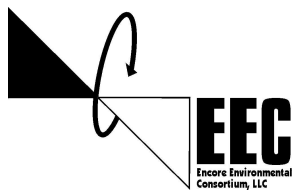


	<b>Remarks:</b> NA = not applicable/ not available bgs = below ground surface 6610 DT trackmounted Geoprobe used for direct push. DP = direct push
---	--

<b>Date Start/Finish:</b> 8/16/07 <b>Drilling Company:</b> Altech <b>Driller's Name:</b> Nick Simmons <b>Drilling Method:</b> Direct Push <b>Sampler Size:</b> 5' acetate liner	<b>Northing:</b> NA <b>Easting:</b> NA <b>Casing Elevation:</b> NA  <b>Borehole Depth:</b> 15' bgs <b>Surface Elevation:</b> NA  <b>Descriptions By:</b> Wayne Patterson	<b>Boring ID:</b> SB-2  <b>Client:</b> General Motors Corporation  <b>Location:</b> GMPT - Romulus Engineering Center AST and Fuel Distribution Area Romulus, Michigan
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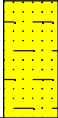
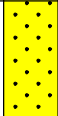
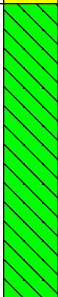

DEPTH	ELEVATION	Sample Run Number	Sample Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Hydrostratigraphy	Boring Construction
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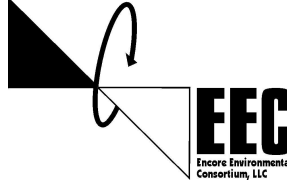


	<b>Remarks:</b> NA = not applicable/ not available bgs = below ground surface 6610 DT trackmounted Geoprobe used for direct push. DP = direct push
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<b>Date Start/Finish:</b> 8/16/07 <b>Drilling Company:</b> Altech <b>Driller's Name:</b> Nick Simmons <b>Drilling Method:</b> Direct Push <b>Sampler Size:</b> 5' acetate liner	<b>Northing:</b> NA <b>Easting:</b> NA <b>Casing Elevation:</b> NA  <b>Borehole Depth:</b> 10' bgs <b>Surface Elevation:</b> NA  <b>Descriptions By:</b> Wayne Patterson	<b>Boring ID:</b> SB-4  <b>Client:</b> General Motors Corporation  <b>Location:</b> GMPT - Romulus Engineering Center AST and Fuel Distribution Area Romulus, Michigan
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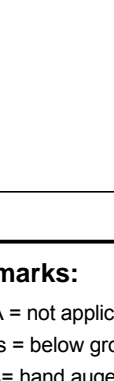
DEPTH	ELEVATION	Sample Run Number	Sample Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Hydrostratigraphy	Boring Construction
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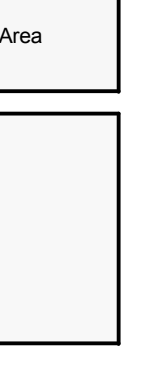
0	0									
		1	DP 0-5'	4'	0.1	SM	 Brown SANDY SILT, fine to coarse Sand, trace fine, angular Gravel, medium stiff, dry, no odor. Very dark brown to black SANDY SILT, fine Sand, dry to moist, slight odor.			
						SP	 Light brown, fine SAND, dense, moist, no odor.			Borehole backfilled with soil cuttings.
5	-5						 Gray brown LEAN CLAY, trace fine to coarse, angular Sand, stiff, low to medium plasticity, moist, no odor.			
		2	DP 5-10'	5'	0.2	CL				
10	-10						 End of boring at 10' bgs.			
15	-15									

	<b>Remarks:</b> NA = not applicable/ not available bgs = below ground surface 6610 DT trackmounted Geoprobe used for direct push. DP = direct push
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<b>Date Start/Finish:</b> 8/16/07 <b>Drilling Company:</b> NA <b>Driller's Name:</b> Allyn Fedoronko <b>Drilling Method:</b> Hand Auger <b>Sampler Size:</b> 4"	<b>Northing:</b> NA <b>Easting:</b> NA <b>Casing Elevation:</b> NA  <b>Borehole Depth:</b> 2.5' bgs <b>Surface Elevation:</b> NA  <b>Descriptions By:</b> Wayne Patterson	<b>Boring ID:</b> HA-1 to HA-9, HA-11 to HA-14  <b>Client:</b> General Motors Corporation  <b>Location:</b> GMPT - Romulus Engineering Center AST and Fuel Distribution Area Romulus, Michigan
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Hydrostratigraphy	Boring Construction
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0	0									
		1	HA 0-2.5'	2.5'	0.0	SP		TOPSOIL. Light brown to brown, fine SAND.		 Borehole backfilled with soil cuttings.
								End of boring at 2.5' bgs.		
-5	-5									
-10	-10									
-15	-15									

 <p><b>EEC</b> Encore Environmental Consortium, LLC</p>	<b>Remarks:</b> NA = not applicable/ not available bgs = below ground surface HA= hand auger Soil descriptions for HA-1 to HA-9 and HA-11 to HA-14 are similar and represented on this log.
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<b>Date Start/Finish:</b> 8/16/07 <b>Drilling Company:</b> NA <b>Driller's Name:</b> Wayne Patterson <b>Drilling Method:</b> Hand Auger <b>Sampler Size:</b> 4"	<b>Northing:</b> NA <b>Easting:</b> NA <b>Casing Elevation:</b> NA  <b>Borehole Depth:</b> 2.5' bgs <b>Surface Elevation:</b> NA  <b>Descriptions By:</b> Allyn Fedoronko	<b>Boring ID:</b> HA-10  <b>Client:</b> General Motors Corporation  <b>Location:</b> GMPT - Romulus Engineering Center AST and Fuel Distribution Area Romulus, Michigan
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Hydrostratigraphy	Boring Construction
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0	0	1	HA 0-2.5'	2.5'	0.0	CL		Black to brown LEAN CLAY, trace fine to coarse, angular Sand, medium stiff to stiff, damp, no odor.		Borehole backfilled with soil cuttings.
-5	-5							End of boring at 2.5' bgs.		
-10	-10									
-15	-15									

	<b>Remarks:</b> NA = not applicable/ not available bgs = below ground surface HA= hand auger
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<b>Date Start/Finish:</b> 8/16/07 <b>Drilling Company:</b> NA <b>Driller's Name:</b> Wayne Patterson <b>Drilling Method:</b> Hand Auger <b>Sampler Size:</b> 4"	<b>Northing:</b> NA <b>Easting:</b> NA <b>Casing Elevation:</b> NA  <b>Borehole Depth:</b> 3' bgs <b>Surface Elevation:</b> NA  <b>Descriptions By:</b> Allyn Fedoronko	<b>Boring ID:</b> HA-15  <b>Client:</b> General Motors Corporation  <b>Location:</b> GMPT - Romulus Engineering Center AST and Fuel Distribution Area Romulus, Michigan
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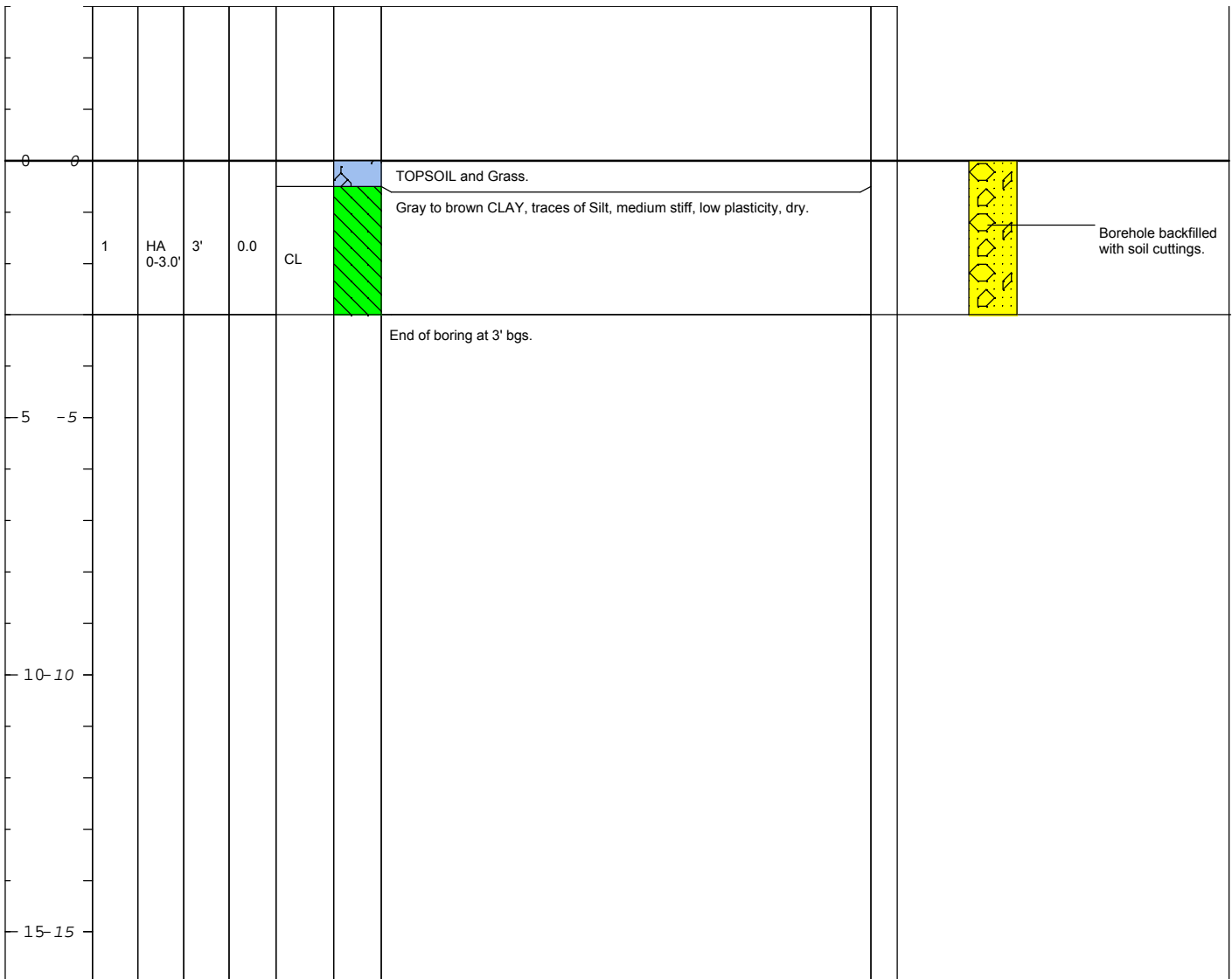
DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Hydrostratigraphy	Boring Construction
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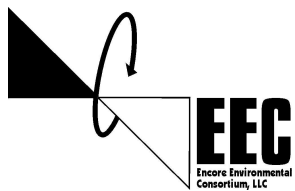
0	0	1	HA 0-3.0'	3'	0.0	SM		Dark brown SANDY SILT, fine to coarse Sand, medium stiff, damp, no odor.		 Borehole backfilled with soil cuttings.
-5	-5							End of boring at 3' bgs.		
-10	-10									
-15	-15									

	<b>Remarks:</b> NA = not applicable/ not available bgs = below ground surface HA= hand auger
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<b>Date Start/Finish:</b> 8/16/07 <b>Drilling Company:</b> NA <b>Driller's Name:</b> Wayne Patterson <b>Drilling Method:</b> Hand Auger <b>Sampler Size:</b> 4"	<b>Northing:</b> NA <b>Easting:</b> NA <b>Casing Elevation:</b> NA  <b>Borehole Depth:</b> 3' bgs <b>Surface Elevation:</b> NA  <b>Descriptions By:</b> Allyn Fedoronko	<b>Boring ID:</b> HA-17  <b>Client:</b> General Motors Corporation  <b>Location:</b> GMPT - Romulus Engineering Center AST and Fuel Distribution Area Romulus, Michigan
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Hydrostratigraphy	Boring Construction
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	<b>Remarks:</b> NA = not applicable/ not available bgs = below ground surface HA= hand auger
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**APPENDIX E**

**Previous Reports and Documentation**

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## **PREVIOUS REPORTS**

The following reports relevant to the diesel fuel spill at the Site were reviewed, summarized, and referenced in the report by EEC:

1. General Motors Corporation, 10-Day Letter and Written Spill/Release Report submitted to MDEQ regarding diesel fuel spill; GMPT – Romulus Engineering Center, 37350 Ecorse Road, Romulus, Michigan 48174; May 7, 2007.
2. EQ Emergency Response, Incident Report, Prepared for GMPT – Romulus Engineering Center, 37350 Ecorse Road, Romulus, MI; June 4, 2007.
3. General Motors Corporation, Follow-up Letter submitted to MDEQ regarding diesel fuel spill; GMPT – Romulus Engineering Center, 37350 Ecorse Road, Romulus, Michigan 48174; July 18, 2007.

ADRIAN

**APPENDIX F**

**Personnel Resumes**

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