REPORT

SITE HISTORY AND CURRENT CONDITIONS REPORT
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

Revitalizing Auto Communities Environmental Response Trust (RACER)
Ypsilanti, MICHIGAN

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Site History and Current Conditions Report Dort Highway Land

10800 South Saginaw Street
Grand Blanc, Michigan

Prepared for: RACER Trust
Ypsilanti, Michigan

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1. INTRODUCTION

This document serves as the Site History and Conditions Report for the Dort Highway Land site (Site) located in Grand Blanc, Michigan (Figures 1 and 2, herein referred to as "the Site"). The Site is immediately adjacent to the General Motors Company (GM) plant located at 10800 South Saginaw Street, Grand Blanc, Michigan (Figure 1). This Site History and Conditions Report presents information from environmental investigations performed at the Site.

The Site is presently owned by the Revitalizing Auto Communities Environmental Response (RACER) Trust, which took over responsibility of the Site following the bankruptcy of General Motors Corporation (former GM Corporation) and management by Motors Liquidation Company (MLC). The Dort Highway Land Site is comprised of a 20.44 acre portion of what was formerly part of an area of the former GM Corporation site known as Area 2. The GM owned portion of the former GM Corporation plant is now known as the Weld Tool Center (WTC) – Grand Blanc (Figure 1) and includes the other exterior areas of the plant (Areas 1 through 5), the former Press Room area (that was recently demolished), and the remaining portion of the plant (Area 6). Area 2 was an approximately 38.5 acre exterior area of the former GM Corporation plant located west of the plant. The Site is currently unused (*i.e.*, vacant land).

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2. SITE BACKGROUND AND SETTING

The following provides a general description of the Site, Site background, Site topography and drainage, and the regional geology and hydrogeology of the Site. It also provides a brief summary of previous investigations and remediation activities conducted at the site. Specific details concerning Site investigation activities and methods/procedures are presented in Section 3. Specific information about Site features as a result of the investigations conducted at the Site (see Section 2.2) are discussed in Section 4, along with field observations and analytical results.

2.1 LOCATION AND DESCRIPTION

The Site is located at 10800 S. Saginaw Street in Grand Blanc Township, Genesee County, Michigan (Figure 1) in an industrial and commercial area of Grand Blanc, Michigan and fronts on Dort Highway (Figure 2). The current address for the site is also associated with the adjacent GM plant, and at some point a unique address for the Site may be established.

The Site is currently unused (*i.e.*, vacant land) and a fence encloses the property, separating it from the adjacent GM facility. However, the only access gate for entering the Site property is located in the southwest corner of the Site (Figure 2), which can only be accessed by going through GM's site security. A pine tree line exists just inside of the perimeter fence along the western, northern and northeastern boundary of the Site.

2.2 SITE BACKGROUND

The Site and the original portion of the adjacent plant were constructed in 1942 as a tank arsenal by the United States Department of Defense. The Site was initially used as a test track for the tanks manufactured at the adjacent plant, and also included a pump house and water tank utilized for water storage and firefighting. After World War II, the Site and plant were leased from the government by the Buick Motor Division and were purchased by the former General Motors Corporation in 1951. The Site was then used for die and other equipment storage during the manufacturing of automobile parts at the adjacent plant, and for water storage and firefighting. During the Korean Emergency, Fisher Body produced Patton M-48 Medium Tanks at the plant, and the Site was again used as a tank test track. In 1955, the Site was converted to automotive body metal fabricating and the Press Room was added to the plant. The former GM Corporation stopped manufacturing automotive body parts in 2008 and began the demolition of the former Press Room, which concluded in 2010. The pump house and tank were also decommissioned and demolished during this time. GM currently fabricates, assembles and repairs robotic systems for automotive plants at the adjacent plant.

Approximately 4 feet of soils (and fill materials, including concrete and asphalt pavement) on average were stripped from the Site during the demolition of the former Press Room to fill in its basement. The drawings provided in Appendix A represent the proposed cut and fill maps that guided the stripping (*i.e.*, excavation or removal) of soils from the Site. The soil stripping activities were completed in 2009 on the Site, and no seeding or stabilization of the Site was undertaken. Some areas were not stripped to the 4 foot depth due to encountering concrete (former water test trough for the tanks) or debris (*i.e.*, wood floor blocks) in these areas (Figure 2).

2.3 SITE TOPOGRAPHY AND SURFACE DRAINAGE FEATURES

The topography of the Site is generally characterized by a gentle northeast to southwest slope along the southern and north central portions of the Site, a gentle northwest slope along the eastern portion of the Site, and a gentle north to south slope along the very western portion of the Site. Figure 3 represents the approximate topography of the Site (survey completed in November/December 2010) after the soil stripping activities were completed in 2009. The drawings in Appendix A provide the pre-stripping topography and the proposed post-stripping topography for the Site. Along the western edge of the site the topography rises to generally contain the surface drainage on Site. However, a drainage ditch on the western side of this rise in topography, between the tree line and Site fence, does receive surface drainage for a very small portion of the Site. This ditch discharges to a culvert about 20 ft or so south of the Site, which discharges to stormwater lagoon #2 on GM's facility. The topographic relief at the Site is about 15 ft. It varies from a high of about 836 ft above mean sea

level (aMSL) at the very north corner of the Site and along the southeast corner of the Site to 821 ft (aMSL) in the southwestern corner of the Site.

GM installed an approximate 1 to 4 foot high berm along the southern boundary of the Site to separate the GM and Site properties, and installed a new perimeter fence along the southern and eastern boundaries of the Site. The berm generally consists of gravelly materials. The berm forms a stormwater retention basin along the southwestern corner of the Site (Figure 2); however, because the berm is permeable, storm water from the ponded area drains through the berm onto GM property, and discharges to Stormwater Lagoon #2 located about 130 ft south of the Site. RACER is currently working to separate the storm water discharge for the Site from that of the GM property, and will eventually discharge storm water from the Site to the county ditch along Dort Highway, which drains to Gibson Drain located west of the Site.

2.4 GEOLOGIC SETTING

2.4.1 Regional Geology

The Site is underlain by unconsolidated glacial drift soils to depths of about 120 to 160 ft beneath the Site according to the Groundwater Resources Map Series for Grand Blanc Township (U of M – Flint, Nov. 1994). The soils at the Site consist of loam and clay loam from the Conover series with low infiltration rates (O'Brien & Gere, 2005). The native clay soils underlying surficial topsoil or fill soils at the Site likely extend to the top of bedrock. The Groundwater Resources Maps indicate between 80 and 90 percent of the drift soils to a depth of 100 ft consist of clay in the area of the Site.

Bedrock in the area of the Site is a stratified sequence from the Paleozoic Era. The Bedrock Geology of Michigan (MDNR, 1987) map indicates the site is underlain by the Pennsylvanian age Saginaw Formation consisting of a fine-grained sandstone and siltstone interbedded with shale, limestone, coal and gypsum. The bedrock surface is reported to vary in elevation from about 680 to 720 ft aMSL beneath the site and generally slopes toward the southwest.

2.4.2 Regional Hydrogeology

The depth to groundwater at the Site is generally less than 12 ft; however, this may be indicative of perched groundwater conditions. The Groundwater Resources Map Series for Grand Blanc Township (U of M – Flint, Nov. 1994) indicates the regional groundwater table exists at elevations of about 770 to 780 ft a MSL in the area of the Site, which corresponds to depths of about 50 to 70 ft below grade (fbg). The Site area is gently sloped and based on local topography, the shallow (potentially perched) groundwater flow direction is generally towards the east, east of the Site toward Thread Creek located about two thirds of a mile northeast of the Site, and towards the west on the Site toward Gibson Drain located about a quarter mile west of the site (Figure 1). However, deeper regional groundwater flow is purported to flow towards the northwest (U of M – Flint, Nov. 1994).

2.5 PREVIOUS SITE INVESTIGATIONS

O'Brien & Gere conducted two Phase I Environmental Site Assessment (ESA) Investigations (O'Brien & Gere, 2005 and 2010), a Phase II ESA Investigation (O'Brien & Gere, 2007a), and a Delineation Investigation of the Site (O'Brien & Gere, 2007b). A more recent investigation was conducted by RACER in August 2011, which is discussed in Section 3.1.1.

The following sections summarize each of the previous Site investigations.

2.5.1 Phase I Scope and Results

Two Phase I ESAs were conducted of the Site; one was conducted in 2005 for the former GM Corporation, and another was conducted in 2010 for Motors Liquidation Company (MLC), which was responsible for the Site from the time REALM and the former GM Corporation filed for bankruptcy until the completion of the bankruptcy proceedings when the RACER Trust took over responsibility for the Site. Both Phase I ESAs were conducted to evaluate the existence of recognized environmental conditions (RECs) associated with the Site due to past or present Site activities. The RECs identified in the 2005 Phase I ESA were used to guide the Phase II ESA for Site (see Section 2.5.2), and included:

- The AST associated with the (now former) pump house (Figure 2) may have impacted the Site
- Potential impacts from the crock sump (Figure 2) pump discharge to the drainage ditch near the Dort Highway entrance to plant
- Potential impacts to soil and groundwater in the former die storage area(s)
- Historic production operations at the adjacent plant may have impacted the Site
- Potential impacts to soil and groundwater from former fire-training exercises (location unknown)

The 2010 Phase I ESA only identified a couple potential RECs on the Site: 1) impacted soils that may not have been removed during the soil removal activities (especially in the area of SS2-24 (*a.k.a.*, subarea B-3, see Figure 4)), and 2) unearthed wood floor blocks along the southern boundary of the Site (see Figure 2).

The purpose of the Phase I ESAs were to identify and document the current and historical environmental conditions of the Site and the presence of substances that indicate an existing, past, or potential adverse environmental impact to the air, soil, groundwater or surface waters as a result of operations on the Site and adjacent and surrounding properties, and which indicate that further investigation may be necessary to evaluate environmental issues associated with the Site. The ESAs were also intended to identify RECs as defined by the ASTM E 1527-00.

The ASTM standard defines a REC as *"the presence or likely presence of any hazardous substances or petroleum products on a property* (Site) *under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on a property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions."*

The following scope of work was undertaken, in accordance with ASTM Phase I ESA Standard (E1527-00) requirements and client-specified requirements:

Task 1

A Site reconnaissance was conducted to visually and physically observe the Site in an effort to obtain information suggesting the presence of RECs, including:

- Observing and recording the physical setting of the Site
- Observing and documenting the property and land use, including abutting and surrounding properties
- Interviewing the current Site owner/tenants, environmental personnel and maintenance chief to obtain information on current and past operations that may have led to a release of oil, gasoline, solvents, or hazardous material(s) to the soil or groundwater and information regarding the presence of underground storage tanks (USTs), hydraulic lifts, lead-based paint (LBP), polychlorinated biphenyls (PCBs), and related conditions on Site
- Observing and documenting the Site conditions that may be indicative of past and present releases and practices, including taking color photographs showing the general property and surrounding areas
- Observing and documenting the presence and/or absence and the condition and apparent regulatory compliance status of prior and current aboveground storage tanks (ASTs), USTs, chemical storage areas, hydraulic lifts, septic fields, drainage systems, oil/water separators, central vehicle fluid (*i.e.*, oil, grease, transmission fluid, or other petroleum fluids) dispensing systems, and other operational equipment, including taking color photographs showing the location and condition of these observed areas
- Observing and recording the presence or absence of chemical substances and/or debris on site, including the number of drums/containers, size estimated quantity, and a description/identification of the contents where possible

Task 2

A Site history review was performed to evaluate previous ownership and land use including:

- Local topography (see Figure 1 for general historical topography, Figure 3 for current topography, and Appendix A for historical cut and fill maps)
- Local geology/hydrogeology
- Groundwater well inventory
- Groundwater use
- Review of historic aerial photographs, Sanborn or other fire insurance maps, and other sources described herein (see original reports: O'Brien & Gere, 2005 and 2010)

Task 3

An electronic database search report was generated for the Site by Environmental Data Resources, Inc. of Milford, Connecticut (EDR) to complete the environmental records review. The database search was used to identify properties that may be listed in the referenced Agency records, located within the ASTM-specified search radii indicated below. The databases reviewed included, but were not limited to:

Database Search: Radius

- NPL sites: 1 mile
- CERCLIS sites: 0.5 mile
- CERCLIS NFRAP sites: 0.25 mile
- Federal ERNS: Site only
- RCRA non-CORRACTS TSD facilities: 0.5 mile
- RCRA CORRACTS TSD facilities: 1 mile
- RCRA Generators: 0.25 mile
- State Hazardous Waste Sites: 1 mile
- Registered Underground Storage Tanks: 0.25 mile
- State Landfills and Solid Waste Disposal Sites: 0.5 mile
- State Leaking Underground Storage Tanks: 0.5 mile

The database search was supplemented with inquiries with appropriate regulatory agencies and municipalities regarding the Site, and to the extent practicable, adjacent properties. Inquiries were not made with regulatory agencies with regard to basic regulatory compliance issues for the Site, such as Site drainage or permits.

Task 4

A preliminary wetlands, asbestos-containing material (ACM), PCB, LBP, and radon review was performed based on: observations of the site reconnaissance and property location; the age(s) of the buildings; building materials; discussions with the owner/tenant/operator and the local utility company; and the results of the database search discussed in Task 3. Samples were not collected as part of this assessment.

Task 5

The findings of the ESAs (*i.e.*, RECs) have been summarized in this report and are documented in the referenced reports (O'Brien & Gere, 2005 and 2010), and presents a professional opinion as to the environmental disposition of the Site with regard to the presence of RECs or other environmental issues.

2.5.2 Phase II Scope and Results Summary

The Phase II ESA was performed in 2006. The purpose of the Phase II ESA was to identify and document the environmental conditions of the Site. This included identifying and documenting the presence of substances which indicate an existing, past, or potential adverse environmental impact to the air, soil, groundwater or surface waters as a result of operations on the Site and adjacent and surrounding properties, and which indicate that further investigation may be necessary to evaluate environmental issues associated with the Site.

O'Brien & Gere performed the Phase II ESA to evaluate the RECs identified in the 2005 Phase I ESA report performed on the Site. The purpose of the Phase II ESA was to provide sufficient information regarding the presence and approximate extent of impacts, if any, within the Site to assist in making informed business decisions regarding the property. O'Brien & Gere first evaluated whether the RECs identified in the Phase I ESA report were confirmed by initially investigating the nature of the RECs and secondly by investigating the approximate extent of the impacts, if any, for each REC within the Site. This approach involved initially investigating and collecting environmental samples to identify the nature of the REC. This included analyzing for a more complete list of the potential parameters of concern, followed by identifying a focused list of potential constituents of concern (COCs) for each REC based on the initial sampling efforts. During the second round of investigation activities, the approximate extent of the REC was evaluated, if confirmed during the initial investigation, utilizing the initial sampling results and the focused list of COCs to guide the sample collection and analysis. The Phase II ESA included:

- Completion of 16 Geoprobe® boring samples to depths of up to 10 ft below grade (fbg, typically 5 to 10 fbg) and collection of 20 surface soil samples (Figure 4)
- Installation of 2 monitoring wells to approximate 20 fbg to assess groundwater flow conditions (additional wells were installed on portions of the GM property not owned by RACER), and assess water quality through sample collection
- Elevation survey of soil boring and monitoring well locations and top of casing elevations to use to accurately locate sample locations and to evaluate groundwater elevations and flow direction
- Laboratory analysis of soil and groundwater samples
- Phase II ESA report preparation

The 2005 Phase I ESA performed on the Site revealed the presence of five RECs, which were investigated during the Phase II ESA. The results of the Phase II ESA investigation at these five locations are summarized below, but are discussed in more detail in Section 4:

- AST Area: The AST was located in a concrete vault that protected the tank from inclement weather and based on visual inspection of the AST, it did not appear to be leaking. The sample collected at soil boring SB2-10 (Figures 4 through 6) immediately adjacent to the pump house AST was below the Michigan Department of Environmental Quality (MDEQ) criteria and did not indicate a release from the AST
- Crock sump discharge area: The crock sump discharge area had limited surficial polynuclear aromatic hydrocarbon (PAH) detections, but were below the nonresidential criteria that appeared to have been roughly delineated during the Phase II ESA (Figures 4 through 6)
- Die storage area: Two large areas within the die storage area of the Site had surficial PAH and metal impacts above the nonresidential direct contact and groundwater surface water interface (GSI) criteria for PAHs and above the GSI and drinking water protection criteria for some metals in soils (Figures 4, 5, 7 and 8). The first area was along the former drainage ditch near MW2-1, which is also known as area C, that primarily contained PAH impacts (Figure 7) and the second, larger, area primarily had metals impacts in the area near MW2-2 and extending southward (Figure 7). These impacts were delineated during the Phase II ESA
- Historic production operations: The actual production operations do not appear to be impacting the Site; however, activities associated with the miscellaneous equipment and materials storage area, which somewhat coincides with the area now indentified as the wood floor block area had surficial PAH and metal impacts above the GSI and

nonresidential direct contact criteria, and the nonresidential drinking water protection criteria for arsenic, cadmium, lead, mercury (Figure 7)

- Former fire-training exercises: None of the Phase II ESA investigation results indicated impacts from former fire-training exercises

Based on the Phase II ESA findings, soil leaching to groundwater is not occurring above the nonresidential groundwater criteria. Monitoring wells MW2-1 and MW2-2 were installed within two large areas of impacts within the die storage area; however, the water within these wells was below the nonresidential drinking water criteria, indicating that the surficial impacts did not impact the groundwater above the drinking water criteria. Selenium and silver, which are not considered Site COCs, were detected above their respective GSI criterion; however, monitoring wells MW2-1 and MW2-2 would not be considered GSI monitoring wells due to their distance from nearest surface water body. Groundwater compliance with GSI criteria would require GSI monitoring wells installed at the receiving surface water body. However, because these exceedances are just above their criteria, it is unlikely that the groundwater from the site would impact surface water off-Site.

2.5.3 Delineation Investigation Scope and Results Summary

The Delineation Investigation was conducted to further delineate the documented surface soil impacted locations identified at the Site, which were above the MDEQ nonresidential criteria.

O'Brien & Gere performed the Delineation Investigation to evaluate the RECs identified in the Phase II ESA report associated with the Site. The purpose of the Delineation Investigation was to provide additional information regarding the approximate extent of impacts within the Site. The Delineation Investigation included

- Completion of 12 Geoprobe® boring samples to depths of up to 10 fbg (typically to 5 fbg) and collection of 47 surface soil samples (Figure 4)
- Laboratory analysis of soil samples
- Delineation Investigation report preparation

2.6 REMEDIAL ACTIONS

2.6.1 Subarea B-2 Remediation

O'Brien & Gere remediated an area approximately 40 foot by 40 foot, to a depth of about one foot for mercury impacts known as subarea B-2 (Figures 7 and 8). The area was located in the former miscellaneous equipment storage area, and was an area centered on surface soil sampling location SS2-20 (Figure 8).

A meeting was held on March 3, 2009 with James Innes of the MDEQ at the Site to discuss using soil from the Site to fill the basement of the former Press Room, which was being decommissioned. Although there were a number of impacts at the Site (primarily arsenic and PAHs, and exceedances of the GSI criteria), relocation of the soils from the Site to the basement of the former Press Room was considered moving soils from one area of the Site to another area with similar impacts, and an acceptable practice according to MDEQ regulations. However, the area impacted with mercury was considered dissimilar to the other impacts in the area, and Mr. Innes suggested the area be remediated to below drinking water quality criteria. O'Brien & Gere provided oversight and collected samples while MCM Management Corporation remediated the surficial mercury impacts on March 17, 2009.

Approximately 90 cubic yards of soil were removed from the area, transported and disposed as non-hazardous soil at the Cove Landfill of Bad Axe/Richfield Management LLC.

O'Brien & Gere collected nine confirmatory samples (Figure 8) after the soil was removed following the MDEQ *Sampling Strategies and Statistics Training Materials* (S^3TM) *for Part 201 Cleanup Criteria* (MDEQ, 2002) guidance document). Based on the amount of soil removed and the area of the excavation, five confirmatory samples (SS2-20-CF-1 through SS2-21-CF-5) were collected on the floor of the excavation, and four confirmatory samples (SS2-20-CS-1 through SS2-20-CS-4) were collected at the midpoint of the sidewall to confirm the area had been remediated below MDEQ nonresidential drinking water criteria. A duplicate and a matrix spike and

matrix spike duplicate were also collected to follow quality assurance quality control (QA/QC) procedures. The soil samples were placed directly into clean, pre-labeled, sample jars and analyzed for mercury by Merit Laboratories, Inc.

The analytical results for the nine confirmatory samples were below the MDEQ nonresidential drinking water protection criteria. The duplicate sample collected at SS2-20-CF-4 was within acceptable relative percent difference criteria. Four of the nine confirmatory samples (SS2-20-CF-2, SS2-20-CF-3, SS2-20-CF-5, SS2-20-CS-3) were either non-detect or below the Michigan Statewide Default Background (default background) level. The remaining five confirmatory samples were above the default background level and the GSI criterion, and ranged from 0.216 mg/kg at the duplicate for SS2-20-CF-4 to 1.146 mg/kg at SS2-20-CS-2. The sample with the highest concentration of mercury (SS2-20-CS-2), which presented the greatest potential for mercury to leach into the soil was analyzed using the synthetic precipitation leaching procedure (SPLP) by USEPA Method 1312. The SPLP analytical result for SS2-20-CS-2 was 0.6 ug/l (or 0.0006 mg/l), which also exceeds the GSI criteria for groundwater of 0.0013 ug/l, and the detection limit of 0.2 ug/l. Therefore, as discussed with Mr. Innes, the GSI pathway should be evaluated for relevance at some time in the future if and when the GM plant is closed through the Part 201 process, which would likely include institutional controls because the soils placed within the former Press Room basement had exceedances of other nonresidential criteria. The analytical results are presented in Table 1.

2.6.2 Soil Removal Activities

MCM management Corporation, on behalf of the former GM Corporation, removed an average of about 4 feet of soil from the majority of the Site, as mentioned earlier. The drawings provided in Appendix A represent the proposed cut and fill maps that guided the stripping (*i.e.*, excavation) of soils from the Site, and Figure 3 provides the topography of the site following completion of the soil removal activities.

Most of the impacts identified during the Phase II ESA and Delineation Investigation were shallow (less than 3 ft), except in the SS2-24 area (*i.e.*, subarea B-3, Figure 7) where impacts above the nonresidential criteria were encountered to depths of up to 6 ft (about 3 to 3.5 ft below the existing Site grade). Therefore, the impacts delineated during the Phase II ESA and Delineation Investigation were largely removed during the soil removal activities at the Site. However, as mentioned earlier, wood floor blocks were identified in the southern area of the Site, which were investigated in August 2011 as discussed in Section 3.1.1. Originally, no confirmatory samples were collected to verify the completion of the remediation activities; however, confirmatory samples were collected in August 2011 in areas with pre-soil stripping exceedances of the nonresidential criteria (see Section 3.1.1).

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3. SITE INVESTIGATION ACTIVITIES

3.1 SOIL BORING INSTALLATION AND SOIL SAMPLING

Twenty eight soil borings and two monitoring wells were installed, and a total of 24 soil boring samples and 67 surface soil samples were collected during the Phase II ESA and Delineation Investigation (Figure 4). The soil samples collected during the Phase II ESA were to evaluate impacts in relation to the five REC areas identified in the Phase I ESA Report. Most of the soil borings installed during the Phase II ESA were located in relation to the former miscellaneous equipment and materials storage (i.e., subareas B-2, B-3 and B-4, see Figures 4, 5 and 7) and die storage areas along the former roadways, and included the ditch that formerly ran along the south side of the former road on the north central portion of the Site near MW2-1 (Figures 4, 5 and 7). Surface soil samples were also collected near the Crock Sump near the former pump house. Eleven impacted sample locations were identified during the Phase II ESA. The soil borings samples were named SB2 followed by the boring number (example: SB2-04), and the surface soil samples were named SS2 followed by the sample number (example: SS2-01). Gaps in the numbering system now exist because some of the borings/samples were installed on the property now owned by GM. The actual locations were chosen in the field based on visual indications of impacts, previous analytical results and other professional judgment factors.

The initial soil boring samples collected for the Phase II ESA were installed to depths of 10 to 15 feet and were terminated in native soil. Initial soil boring samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Michigan 10 metals (*i.e.*, Resource Conservation and Recovery Act [RCRA] metals, plus copper and zinc, including fine and coarse fraction lead analysis), and PCBs. The samples were selected based on photoionization detector (PID) readings, olfactory response and/or visual indication of impacts. The initial surface soil samples were also submitted for the full suite of analyses. Only one sample was collected from each boring location at the Site during the initial mobilization, and some of the soil boring samples were not analyzed if the corresponding surface soil sample did not exhibit exceedances of the criteria (except potentially for the GSI criteria).

During the second round of soil borings for the Delineation Investigation, a 3 ft to 5 ft soil sample was collected from soil borings along with a corresponding surface soil sample from the same horizontal location. The second round surface soil samples and selected soil boring samples, deemed necessary to evaluate vertical impacts, were analyzed for PAHs and Michigan 10 metals, which were identified as the COCs for the Site based on the initial round of sampling results. Subsequent surface soil samples, deemed necessary to evaluate horizontal surficial impacts, were analyzed for PAHs and/or selected Michigan 10 metals depending on the COCs that were being delineated by these samples.

Soil borings and/or surface soil samples for the Delineation Investigation were placed in relation to the eleven impacted sample locations identified in the Phase II ESA, as discussed above. These eleven areas were combined into three subareas to better delineate each of these areas. The three subareas (subareas B [*i.e.*, B-2, B-3 and B-4] and C, and the Crock Sump area) were based on impacts identified during the Phase II ESA and were analyzed at the depth and for the COC associated with the samples from the Phase II ESA. The three subareas delineated were located in the former miscellaneous equipment and materials storage (subareas B-2, B-3 and B-4) and former die storage areas (along former roadways), including the former ditch that ran along the south side of the road on the north central portion of the Site near MW2-1 (subarea C), and the Crock Sump area which was delineated during the Phase II ESA. The former miscellaneous equipment and materials storage and former die storage areas were delineated for impacts of arsenic, lead, mercury, and PAHs, while the area along the former ditch that ran along the south side of the road on the north central portion of the Site near MW2-1 was delineated for impacts of PAHs.

The delineation soil borings were generally installed 20 ft north, south, east, and west from the original soil boring or surface sample. Surface soil samples were collected 0 to 6 in below the surface. Soil borings delineating vertical impacts were installed to depths of up to 10 fbg and/or a sample was collected at the top 6 inches of the native clay. The samples collected during the Delineation Investigation were named according to the previous Phase II ESA sample name followed by the direction from the original sample (example: SS2-14N is the delineation sample approximately 20 ft north of the original sample location SS2-14). If an additional

sample was collected further in the same direction during the subsequent mobilization it was given two direction descriptors (example: SS2-14NN). At eight of the eleven locations where a surface sample was collected during the Phase II ESA a soil boring was installed to evaluate vertical impacts. The three remaining locations were already vertically delineated. The letter D and depth of sample followed the original sample name to distinguish it as a deep sample at the original sample location (example: SS2-14D-5).

O'Brien & Gere installed the soil borings utilizing Geoporbe® drilling techniques. Field data was recorded in a field book during soil boring installation. Soil borings were installed using 5-foot long Geoprobe® macro-core samplers. Macro-core samplers were cleaned, attached to the drill rods, and lowered into the borehole. After the sampler was lowered to the bottom of the borehole, it was advanced utilizing direct push techniques using the hydraulic hammer as necessary to the terminus of the sample interval. Each of the Site borings was advanced to a depth of 5 to 15 fbg. The sampler was removed from the borehole, detached from the drill rods and opened. The sample length was measured and recorded and the upper and lower ends of the sample core were discarded (+/- 3 inches). The sample core was then screened using a PID to monitor for the presence of VOCs. Soil boring logs are provided in Appendix B.

The soil samples were either collected from the Geoprobe® samplers, or collected directly from the surface utilizing a shovel, except for the samples collected at sample locations SS2-14D-2, SS2-20D-3, and SS2-24D-2, which were collected utilizing hand auger techniques. The soil was removed from the sampler, placed directly into clean, pre-labeled, sample jars for analysis. VOC sub-samples were not homogenized and were taken using syringe-type coring devices and immediately transferred into pre-weighed VOC vials containing reagent grade methanol sufficient to obtain an estimated ratio of 1:1 in accordance with MDEQ Operational Memo #2 and U.S. EPA Method 5035. Samples were placed in a cooler with ice after collection and hand delivered to Merit Laboratories, Inc. via the laboratory's courier service.

The soil samples were submitted to the analytical laboratory for analysis using appropriate chain of custody and standard QA/QC procedures. A Level II analytical data package was prepared by the laboratory for the soil samples analyzed and a Level II partial data validation was performed on the data.

Each soil boring was backfilled with granular bentonite following completion of sampling. The ground surface at the boring location was restored to its original condition with soils, cold patch asphalt or concrete depending on the conditions at the boring location prior to drilling.

3.1.1 Recent Site Conditions Investigation Activities

On August 1, 2011 O'Brien & Gere collected twenty surface soil samples, five wood block samples, and five samples of soils in contact with the floor blocks to confirm that impacted soils were removed from the Site area during the soil stripping activities and placed in the former Press Room basement. The sample locations and analytical parameters were selected based on the analytical results from the Phase II ESA and Delineation Investigation, and were analyzed for one or more of the following analytical parameters: VOCs, SVOCs, PAHs, RCRA metals, and PCBs.

The five samples of the floor block material and five samples of soils in contact with the floor blocks were collected and analyzed for metals, PAHs and PCBs. Although, PCBs had not been detected at the Site, because the floor block material could have been in contact with PCBs during their use, it was added to the sampling effort. Surface soil samples SS-01, SS-02, SS-05, SS-06, and SS-17 through SS-20 were analyzed for PAHs. Surface soil samples SS-03, SS-04, and SS-09 through SS-12 were analyzed for RCRA metals. Surface soil samples SS-07 and SS-08 were analyzed for PAHs and RCRA metals. Surface soil samples SS-13 through SS-16 were analyzed for VOCs, SVOCs, RCRA metals and PCBs.

Surface soil, floor block and soils in contact with floor block samples were collected directly from the ground surface utilizing a hand shovel. VOC samples were not homogenized and were taken using syringe-type coring devices and immediately transferred into pre-weighed VOC vials containing reagent grade methanol sufficient to obtain an estimated ratio of 1:1 in accordance with MDEQ Operational Memo #2 and U.S. EPA Method 5035. The samples were placed directly into clean, pre-labeled, sample jars for analysis. Samples were placed in a cooler

with ice after collection and hand delivered to Merit Laboratories, Inc. of East Lansing, Michigan via the laboratory's courier service.

The samples were submitted to the analytical laboratory for analysis using appropriate chain of custody and standard QA/QC procedures. A level III analytical data package was prepared by the laboratory for the soil samples analyzed.

QA/QC samples were collected in accordance with MDEQ Operational Memorandum No. 2-Attachment 5. These samples included blind duplicate samples (normal soil sample collected in duplicate and submitted to the laboratory blind), co-located samples (independent soil sample collected at same time, interval, and location as a normal sample), matrix spike (MS)/matrix spike duplicates (MSD), equipment blanks, field (ambient) blanks, and trip blanks, which were analyzed by the same methods as the soil samples. The sample results will be data validated, but at the time of the preparation of this report the validation had not been completed.

The sample locations were located using a Global Positioning System (GPS) and are shown on Figure 4.

3.2 MONITORING WELL INSTALLATION

Monitoring wells MW2-1 and MW2-2 (Figure 4) were installed during the second mobilization of the Phase II ESA in November 2006 to further evaluate site conditions. MW2-1 and MW2-2 were installed in subareas C and B, respectively in areas where dies were stored. The groundwater monitoring wells were installed at a depths of 15 to 20 fbg to assess potential impact to groundwater and evaluate site-specific groundwater conditions. The soil borings for well installation were installed using 4.25-inch inside diameter hollow stem augers (HSAs). The well screen, end caps, and riser were constructed of 2-inch inside diameter, flush-threaded polyvinyl chloride (PVC) and the well screen was machine slotted with 0.010 inches slots. Well construction materials were new, clean and inspected for proper specifications and integrity prior to installation.

Monitoring well construction details were recorded in the field logbook. A filter pack was placed in increments to minimize bridging. The filter pack extended a minimum of 2 feet above the top of the screen. The filter pack material level was maintained within the augers as they were removed in stipulated increments to limit borehole collapse.

A granular bentonite seal was placed over the filter pack to a minimum thickness of 2 feet and was extended to seal the annular space from the top of the bentonite seal to the ground surface. A flush-mounted protective casing was installed over each monitoring well. The monitoring well identification was clearly marked on the inside and the outside of the protective casing cap. Monitoring well construction details are provided in Appendix C.

The monitoring wells were developed to remove fine-grained materials and enhance the connection with the aquifer. Equipment used for development was cleaned using a laboratory grade detergent and tap water rinse prior to well development. The well was uncapped and the water level was allowed to stabilize before developing the well. A pump and appropriate tubing was lowered into the well and the pump was turned on. Groundwater was collected in a glass jar to evaluate relative turbidity and to measure and record temperature, pH, turbidity, and specific electrical conductance during development. The monitoring well was pumped until the samples were relatively silt-free or no further change was noted; and the temperature, pH, turbidity, and specific electrical conductance readings stabilized to within 10 percent or until the well produces relatively clear, sediment-free water, to the extent practical. Investigation derived wastes were handled as described in Section 3.6.

3.3 GROUNDWATER SAMPLING

Groundwater samples from the two monitoring wells were collected using low flow/low stress sampling technique about one week after well installation. Low flow/low stress sampling techniques minimize the presence of fine grain materials in the groundwater samples. Samples collected using low flow/low stress techniques are typically more representative of the groundwater quality in the aquifer than samples collected using a hand bailer because some constituents are known to have an affinity for fine-grained particulate (*i.e.*, inorganic constituents).

The well identifications and locations were verified using location layout drawings and the condition of the wells were noted in the field logbook prior to set up. A water level and total well depth measurement was also recorded and the volume of water in the monitoring well was calculated prior to purging.

A peristaltic pump and new tubing were utilized to purge the monitoring well using low flow/low stress techniques. The well was purged between 100 to a maximum of 500 milliliters per minute (mL/min). During purging, the water level was monitored as necessary to maintain a steady flow rate resulting in drawdown of 0.3 ft or less. Field indicator parameters (pH, temperature, conductivity, oxidation-reduction potential [ORP], dissolved oxygen [DO], and turbidity) were monitored about every 5 minutes. Field instruments were calibrated prior to use and a record was documented in the field logbook or on the groundwater sampling log forms. Water level and field indicator parameter measurements were documented on the groundwater sampling log forms.

The wells were considered stabilized when the physical parameters were within 10% for three consecutive readings for each parameter.

Groundwater samples were collected directly from the pump/tubing and discharged directly into the appropriate sample container. Samples were collected at a flow rate between 100 and 250 mL/min. Groundwater samples were analyzed for the list of COCs established during the initial sampling activities. The samples were analyzed for PAHs and dissolved Michigan 10 metals. Samples were placed in a cooler with ice following sample collection. Filtration for dissolved metals samples were performed in the field. No decontamination was needed because disposable materials were used for the groundwater sampling.

A second round of groundwater samples were collected for total (unfiltered) Michigan 10 metals about two weeks after the initial sampling event to provide a comparison between total and dissolved metals and to further aid in the evaluation of the groundwater quality at the site.

3.4 SURVEYING

Each Phase II ESA soil boring and monitoring well location was located horizontally with respect to Site features and included on a scaled Site sample location map by a licensed surveyor, as were the initial surface soil sample locations. However, subsequent soil boring and surface soil sample locations were generally place on the Site sample location map (Figure 4) relative to the original (generally corresponding) surveyed locations based on field measurements from these known locations. A licensed surveyor determined the elevation of the ground surface at each surveyed boring and monitoring well location, and the top of casing for each monitoring well. The top of casing elevations were used to evaluate the groundwater flow direction of the Site.

3.5 DECONTAMINATION PROCEDURES

Field equipment potentially exposed to contaminants were properly decontaminated as described in this Report.

3.5.1 Drill Rig and Heavy Equipment

Equipment and materials associated with sampling were cleaned before and after use at the Site and between discrete investigation locations. Items such as drill rigs, drill rods, and miscellaneous heavy equipment present potential sources of interference to environmental samples. These items were cleaned using high-pressure steam cleaning methods.

3.5.2 Decontamination of Sampling Equipment

Decontamination procedures were designed to remove particles and compounds that could have affected the integrity of samples, and thus, the interpretation of environmental sampling data. The following decontamination procedure was followed for sampling equipment:

- Brush loose soil off equipment
- Wash equipment with laboratory grade detergent (*i.e.,* Alconox or equivalent)
- Rinse with potable water
- Allow water to evaporate before reusing equipment

For decontamination of submersible pumps used for well development, the following procedure was followed:

- Remove the pump from the well and decontaminate the external casing and associated wiring.
- Pump solution (approximately five gallons) of potable water and non-phosphate detergent through the pump
- Pump clean potable water through pump
- Pump distilled water through pump
- Return the pump to a covered storage container

3.6 INVESTIGATION DERIVED WASTES

Investigation derived wastes (IDW) including soils were containerized and transported to the on-site drum storage pad by the former GM Corporation (*i.e.*, facility) personnel, and was characterized and disposed of in accordance with state and federal protocols. Purge water and decontamination water was discharged on the GM property such that it entered the waste water system and was treated by the former waste water treatment plan (WWTP) at the former GM Corporation facility (*i.e.*, plant). Personal protective equipment (PPE, *i.e.*, gloves, etc.) and disposable sampling equipment were disposed of in appropriate trash receptacles at the plant and were disposed as municipal trash.

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4. FINDINGS

Information obtained from the sources and activities described in Sections 2 and 3 are presented in the following section for the Site. Information supporting the observations and findings presented in this report are provided in the tables, figures and appendices of this report. The sample depths, depths presented in the soil boring logs (Appendix A) and well construction details (Appendix B), and depths presented in the discussions throughout this report are based on the original ground surface at the time that the samples were collected or borings/wells were installed. In general, subtracting about four feet from the stated depths will provide the depth below the current ground surface.

4.1 SITE GEOLOGY AND HYDROGEOLOGY

The Site geology based on the twenty-eight soil borings installed during the Phase II ESA and Delineation Investigation generally consisted of either an asphalt, concrete, gravel or topsoil cap depending on the location of the boring underlain by a layer of damp, brown silty SAND and GRAVEL fill material to a depths of up to 8 fbg, but typically less than 4 fbg. From 4 fbg to around 7 to 10 fbg a layer of damp, brown with gray mottling, stiff silty CLAY, little gravel with a Unified Soil Classification System (USCS) symbol of CL was consistent almost throughout the Site. From about 10 to 20 fbg the soil became less mottled or was not mottled and generally consisted of a moist, medium plasticity, brown to gray, silty CLAY, trace to little gravel with a USCS symbol of CL down to at least 20 fbg (the deepest depth investigated during the Phase II ESA and Delineation Investigation), which purportedly extends to a depths of about 100 fbg in the Site area. A half inch thick sand seam was observed at 14 fbg in the boring for monitoring well MW2-1. At monitoring well MW2-2 two approximately 6 inch thick seams of wet, brown, sandy CLAY were observed from 17.5 to 18 fbg and 19.5 to 20 fbg. Figure 9 presents three cross-sections (A-A', B-B'-B'', and C-C') to help illustrate the Site geology, and the relationship between the historical topography and the post-soil removal (2010) topography of the Site.

The depths to groundwater on December 7, 2006 were 11.33 ft below top of casing (fbTOC) at MW2-1 and 4.95 fbTOC at MW2-2. The corresponding groundwater elevations were 820.91 ft aMSL at MW2-1 and 828.20 ft aMSL at MW2-2. On December 22, 2006, the depth to groundwater was 10.95 fbTOC at MW2-1 and 4.44 fbTOC at MW2-2, which is similar to the earlier measurements and the groundwater elevations were 821.29 ft aMSL at MW2-1 and 828.71 ft aMSL at MW2-2. Groundwater contours cannot be constructed with only two groundwater elevations; however, because the groundwater elevation is lower at MW2-1 than MW2-2, it appears that there may be a northerly component of groundwater flow in addition to the west local (sub-regional) flow direction discussed in Section 2.4.2. As with many shallow perched groundwater systems, the groundwater flow direction can be complex and may be affected by surface infiltration, the presence of discontinuous sand seams and other factors, and may even indicate that the groundwater elevations should not be contoured. However, a general west groundwater flow direction at the Site was predicted based on topographic and surface water information for the Site. Local shallow groundwater in the Site area may discharge to Storm Water Lagoon #2 located southwest of the site and Gibson Drain located west of the Site.

4.2 FIELD OBSERVATIONS

No PID readings were detected in the soil borings from the Phase II ESA and Delineation Investigation. No significant olfactory observations were recognized during drilling or sampling. Visual observations of potential impacts were limited to surficial soils during the drilling and sampling activities. The selection of soil samples was therefore based on the visual observations of potential impacts during the Phase II ESA, and on professional judgment using the topography, geology and hydrogeology of the Site/Site area to guide sample collection. In general, if visual observations did not indicate potential impacts, soil samples were taken at depths that corresponded with potential impact scenarios, such as surficial sources of impacts, or releases from USTs or ASTs.

4.3 PHASE II ESA AND DELINEATION INVESTIGATION SOIL ANALYTICAL RESULTS

The analytical results for detected analytes in the soil samples collected during the Phase II ESA and Delineation Investigation for the Site are presented in Table 2. The corresponding analytical laboratory reports are contained in Appendix D. These analytical results are pre-soil stripping analytical results and do not necessarily

represent the current Site conditions. Section 4.5 summarizes the results of the August 2011 sampling activities conducted to ascertain the current Site conditions.

During the initial Phase II ESA sampling soil borings and surface samples were analyzed for VOCs, SVOCs, metals and PCBs. Both VOCs and PCBs were not detected; therefore, they were not analyzed for in subsequent rounds. Several PAH constituents of the SVOC analytes and several Michigan metals exceeded MDEQ soil cleanup criteria and were the main focus during the remainder of the Phase II ESA and Delineation Investigation.

4.3.1 Metals

None of the subsurface soil samples (*i.e.*, from the soil borings) contained metals above MDEQ soil cleanup criteria, with the exception of several selenium detections and one mercury detection from the sample from SB2-10-03 (1 to 3 fbg sample interval at a concentration of 0.096 mg/kg), which exceeded the GSI criteria. However, selenium appears to be ubiquitous to the Site and may represent Site specific background concentrations, and the mercury detection was below the default background level of 0.13 mg/kg. This indicates that metals impacts at the Site are restricted to surface soils or near surface impacts.

Silver and Barium were detected but were generally detected at concentrations below their respective default background levels, and were detected at concentrations below their respective MDEQ cleanup criteria. Chromium was detected above the default background level at several locations, but was detected at concentrations below its MDEQ cleanup criterion.

Copper, selenium and zinc exceeded their respective default background levels and GSI criteria at more than one location, but did not exceed other MDEQ criteria. Copper exceeded the GSI criterion at a total of three locations. Selenium was detected above the GSI criterion (0.40 mg/kg) in 15 of the 25 samples taken for selenium analysis. None of the 15 samples were above the nonresidential drinking water or direct contact criteria (*i.e.*, only exceeded the GSI criterion). The range for selenium was from non-detect to 1.31 mg/kg (at SB2-07) and numerous samples were greater than the default background level of 0.41 mg/kg. The selenium detections appear to be ubiquitous to the Site and may generally represent a higher Site specific background level. Zinc was detected above the GSI criterion of 170 mg/kg at a total of 7 out of 26 metals samples analyzed for zinc; however, zinc was not detected above other criteria. The samples with elevated copper and zinc results correspond with locations exhibiting other elevated metals results.

Cadmium was detected above the GSI criterion of 3 mg/kg at three locations, which also exceeded the default background level of 1.2 mg/kg. At SS2-03, the cadmium concentration of 7.29 mg/kg also exceeded the nonresidential drinking water criterion of 6 mg/kg.

Mercury was detected above the GSI criterion of 0.050 mg/kg (based on the acceptable method detection limit or 0.0012 mg/kg based on aquatic toxicity data) in 12 of the 31 samples, and of the 12 samples, only seven were above the default background level. The sample from SS2-20 located in the miscellaneous equipment and material storage area (subarea B-2, see Figures 4, 5, 7 and 8), also exceeded the nonresidential drinking water protection criterion of 1.7 mg/kg for mercury with a level of 2.76 mg/kg. The intermediate and deep samples collected at 3 ft and 8 ft, respectively were below the MDEQ nonresidential drinking water and direct contact criteria. As discussed in Section 2.6.1, this area was remediated, and the analytical results for the nine (post-excavation) confirmatory samples (Figure 8) were below the MDEQ nonresidential drinking water protection criterion (Table 1). Four of the nine confirmatory samples (SS2-20-CF-2, SS2-20-CF-3, SS2-20-CF-5, SS2-20-CS-3) were either nondetect or below the default background level. The remaining five confirmatory samples were above the default background level and the MDEQ GSI criterion, and ranged from 0.216 mg/kg at the duplicate for SS2-20-CF-4 to 1.146 mg/kg at SS2-20-CS-2. The sample with the highest concentration of mercury (SS2-20-CS-2), which presented the greatest potential for mercury to leach in the soil was analyzed using the synthetic precipitation leaching procedure (SPLP) by USEPA Method 1312. The SPLP analytical result for SS2-20-CS-2 was 0.6 ug/l (or 0.0006 mg/l), which exceeds the MDEQ GSI criterion for groundwater of 0.0013 ug/l, and the detection limit of 0.2 ug/l. However, as discussed earlier, although the GSI criterion is an appropriate screening criteria for soils and groundwater, the GSI criteria is only applicable at GSI monitoring wells at the receiving

surface water body, or as they might relate to surface soils that could leach or produce sediments that might enter storm water/surface water.

Total lead was detected above the default background level in 19 of the 33 samples analyzed for total lead. Total lead was detected above the MDEQ nonresidential criteria at only one location, SS2-14, which was located in the miscellaneous equipment and material storage and die storage areas (*i.e.*, subarea B-4). The lead concentration at SS2-14 of 1,020 mg/kg exceeded both the nonresidential direct contact criterion of 900 mg/kg and the nonresidential drinking water protection criterion of 700 mg/kg for lead. The surface sample locations collected to delineate the extent of the lead impacts were below the nonresidential drinking water and direct contact criteria, as were the deeper samples from SS2-14D-2 (from 2 fbg) and SS2-14D-8 (from 8 fbg).

Arsenic was detected above the nonresidential drinking water and GSI criteria of 4.6 mg/kg (*i.e.*, same criterion for drinking water and GSI) at 18 of the 51 samples analyzed for arsenic. Six of the soil samples above the nonresidential drinking water (and GSI) criterion were also above the nonresidential direct contact criterion of 37 mg/kg. The arsenic impacts ranged from 4.89 mg/kg (at SS2-03) collected during the Phase II ESA to 91.8 mg/kg (at SS2-46) collected during the Delineation Investigation. The arsenic impacts were located within the miscellaneous equipment and material storage and die storage areas (*i.e.*, subarea B-4, see Figures 4, 5 and 7) and were generally restricted to the surface or near surface soils, as previously discussed.

4.3.2 PAHs

PAHs were detected at the highest concentrations and were the only SVOCs detected above the MDEQ criteria at the Site. Out of the 68 samples collected at the Site for either SVOCs or PAHs, 8 samples exceeded the nonresidential direct contact criteria for benzo(a)pyrene of 8,000 ug/kg, including, SS2-04, SS2-05, SS2-15N, SS2-24D-3 (from 3 fbg), SS2-24D-5 (from 5 fbg), SS2-27, SS2-38 and SS2-39 with concentrations ranging from 10,400 ug/kg to 38,700 ug/kg.

Fluoranthene exceeded the GSI criterion in 17 of 68 samples collected at the Site for either SVOCs or PAHs. Phenanthrene exceeded the GSI criterion in 23 of 68 samples collected at the Site for either SVOCs or PAHs. Naphthalene exceeded the GSI criterion in SS2-24D-3 and SS2-24D-5. Fluorene exceeded the GSI criterion in SS2-24D-5. Carbazole exceeded the GSI criterion at SS2-04.

No other SVOCs exceeded the MDEQ nonresidential soil cleanup criteria, no other subsurface soil samples contained SVOCs above a MDEQ nonresidential criteria and it appears that the impacts at the Site are generally restricted to the surface or near surface soils and located in the miscellaneous equipment and material storage and die storage areas (*i.e.*, subareas B-3 and B-4, see Figures 4, 5 and 7), and the ditch that formerly ran along the south side of the road on the north central portion of the Site (*i.e.*, subarea C, see Figures 4, 5 and 7), where a majority of the dies were stored at one time. This area had the highest levels of PAHs.

4.3.3 Areas of Impact

There were four areas within the Site that were impacted above nonresidential direct contact and/or drinking water criteria (Figures 5 and 7). These areas are referred to as:

- Subarea B-2 (Figure 7), which is within the miscellaneous equipment and material storage area and southern portion of the overall die storage area
- Subarea B-3 (Figure 7), which is within the miscellaneous equipment and material storage area and southern portion of the overall die storage area
- Subarea B-4 (Figure 7), which includes the miscellaneous equipment and material storage area and southern portion of the overall die storage area
- Subarea C (Figure 7), which includes the northern portion of the overall die storage area, and the former ditch that ran along the south side of the road on the north central portion of the Site near MW2-1 where a majority of the dies were once stored

Area B-2 was located centered on sample location of SS2-20. This location was delineated for mercury, which exceeded the MDEQ nonresidential drinking water protection criterion. This area was investigated to see the

approximate extent of mercury impacts in this area above drinking water levels. The surface soil samples were above the nonresidential drinking water criterion; however, the intermediate and deep samples collected at 3 ft and 8 ft, respectively were below the MDEQ nonresidential drinking water criterion. The attempt to delineate these impacts indicate that the mercury impacts above the drinking water criterion at least extends to an area of 40 ft by 40 ft. Mercury was delineated to below the drinking water criteria by other Phase II ESA sampling locations, including SS2-11, SS2-14, SS2-19, and SS2-24; therefore, no further delineation was conducted during the Delineation Investigation. Furthermore, the groundwater data collected during the Phase II ESA indicates that mercury was not detected at the Site. As discussed in Section 2.6.1, this area was remediated by removing approximately 90 (loose) yards (60 in place yards) of soils from a 40 ft by 40 ft area to a depth of about 1 foot deep (Figure 8).

Area B-3 was located centered on sample location of SS2-24. This location was delineated for PAHs. The deep sample collected at 5 ft was above MDEQ nonresidential direct contact criteria for benzo(a)pyrene at a level of 20,400 ug/kg. The sample collected at 6 ft was non-detect completing the vertical delineation for the area. The samples collected an additional 20 ft from this location were under the MDEQ nonresidential direct contact criteria and completed the delineation of PAHs in this area. The area above MDEQ nonresidential direct contact criteria is approximately 1,444 ft^2 to a depth of approximately 6 fbg. It is assumed that only about 2.5 ft on average was removed from this area during the soil removal activities because of the presence of the historical buried water test trough for the tanks formerly produced at the plant in this area. Therefore, up to about 3.5 ft of additional soil removal may be required in this area of the Site.

Area B-4 was located around sample locations SS2-03, SS2-14, and SS2-15. The SS2-03 area was delineated for lead and PAHs. The SS2-14 area was delineated for arsenic, lead and PAHs. The SS2-15 area was delineated for PAHs. Surface soil sample SS2-03 was delineated by surface soil samples collected 20 ft south and 25 ft east of the original location (SS2-03), SS2-15 to the north, and SS2-14N to the west. The sample at SS2-14, collected at 2 fbg was below the MDEQ nonresidential direct contact criteria for arsenic and lead, but was above the criterion for benzo(a)pyrene of 2,100 ug/kg, at a concentration of 2,300 ug/kg. Furthermore, arsenic in the 2 fbg sample exceeded the nonresidential drinking water (and GSI) criterion of 4.6 mg/kg, but was below the default background level; therefore, arsenic was considered delineated vertically at this location. The sample collected at 3 fbg was non-detect for benzo(a)pyrene and below the nonresidential drinking water criterion for arsenic completing the vertical delineation for the area. The north, south, east and west surface soil sample locations collected to delineate SS2-14 were below MDEQ nonresidential direct contact for lead and benzo(a)pyrene; however, arsenic was again above the nonresidential drinking water criterion. Levels ranged from 7.2 mg/kg at SS2-14W to 12.1 mg/kg at SS2-14N for arsenic, and 2,800 ug/kg at SS2-14W to 6,000 ug/kg at SS2-14E for benzo(a)pyrene. Benzo(a)pyrene was delineated by the surface soil samples collected an additional 20 ft from the original location. Arsenic was delineated by SS2-15 to the north and to the south by SS2-14SSS, which is 55 ft to the south and had a concentration of 2.26 mg/kg. SS2-14EE delineated the area to the east. Thirteen surface soil samples were collected to the north, south, and west of SS2-14W to delineate the area for arsenic to below the nonresidential drinking water and direct contact criteria. The samples to the west of SS2-14W that were above MDEQ nonresidential direct contact criteria for arsenic ranged from 14.3 mg/kg at SS2-14W to 91.8 mg/kg at SS2-46. The sample SS2-46WWW, which is 270 ft from SS2-14W, was below MDEQ clean up criterion with a concentration of 4.24 mg/kg. At SS2-46 two samples were collected to delineate arsenic to the north, which was delineated by SS2-26NN about 50 ft north of SS2-46. Five samples were collected up to 160 ft south of SS2-46 to delineate the area. The samples to the south that were above MDEQ nonresidential direct contact and/or drinking water criteria ranged from 21 mg/kg at SS2-46SSS to 59.4 mg/kg at SS2-46S. To the south, arsenic was delineated below the nonresidential direct contact criteria by SS2-47NWNW at a level of 6.15 mg/kg, which still exceeds the drinking water criterion.

To delineate the vertical impacts of PAHs at SS2-15, two samples were collected at depths of 3 ft and 7 ft. Both samples were non-detect for PAHs. The delineation of SS2-15 indicated that the northern location exceeded the MDEQ nonresidential direct contact cleanup criterion for benzo(a)pyrene with a level of 15,600 ug/kg. A second location was sampled an additional 20 ft north and that sample did not contain benzo(a)pyrene (*i.e.*, was non detect). The delineated area for Area B-4 was calculated for two different depths. The area adjacent to the original sample locations of SS2-03, SS2-14, and SS2-15, bordered by SS2-15NN to the north, SS2-14SS to the

south, SS2-03E to the east, and SS2-14WW to the west, had an area above MDEQ nonresidential direct contact of approximately 4,685 ft^2 to a depth of approximately 3 ft. The area to the west bordered by SS2-26 to the north, SS2-48S to the south, SS2-14WW to the east, and SS2-46WWW to the west, had an area above MDEQ nonresidential direct contact of approximately 15,711 ft^2 to a depth of approximately 2 ft. It is assumed that the impacted soils from the B-4 area were removed during the soil removal activities at the Site.

Area C, which is in the northern portion of the die storage area along the aforementioned former ditch area. This location was delineated for PAHs and had exceedances throughout the ditch. The deep sample collected at SS2-27D at 2.5 ft was below the MDEQ nonresidential direct contact criteria, which indicates that the impacts were surficial in nature. The concentrations ranged from 1,800 ug/kg at SS2-37 to 38,700 ug/kg at SS2-38 for benzo(a)pyrene. Results of SS2-41 define the eastern extent of impacts, and SS2-43 defines the southern extent. It is assumed that the impacted soils from this area were removed during the soil removal activities at the Site because impacts were detected no deeper than approximately 2.5 fbg.

4.3.4 Impact Volumes

The following section provides the volume of soil by in place yards that would have needed to be removed from each area to restore the areas to below nonresidential direct contact and/or groundwater criteria prior to the soil stripping activities conducted at the Site, and an estimate for the volume that might have remained after the soil stripping activities were completed. Once the soils were/are removed and decompressed, the volume typically increased/would increase by a factor of 20 to 30 percent.

- Area B2 – 90 yards –soils from this area were removed prior to the other soil stripping/removal activities
- Area B3 – 321 yards – an estimated 134 yards were removed during the soil removal activities; therefore, about 187 yards potentially remain in this area
- Area B4 – 1,704 yards – the impacts associated with the samples collected during the Phase II ESA and Delineation Study were likely removed as part of the soil removal activities; however, the floor block materials and potentially the soils in contact with the floor block material may need to be removed as discussed in Section 4.4
- Area C – 574 yards – likely removed as part of the soil removal activities
- Total – 2,599 yards – with potentially about 187 yards still remaining, not counting the potential volume of floor block material or soils in contact with the floor block material as discussed in Section 4.4

4.4 AUGUST 2011 INVESTIGATION SOIL ANALYTICAL RESULTS

The analytical results for detected analytes in the soil samples collected during the August 2011 sampling event for the Site to determine the current conditions under the areas that the Phase II ESA and Delineation Investigation indicated needed remediation are presented in Table 3. The corresponding analytical laboratory reports are contained in Appendix D.

4.4.1 VOCs, Metals and PCBs

No VOCs were detected in the surface soil samples analyzed for VOCs (*i.e.*, SS-13 through SS-16), which confirms previous Phase II ESA sample results for the Site. None of the surface soil, soils in contact with floor block, or floor block samples analyzed for RCRA metals contained metals above the MDEQ nonresidential soil cleanup criteria, which indicates that metals impacts at the Site were remediated during the soil stripping (*i.e.*, removal) activities, which confirms the Phase II ESA and Delineation Investigation results that indicated that metals impacts were restricted to surface soils or near surface impacts, which have been removed from the Site and were placed in the basement of the former Press Room. Furthermore, no PCBs were detected in the surface soil, soils in contact with floor block, or floor block samples analyzed for PCBs, which confirms the previous Phase II ESA sample results for the Site.

4.4.2 SVOCs

PAHs were the only SVOC constituents detected at the Site, which confirms the previous Phase II ESA and Delineation Investigation results. Several PAH constituents were detected at concentrations above the MDEQ nonresidential criteria at the Site. Of the 20 confirmation/verification surface soil samples (confirming previous

Phase II ESA and Delineation Investigation study results following the removal of the soils from the Site), SS-01 through SS-20, only SS-01, SS-07 and SS-17 contained PAHs at concentrations above the MDEQ nonresidential criteria, and only for the GSI criteria.

SS-01 contained fluoranthene and phenanthrene at concentrations of 7,100 ug/kg and 4,200 ug/kg, respectively, which exceeds their respective GSI criterion of 5,500 ug/kg and 2,100 ug/kg. Previous Phase II ESA and Delineation Investigation results also contained other PAHs in this area of the Site, and fluoranthene and phenanthrene at concentrations of up to 58,300 ug/kg and 51,100 ug/kg, respectively.

SS-07 contained phenanthrene at a concentration of 2,600 ug/kg, which exceeded the GSI criterion of 2,100 ug/kg. Previous Phase II ESA and Delineation Investigation results also contained other PAHs in this area of the Site, and fluoranthene and phenanthrene at concentrations of up to 3,900 ug/kg and 2,300 ug/kg, respectively, at a depth of up to 2 ft deep. However, up to 6 ft of soil was removed from this area of the site.

SS-17 contained fluoranthene and phenanthrene at concentrations of 6,800 ug/kg and 5,700 ug/kg, respectively, which exceeds their respective GSI criterion of 5,500 ug/kg and 2,100 ug/kg. Previous Phase II ESA and Delineation Investigation results also contained other PAHs in this area of the Site, and fluoranthene and phenanthrene at concentrations of up to 26,500 ug/kg and 18,200 ug/kg, respectively. Also, SS-17 was likely collected about a foot below the depth of the nearby Delineation Investigation sample SS2-39 because, although about 3 to 4 ft was removed from this area during the soil stripping activities, these samples were collected in the area of a previous 2 to 3 foot deep ditch.

PAH constituent concentrations within the floor block samples (*i.e.*, FB-01 through FB-05) exceeded one or more of the following criteria for several PAH constituents: nonresidential drinking water protection criteria, GSI criteria, and/or nonresidential direct contact criteria. Table 3 provides a comparison to these criteria.

The soils in contact with the floor blocks, with the exception of the sample FBS-03, which was below the MDEQ criteria, exceeded the GSI criteria for acenaphthene, fluoranthene, fluorene, and/or phenanthrene. Soils in contact with the floor blocks samples FBS-01, FBS-02 and FBS-03 exceeded the nonresidential direct contact criteria for one or more of the following PAHs: benzo(a)anthracene, benzo(a)pyrene benzo(b)fluoranthene, but at much lower concentrations (up to several orders of magnitude) than the floor blocks. The highest concentrations of PAHs were detected in the soil in contact with floor block sample FBS-01, and the soil in contact with floor block sample location FBS-03 met the MDEQ criteria. Table 3 provides a comparison to these criteria.

4.4.3 Areas of Impact and Potential Exposure Risks

The August 2011 results indicate that there were three areas within the Site that are impacted above drinking water, GSI, and/or direct contact criteria. These areas are referred to as:

- The B-3 subarea (Figure 7) where SS-01 was located, which includes a small portion of the miscellaneous equipment and material storage area
- The B-4 subarea (Figure 7) and floor block area where SS-07 and FB-01 through FB-05 and FBS-01 through FBS-05 were located (Figure 7), which includes the main portion of the miscellaneous equipment and material storage
- The C subarea (Figure 7) where SS-17 was located, which includes the eastern portion of the former ditch that ran along the south side of the road on the north central portion of the Site near MW2-1 where a majority of the dies were once stored

As detailed in the results summary section, each of these areas contain PAH impacted materials above one or more of the MDEQ criteria. The B-3 subarea contains PAH constituents at concentrations of about twice the GSI criteria, which have a small potential for impacting surface water through either erosion (sedimentation) or leaching to groundwater and then migrating to the nearest surface water. However, the potential for leaching to groundwater is very remote because the concentrations are much (2 orders of magnitude) less than drinking water protection criteria indicating that the soil concentrations observed in this area of the Site would not leach to groundwater in significant concentrations or then migtrate to the nearest surface water. The potential

pathway for exposure to the GSI exceedances in this area of the Site would be via erosion and sedimentation that reaches a surface water body, which is also not likely if the area is stabilized (*i.e.*, graded and seeded to establish vegetative cover and minimize erosion), and due to the distance to the planned stormwater discharge pipe (approximately 400 ft), the planned sediment retention for stormwater, and the distance to the nearest surface water.

Similarly, the results at SS-07 (subarea B-4) and SS-17 (subarea C) also exceed the GSI criteria and similarly do no present a leaching to groundwater concern and present an unlikely exposure scenario of erosion and sedimentation that reaches a surface water body.

The floor block area, in particular the floor blocks, has PAHs exceeding the nonresidential drinking water protection criteria, GSI criteria, nonresidential direct contact criteria. However, based on the site geology, hydrogeology and groundwater samples collected during the Phase II ESA, it does not appear that the floor blocks have impacted the Site groundwater above criteria. Removal of the floor blocks would eliminate potential future leaching to groundwater or direct contact exposure scenarios. The remaining soils in the floor block area could potentially present a risk through direct contact.

4.4.4 Impacted Volumes

The following section provides the estimated volumes of soil by in place yards that would need to be removed from each area to restore to below the nonresidential drinking water and/or direct contact criteria. Once the soils are removed and decompressed, the volume will typically increase by a factor of 20 to 30 percent.

- Area B3 – 187 yards – approximately 2.5 feet of soils were removed from this area during previous soil removal activities and previous investigation results indicated that impacts were 6 ft or less, so up to 3.5 ft of soil could require removal to restore the area
- Area B4 – this area will be dealt with along with the floor block area
- Floor block area – worse case: 7,400 yards – assuming a 2.3 acre area contains floor blocks and all soils and floor blocks are removed to a depth of 2 feet below the existing grade (of this maybe 1 to 5 percent of this volume would be made up of floor blocks, so about 74 yards to 370 yards, which may be all that requires removal)
- Area C – 0 yards – already meets the nonresidential drinking water and/or direct contact criteria, and GSI risk is negligible

4.5 PHASE II ESA AND DELINEATION INVESTIGATION GROUNDWATER ANALYTICAL RESULTS

The analytical results for detected analytes in the groundwater samples collected during the Phase II ESA for the Site are presented in Table 4. The corresponding analytical laboratory reports are contained in Appendix E.

Groundwater analytical results for most analytes were non-detect (Table 3). Selenium at a concentration of 6 ug/L at MW2-2 exceeded the GSI criterion of 5 ug/L in the dissolved metals sample, but was not detected above the GSI criterion in the corresponding total metals sample. Likewise, silver at a concentration of 0.8 ug/L at MW2-2 exceeded the GSI criterion of 0.06 ug/L in the dissolved metals sample, and exceeded the GSI criterion at a concentration of 0.4 ug/L in the total metals. The rest of the results were below the criteria.

Based on the Phase II ESA findings, soil leaching to groundwater is not occurring above the groundwater criteria. Monitoring wells MW2-1 and MW2-2 were installed within two large areas of impacts within the die storage area; however, the groundwater within these wells was below the nonresidential drinking water criteria indicating that the surficial impacts did not impact the groundwater above the criteria. Furthermore, as discussed earlier, the GSI criteria are not applicable to analytical results from MW2-1 and MW2-2 as they are not located close enough to the nearest surface water body where the GSI criteria would be relevant.

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5. CONCLUSIONS AND RECOMMENDATIONS

The results of the previous activities performed at the Site indicate that:

- RCRA metals, along with VOCs and PCBs, are not constituents of concern (COCs) at the Site. It appears that the shallow metals impacts previously observed at the Site were removed during the soil removal activities to fill the basement of the former Press Room
- PAHs continue to be a COC for the Site
- Most of the PAH impacted soils previously identified at the Site were removed as part of the soil removal efforts undertaken to fill the basement of the former Press Room, which included removing an average of approximately 4 feet of soils from the Site
- Impacted soils are still present above the direct contact and GSI criteria in the B-3 area (Figure 10) because soil impacts were determined to be present to a depth of about 6 fbg (historical grade); however, the GSI risks are negligible
- Wooden floor blocks observed in the southern portion of the Site (within the floor block area) are impacted above the nonresidential drinking water protection criteria, GSI criteria, nonresidential direct contact criteria
- Soils in contact with the floor blocks are impacted at much lower levels than the floor blocks, but still above the GSI and/or direct contact criteria several PAHs, and the collection of the soils in contact with the floor block represent a worse-case scenario for these soils, where as samples collected, for instance 6 inches below the floor blocks, might present a different assessment of the risks associated with the soils within the floor block area
- Impacted soils are still present above the GSI criteria in a small portion of the C area (Figure 1); however, it is assumed that the soils in this area (once stabilized) would constitute a negligible risk to stormwater and the nearest surface water body
- The site was not stabilized following the completion of the soil removal activities, but is at least sparsely vegetated currently

O'Brien & Gere makes the following recommendations based on the Site history and current conditions at the Site:

- Conduct additional delineation (from a visual standpoint only) activities to define the extent of the floor blocks both horizontally and vertically to guide remedial action (or interim measure) alternative evaluation for these materials. Visual inspection will be performed to ascertain the depth of floor block burial, the approximate density of floor blocks in the area (compared to soils), and by mapping out the extend of the floor block area. These activities could be completed in one day or less utilizing a backhoe and GPS unit.
- Survey subarea B-3 and either:
  - Remove soil impacted above the nonresidential direct contact criteria as an interim measure, or
  - Cap this areas to limit the potential for direct contact exposure/risk and file a deed restriction for the area as a final corrective measure
- Remove floor blocks from floor block area and characterize soils for remedial action (or interim measure) alternative evaluation
- Backfill and grade Site as necessary, and seed Site to stabilize Site from a storm water management standpoint

To address the above recommendations a Sampling and Analysis Plan (SAP) is attached as Appendix F. Furthermore, a Health and Safety Plan (HASP) to govern the activities at the Site has been prepared and is included in Appendix G.

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TABLES

Table 1
Confirmatory Soil Samples - SS2-20 Area
Analytical Results
RACER Trust
Grand Blanc, Michigan

Confirmatory Floor Results

Parameter		MDEQ Criteria: Statewide Default Background Levels	MDEQ Criteria: Non-Residential Drinking Water Protection Criteria	MDEQ Criteria: Groundwater Surface Water Interface Protection Criteria	MDEQ Criteria: Non-Residential Soil Volatilization to Indoor Air Inhalation Criteria	MDEQ Criteria: Non-Residential Direct Contact Criteria	SS2-20-CF-1	SS2-20-CF-2	SS2-20-CF-3	SS2-20-CF-4	SS2-20-CF-4/ SS2-20-DUP-1	SS2-20-CF-5
Mercury	mg/kg	0.13	1.7	0.050 (M); 0.0012	89	580	**0.264**	<0.050	0.123	**0.405**	**0.216**	<0.050

Confirmatory Sidewall Results

Parameter		MDEQ Criteria: Statewide Default Background Levels	MDEQ Criteria: Non-Residential Drinking Water Protection Criteria	MDEQ Criteria: Groundwater Surface Water Interface Protection Criteria	MDEQ Criteria: Non-Residential Soil Volatilization to Indoor Air Inhalation Criteria	MDEQ Criteria: Non-Residential Direct Contact Criteria	SS2-20-CS-1	SS2-20-CS-2	SS2-20-CS-3	SS2-20-CS-4
Mercury	mg/kg	0.13	1.7	0.050 (M); 0.0012	89	580	**0.440**	**1.146**	0.103	**0.692**

Bold lettering indicates samples with metals concentrations exceeding the Michigan Statewide Default Background

Exceeds GSI protection criteria only

(M) Calculated criterion is below the analytical target detection limit

Table 2
Summary of Soil Analytical Results
RACER Trust
Grand Blanc, Michigan

Parameter		MDEQ Criteria: Statewide Default Background Levels	MDEQ Criteria: Non-Residential Drinking Water Protection Criteria	MDEQ Criteria: Groundwater Surface Water Interface Protection Criteria	MDEQ Criteria: Non-Residential Soil Volatilization to Indoor Air Inhalation Criteria	MDEQ Criteria: Non-Residential Direct Contact Criteria	SB2-06 (8'-10')	SB2-07 (8'-10')	SB2-08 (1'-3')	SB2-09 (2'-4')	SB2-10 (1'-3')	SB2-11 (2'-4')	SB2-11/Dup-02 (2'-4')	SB2-12 (2'-4')	SB2-13 (2'-4')	SB2-14 (4'-5')	SB2-16 (4'-5')	SB2-20 (0'-1')	SS2-01	SS2-02	SS2-03
Arsenic	mg/kg	5.8	4.6	4.6	NLV	37	0.56	2.18	1.69	1.69	1.73	1.04	1.09	0.46	1.59	--	--	2.78	1.26	2.33	4.89
Barium	mg/kg	75	1300	440 (G,X)	NLV	1.3E+05	60.3	54.3	49.9	38.9	43	47.5	51.2	66.8	36.5	--	--	12.6	16.2	30.6	42.9
Cadmium	mg/kg	1.2	6	3 (G,X)	NLV	2100	<0.20	<0.20	0.23	0.24	0.28	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.20	**1.36**	**7.29**
Chromium	mg/kg	18	1.0E+6 (D)	1.0E+6 (G,X,D)	NLV	1.0E+6(D)	3.6	5.5	4.2	2.6	4	3.4	3.7	4.1	4.8	--	--	3	4.5	9.3	**19.1**
Copper	mg/kg	32	5800	73 (G)	NLV	73000	7.4	6.3	5.3	4.2	9.9	3.1	3.1	3.9	4.3	--	--	7	5.6	24.8	**65.3**
Lead (Total)	mg/kg	21	700	2500 (G,X)	NLV	900 (DD)	10.6	7.79	18.2	7.31	20.4	5.77	7.4	7.8	5.99	--	--	11.1	11.2	**31.4**	**699**
Mercury	mg/kg	0.13	1.7	0.050 (M); 0.0012	89	580	<0.050	<0.050	<0.050	<0.050	0.096	<0.050	<0.050	<0.050	<0.050	--	--	<0.050	0.101	<0.050	0.076
Selenium	mg/kg	0.41	4	0.4	NLV	9600	<0.20	**1.31**	<0.50	**0.47**	<0.50	**0.59**	**0.55**	<0.20	**0.5**	--	--	**0.51**	0.4	**0.71**	<0.50
Silver	mg/kg	1	13	100 (M); 27	NLV	9000	<0.10	<0.10	<0.20	<0.10	<0.20	<0.10	<0.10	<0.10	<0.10	--	--	<0.20	<0.10	<0.10	0.24
Zinc	mg/kg	47	5000	170 (G)	NLV	6.3E+05	6.7	11.8	15	17.9	29.8	8.4	9.3	10.7	10	--	--	21.1	22.7	**117**	**645**
Acenaphthene	µg/kg	NC	8.8E+05	8700	3.5E+08	1.3E+08	<330	<330	<330	<300	<330	<300	<300	<300	<330	<300	<300	<300	<330	<300	<330
Acenaphthylene	µg/kg	NC	17000	ID	3.00E+06	5.2E+06	<330	<330	<330	<300	<330	<300	<300	<300	<330	<300	<300	<300	<330	<300	<330
Anthracene	µg/kg	NC	41000	ID	1.0E+9(D)	7.3E+08	<330	<330	<330	<300	<330	<300	<300	<300	<330	<300	<300	<330	<330	600	940
Benzo(a)anthracene	µg/kg	NC	NLL	NLL	NLV	80000	<330	<330	<330	<300	<330	<300	<300	<300	<330	<300	<300	<330	370	1600	3350
Benzo(a)pyrene	µg/kg	NC	NLL	NLL	NLV	8000	<330	<330	<330	<300	440	<300	<300	<300	<330	<300	<300	<330	560	2400	4140
Benzo(b)fluoranthene	µg/kg	NC	NLL	NLL	ID	80000	<330	<330	<330	<300	400	<300	<300	<300	<330	<300	<300	<330	560	2400	3490
Benzo(ghi)perylene	µg/kg	NC	NLL	NLL	NLV	7.0E+06	<330	<330	<330	<300	370	<300	<300	<300	<330	<300	<300	<330	360	1700	2410
Benzo(k)fluoranthene	µg/kg	NC	NLL	NLL	NLV	8.0E+05	<330	<330	<330	<300	380	<300	<300	<300	<330	<300	<300	<330	420	1700	3040
Carbazole	µg/kg	NC	39000	1100	NLV	2.4E+06	<330	<330	<330	<300	<330	<300	<300	<300	<330	--	--	--	370	1000	410
Chrysene	µg/kg	NC	NLL	NLL	ID	8.0E+06	<330	<330	<330	<300	<330	<300	<300	<300	<330	<300	<300	<330	440	1900	3540
Dibenzo(ah)anthracene	µg/kg	NC	NLL	NLL	NLV	8000	<330	<330	<330	<330	<330	<330	<330	<330	<330	<300	<300	<330	<330	<300	<330
Dibenzofuran	µg/kg	NC	ID	1700	3.60E+06	ID	<330	<330	<330	<330	<330	<330	<330	<330	<330	--	--	--	<330	<300	<330
Fluoranthene	µg/kg	NC	7.30E+05	5500	1.0E+9 (D)	1.3E+08	<330	<330	450	<300	<330	<300	<300	<300	<330	<300	<300	400	800	3600	7060
Fluorene	µg/kg	NC	8.9E+05	5300	1.0E+9(D)	8.7E+7(DD)	<330	<330	<330	<330	<330	<330	<330	<330	<330	<300	<300	<300	<330	<300	<330
Indeno(1,2,3-cd)pyrene	µg/kg	NC	NLL	NLL	NLV	80000	<330	<330	<330	<300	330	<300	<300	<300	<330	<300	<300	<330	370	1500	2170
2-Methylnaphthalene	µg/kg	NC	1.70E+05	4200	4.90E+06	2.6E+07	<330	<330	<330	<300	<330	<300	<300	<300	<330	<300	<300	<300	<330	<300	<330
1-Methylnaphthalene	µg/kg	NC	NC	NC	NC	NC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	µg/kg	NC	1.00E+05	730	4.7E+05	5.2E+07	<330	<330	<330	<300	<330	<300	<300	<300	<330	<300	<300	<300	<330	<300	<330
Phenanthrene	µg/kg	NC	1.60E+05	2100	5.1E+06	5.2E+06	<330	<330	<330	<300	<330	<300	<300	<300	<330	<300	<300	<330	390	2000	3240
Pyrene	µg/kg	NC	4.8E+05	ID	1.0E+9(D)	8.4E+07	<330	<330	370	<300	<330	<300	<300	<300	<330	<300	<300	400	640	2600	6600

Bold lettering indicates samples with metals concentrations exceeding the Michigan Statewide Default Background

Exceeds GSI protection criteria only

Exceeds nonresidential drinking water protection criteria or both GSI and drinking water protection criteria

Exceeds nonresidential direct contact criteria

(D) Calculated criterion exceeds 100 percent

(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water

(M) Calculated criterion is below the analytical target detection limit

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source

(DD) Hazardous substances causes developmental effects

(NLL) Means hazardous substances is not likely to leach under most soil conditions

(NLV) Means hazardous substance is not likely to volatilize under most conditions

(ID) Means insufficient data to develop criterion

(NC) Means no criterion or value is available

-- Not analyzed

Table 2
Summary of Soil Analytical Results
RACER Trust
Grand Blanc, Michigan

Parameter		MDEQ Criteria: Statewide Default Background Levels	MDEQ Criteria: Non-Residential Drinking Water Protection Criteria	MDEQ Criteria: Groundwater Surface Water Interface Protection Criteria	MDEQ Criteria: Non-Residential Soil Volatilization to Indoor Air Inhalation Criteria	MDEQ Criteria: Non-Residential Direct Contact Criteria	SS2-03S	SS2-03E	SS2-04	SS2-05	SS2-06	SS2-07	SS2-08	SS2-09	SS2-10	SS2-14	SS2-14D-2'	SS2-14D-3'	SS2-14D-8'	SS2-14N	SS2-14N/ Dup-05	SS2-14S
Arsenic	mg/kg	5.8	4.6	4.6	NLV	37	--	--	2.4	1.34	1.22	0.89	1.14	0.59	3.2	**13.5**	5.09	--	1.08	**12.1**	**11**	**8.62**
Barium	mg/kg	75	1300	440 (G,X)	NLV	1.3E+05	--	--	49.5	38.4	44.4	47.8	42.6	73.7	67.4	**93.2**	--	--	--	--	--	--
Cadmium	mg/kg	1.2	6	3 (G,X)	NLV	2100	--	--	**5.17**	0.76	**1.21**	0.65	<0.20	<0.20	**2.4**	**1.26**	--	--	--	--	--	--
Chromium	mg/kg	18	1.0E+6 (D)	1.0E+6 (G,X,D)	NLV	1.0E+6(D)	--	--	**38.1**	7.8	15.8	6.7	3.1	3.8	**34.6**	**24.5**	--	--	--	--	--	--
Copper	mg/kg	32	5800	73 (G)	NLV	73000	--	--	**94.1**	18.7	**52.9**	11.6	4.9	4.5	**52.6**	**91.2**	--	--	--	--	--	--
Lead (Total)	mg/kg	21	700	2500 (G,X)	NLV	900 (DD)	**164**	**142**	**83.3**	20	**31.1**	**24.5**	12.2	11.6	**253**	**1020**	**35.2**	--	9.2	**154**	**204**	**51.9**
Mercury	mg/kg	0.13	1.7	0.050 (M); 0.0012	89	580	--	--	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.087	**0.38**	--	--	--	--	--	--
Selenium	mg/kg	0.41	4	0.4	NLV	9600	--	--	<0.50	**0.43**	0.39	0.22	0.31	0.39	**0.48**	**0.48**	--	--	--	--	--	--
Silver	mg/kg	1	13	100 (M); 27	NLV	9000	--	--	<0.20	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.31	--	--	--	--	--	--
Zinc	mg/kg	47	5000	170 (G)	NLV	6.3E+05	--	--	**691**	**80**	**191**	**56.7**	15.9	13.1	**321**	**156**	--	--	--	--	--	--
Acenaphthene	µg/kg	NC	8.8E+05	8700	3.5E+08	1.3E+08	--	--	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300
Acenaphthylene	µg/kg	NC	17000	ID	3.00E+06	5.2E+06	--	--	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300
Anthracene	µg/kg	NC	41000	ID	1.0E+9(D)	7.3E+08	--	--	13900	2000	300	800	<300	<300	300	500	600	<300	<300	<300	<300	500
Benzo(a)anthracene	µg/kg	NC	NLL	NLL	NLV	80000	--	--	37300	10700	1600	4400	<300	<300	<300	1500	1800	<300	<300	700	1200	3700
Benzo(a)pyrene	µg/kg	NC	NLL	NLL	NLV	8000	--	--	37300	11700	2000	5500	<300	<300	1000	2300	2100	<300	<300	1200	1600	4800
Benzo(b)fluoranthene	µg/kg	NC	NLL	NLL	ID	80000	--	--	35100	13200	1800	6200	<300	<300	1300	2100	2000	<300	<300	700	1600	4400
Benzo(ghi)perylene	µg/kg	NC	NLL	NLL	NLV	7.0E+06	--	--	19400	3200	1000	1600	<300	<300	400	1200	1200	<300	<300	<300	1500	3200
Benzo(k)fluoranthene	µg/kg	NC	NLL	NLL	NLV	8.0E+05	--	--	30400	12200	1900	4800	<300	<300	900	1900	1600	<300	<300	900	1300	3900
Carbazole	µg/kg	NC	39000	1100	NLV	2.4E+06	--	--	2030	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	µg/kg	NC	NLL	NLL	ID	8.0E+06	--	--	38600	10900	1800	4800	<300	<300	1000	2000	1900	<300	<300	900	1500	3900
Dibenzo(ah)anthracene	µg/kg	NC	NLL	NLL	NLV	8000	--	--	1800	400	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300
Dibenzofuran	µg/kg	NC	ID	1700	3.60E+06	ID	--	--	1020	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	µg/kg	NC	7.30E+05	5500	1.0E+9 (D)	1.3E+08	--	--	81600	20100	3500	8400	<300	<300	1900	3900	3800	<300	<300	1400	2200	6300
Fluorene	µg/kg	NC	8.9E+05	5300	1.0E+9(D)	8.7E+7(DD)	--	--	1730	300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300
Indeno(1,2,3-cd)pyrene	µg/kg	NC	NLL	NLL	NLV	80000	--	--	18300	4000	1100	2000	<300	<300	400	1200	1100	<300	<300	<300	1400	3200
2-Methylnaphthalene	µg/kg	NC	1.70E+05	4200	4.90E+06	2.6E+07	--	--	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300
1-Methylnaphthalene	µg/kg	NC	NC	NC	NC	NC	--	--	--	--	--	--	--	--	--	--	<300	<300	<300	<300	<300	<300
Naphthalene	µg/kg	NC	1.00E+05	730	4.7E+05	5.2E+07	--	--	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300
Phenanthrene	µg/kg	NC	1.60E+05	2100	5.1E+06	5.2E+06	--	--	36700	5500	1100	2100	<300	<300	1000	1800	2300	<300	<300	700	1200	2200
Pyrene	µg/kg	NC	4.8E+05	ID	1.0E+9(D)	8.4E+07	--	--	80900	17400	2900	7300	<300	<300	1600	3400	3500	<300	<300	1800	2900	6600

Bold lettering indicates samples with metals concentrations exceeding the Michigan Statewide Default Background

Exceeds GSI protection criteria only

Exceeds nonresidential drinking water protection criteria or both GSI and drinking water protection criteria

Exceeds nonresidential direct contact criteria

(D) Calculated criterion exceeds 100 percent

(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water

(M) Calculated criterion is below the analytical target detection limit

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source

(DD) Hazardous substances causes developmental effects

(NLL) Means hazardous substances is not likely to leach under most soil conditions

(NLV) Means hazardous substance is not likely to volatilize under most conditions

(ID) Means insufficient data to develop criterion

(NC) Means no criterion or value is available

-- Not analyzed

Table 2
Summary of Soil Analytical Results
RACER Trust
Grand Blanc, Michigan

Parameter		MDEQ Criteria: Statewide Default Background Levels	MDEQ Criteria: Non-Residential Drinking Water Protection Criteria	MDEQ Criteria: Groundwater Surface Water Interface Protection Criteria	MDEQ Criteria: Non-Residential Soil Volatilization to Indoor Air Inhalation Criteria	MDEQ Criteria: Non-Residential Direct Contact Criteria	SS2-14SS	SS2-14SSS	SS2-14E	SS2-14EE	SS2-14W	SS2-14WW	SS2-14WWW	SS2-15	SS2-15D-3'	SS2-15D-7'	SS2-15N	SS2-15NN	SS2-15E	SS2-15W
Arsenic	mg/kg	5.8	4.6	4.6	NLV	37	**10.8**	2.26	**8.53**	4.43	**7.2**	**14.3**	**39.5**	3.13	--	--	--	--	--	--
Barium	mg/kg	75	1300	440 (G,X)	NLV	1.3E+05	--	--	--	--	--	--	--	66	--	--	--	--	--	--
Cadmium	mg/kg	1.2	6	3 (G,X)	NLV	2100	--	--	--	--	--	--	--	0.74	--	--	--	--	--	--
Chromium	mg/kg	18	1.0E+6 (D)	1.0E+6 (G,X,D)	NLV	1.0E+6(D)	--	--	--	--	--	--	--	13.4	--	--	--	--	--	--
Copper	mg/kg	32	5800	73 (G)	NLV	73000	--	--	--	--	--	--	--	27.4	--	--	--	--	--	--
Lead (Total)	mg/kg	21	700	2500 (G,X)	NLV	900 (DD)	--	--	**160**	--	**109**	--	--	**90.9**	--	--	--	--	--	--
Mercury	mg/kg	0.13	1.7	0.050 (M); 0.0012	89	580	--	--	--	--	--	--	--	0.073	--	--	--	--	--	--
Selenium	mg/kg	0.41	4	0.4	NLV	9600	--	--	--	--	--	--	--	**0.56**	--	--	--	--	--	--
Silver	mg/kg	1	13	100 (M); 27	NLV	9000	--	--	--	--	--	--	--	0.21	--	--	--	--	--	--
Zinc	mg/kg	47	5000	170 (G)	NLV	6.3E+05	--	--	--	--	--	--	--	**100**	--	--	--	--	--	--
Acenaphthene	µg/kg	NC	8.8E+05	8700	3.5E+08	1.3E+08	<300	--	500	<300	<300	<300	--	400	<300	<300	1600	<300	<300	<300
Acenaphthylene	µg/kg	NC	17000	ID	3.00E+06	5.2E+06	<300	--	<300	<300	<300	<300	--	<300	<300	<300	<300	<300	<300	<300
Anthracene	µg/kg	NC	41000	ID	1.0E+9(D)	7.3E+08	<300	--	1300	<300	500	<300	--	1000	<300	<300	3800	<300	<300	<300
Benzo(a)anthracene	µg/kg	NC	NLL	NLL	NLV	80000	1300	--	4600	900	1900	1000	--	2100	<300	<300	13000	<300	600	1300
Benzo(a)pyrene	µg/kg	NC	NLL	NLL	NLV	8000	1900	--	6000	1400	2800	1500	--	3000	<300	<300	15600	<300	1100	1900
Benzo(b)fluoranthene	µg/kg	NC	NLL	NLL	ID	80000	1800	--	6500	1200	2200	1400	--	3200	<300	<300	17400	<300	800	1500
Benzo(ghi)perylene	µg/kg	NC	NLL	NLL	NLV	7.0E+06	1300	--	5000	1100	2100	900	--	1200	<300	<300	9900	<300	900	1300
Benzo(k)fluoranthene	µg/kg	NC	NLL	NLL	NLV	8.0E+05	1500	--	4400	1000	2400	1200	--	2700	<300	<300	12300	<300	700	1300
Carbazole	µg/kg	NC	39000	1100	NLV	2.4E+06	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	µg/kg	NC	NLL	NLL	ID	8.0E+06	1500	--	5000	900	2100	1200	--	3000	<300	<300	14800	<300	600	1300
Dibenzo(ah)anthracene	µg/kg	NC	NLL	NLL	NLV	8000	<300	--	<300	<300	<300	<300	--	<300	<300	<300	<300	<300	<300	<300
Dibenzofuran	µg/kg	NC	ID	1700	3.60E+06	ID	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	µg/kg	NC	7.30E+05	5500	1.0E+9 (D)	1.3E+08	2400	--	8600	1400	3500	2300	--	8000	<300	<300	25600	<300	1200	2700
Fluorene	µg/kg	NC	8.9E+05	5300	1.0E+9(D)	8.7E+7(DD)	<300	--	400	<300	<300	<300	--	400	<300	<300	1300	<300	<300	<300
Indeno(1,2,3-cd)pyrene	µg/kg	NC	NLL	NLL	NLV	80000	1200	--	4400	900	1900	900	--	1400	<300	<300	10200	<300	800	1300
2-Methylnaphthalene	µg/kg	NC	1.70E+05	4200	4.90E+06	2.6E+07	<300	--	<300	<300	<300	<300	--	<300	<300	<300	<300	<300	<300	<300
1-Methylnaphthalene	µg/kg	NC	NC	NC	NC	NC	<300	--	<300	<300	<300	<300	--	--	<300	<300	<300	<300	<300	<300
Naphthalene	µg/kg	NC	1.00E+05	730	4.7E+05	5.2E+07	<300	--	<300	<300	<300	<300	--	<300	<300	<300	<300	<300	<300	<300
Phenanthrene	µg/kg	NC	1.60E+05	2100	5.1E+06	5.2E+06	1100	--	4900	600	2200	1200	--	4700	<300	<300	15300	400	600	1300
Pyrene	µg/kg	NC	4.8E+05	ID	1.0E+9(D)	8.4E+07	2400	--	10500	1500	3900	2200	--	6000	<300	<300	34700	<300	1400	2700

Bold lettering indicates samples with metals concentrations exceeding the Michigan Statewide Default Background

Exceeds GSI protection criteria only

Exceeds nonresidential drinking water protection criteria or both GSI and drinking water protection criteria

Exceeds nonresidential direct contact criteria

(D) Calculated criterion exceeds 100 percent

(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water

(M) Calculated criterion is below the analytical target detection limit

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source

(DD) Hazardous substances causes developmental effects

(NLL) Means hazardous substances is not likely to leach under most soil conditions

(NLV) Means hazardous substance is not likely to volatilize under most conditions

(ID) Means insufficient data to develop criterion

(NC) Means no criterion or value is available

-- Not analyzed

Table 2
Summary of Soil Analytical Results
RACER Trust
Grand Blanc, Michigan

Parameter		MDEQ Criteria: Statewide Default Background Levels	MDEQ Criteria: Non-Residential Drinking Water Protection Criteria	MDEQ Criteria: Groundwater Surface Water Interface Protection Criteria	MDEQ Criteria: Non-Residential Soil Volatilization to Indoor Air Inhalation Criteria	MDEQ Criteria: Non-Residential Direct Contact Criteria	SS2-17	SS2-18	SS2-20	SS2-20D-3'	SS2-20D-8'	SS2-20N	SS2-20S	SS2-20E	SS2-20W	SS2-24	SS2-24D-2'	SS2-24D-3'	SS2-24D-5'	SS2-24D-6'	SS2-24D-8.5'	SS2-24N
Arsenic	mg/kg	5.8	4.6	4.6	NLV	37	1.54	3.08	3.36	--	--	--	--	--	--	2.49	--	--	--	--	--	--
Barium	mg/kg	75	1300	440 (G,X)	NLV	1.3E+05	55.6	59.4	30.9	--	--	--	--	--	--	17.6	--	--	--	--	--	--
Cadmium	mg/kg	1.2	6	3 (G,X)	NLV	2100	0.73	**5.74**	**1.51**	--	--	--	--	--	--	**1.55**	--	--	--	--	--	--
Chromium	mg/kg	18	1.0E+6 (D)	1.0E+6 (G,X,D)	NLV	1.0E+6(D)	7.9	**42.8**	12.8	--	--	--	--	--	--	15	--	--	--	--	--	--
Copper	mg/kg	32	5800	73 (G)	NLV	73000	9.8	**34.7**	**128**	--	--	--	--	--	--	**40.9**	--	--	--	--	--	--
Lead (Total)	mg/kg	21	700	2500 (G,X)	NLV	900 (DD)	**26.1**	**183**	**94**	--	--	--	--	--	--	**314**	--	--	--	--	--	--
Mercury	mg/kg	0.13	1.7	0.050 (M); 0.0012	89	580	<0.050	0.060	**2.760**	<0.050	<0.050	**2.761**	**5.976**	**2.736**	**2.242**	**0.701**	--	--	--	--	--	--
Selenium	mg/kg	0.41	4	0.4	NLV	9600	**0.43**	**0.74**	**0.49**	--	--	--	--	--	--	0.36	--	--	--	--	--	--
Silver	mg/kg	1	13	100 (M); 27	NLV	9000	<0.20	0.1	0.15	--	--	--	--	--	--	0.12	--	--	--	--	--	--
Zinc	mg/kg	47	5000	170 (G)	NLV	6.3E+05	37.9	**300**	**613**	--	--	--	--	--	--	**1040**	--	--	--	--	--	--
Acenaphthene	µg/kg	NC	8.8E+05	8700	3.5E+08	1.3E+08	<300	<300	<300	--	--	--	--	--	--	<300	500	4400	4800	<300	<300	400
Acenaphthylene	µg/kg	NC	17000	ID	3.00E+06	5.2E+06	<300	<300	<300	--	--	--	--	--	--	<300	<300	<500	<500	<300	<300	<300
Anthracene	µg/kg	NC	41000	ID	1.0E+9(D)	7.3E+08	<300	<300	<300	--	--	--	--	--	--	700	1000	6600	8900	<300	<300	800
Benzo(a)anthracene	µg/kg	NC	NLL	NLL	NLV	80000	<300	<300	<400	--	--	--	--	--	--	1800	3000	14700	19200	<300	<300	2700
Benzo(a)pyrene	µg/kg	NC	NLL	NLL	NLV	8000	<300	500	900	--	--	--	--	--	--	2300	3400	15000	20400	<300	<300	3000
Benzo(b)fluoranthene	µg/kg	NC	NLL	NLL	ID	80000	<300	700	1300	--	--	--	--	--	--	2400	3000	16900	26000	<300	<300	2900
Benzo(ghi)perylene	µg/kg	NC	NLL	NLL	NLV	7.0E+06	<300	<300	400	--	--	--	--	--	--	1400	1900	4500	4400	<300	<300	2300
Benzo(k)fluoranthene	µg/kg	NC	NLL	NLL	NLV	8.0E+05	<300	600	700	--	--	--	--	--	--	2000	3200	13200	20800	<300	<300	2900
Carbazole	µg/kg	NC	39000	1100	NLV	2.4E+06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	µg/kg	NC	NLL	NLL	ID	8.0E+06	<300	600	700	--	--	--	--	--	--	2100	3300	15400	19000	<300	<300	3000
Dibenzo(ah)anthracene	µg/kg	NC	NLL	NLL	NLV	8000	<300	<300	<400	--	--	--	--	--	--	<300	<300	2100	<500	<300	<300	<300
Dibenzofuran	µg/kg	NC	ID	1700	3.60E+06	ID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	µg/kg	NC	7.30E+05	5500	1.0E+9 (D)	1.3E+08	300	1300	1000	--	--	--	--	--	--	4600	6600	37400	58300	<300	<300	4700
Fluorene	µg/kg	NC	8.9E+05	5300	1.0E+9(D)	8.7E+7(DD)	<300	<300	<400	--	--	--	--	--	--	<300	500	4300	6000	<300	<300	300
Indeno(1,2,3-cd)pyrene	µg/kg	NC	NLL	NLL	NLV	80000	<300	<300	600	--	--	--	--	--	--	1400	1800	5000	5200	<300	<300	2100
2-Methylnaphthalene	µg/kg	NC	1.70E+05	4200	4.90E+06	2.6E+07	<300	<300	<400	--	--	--	--	--	--	<300	<300	1400	3600	<300	<300	<300
1-Methylnaphthalene	µg/kg	NC	NC	NC	NC	NC	--	--	--	--	--	--	--	--	--	--	<300	900	2400	<300	<300	<300
Naphthalene	µg/kg	NC	1.00E+05	730	4.7E+05	5.2E+07	<300	<300	<400	--	--	--	--	--	--	<300	<300	1800	13700	<300	<300	<300
Phenanthrene	µg/kg	NC	1.60E+05	2100	5.1E+06	5.2E+06	<300	500	500	--	--	--	--	--	--	2700	4400	31800	51100	<300	<300	3100
Pyrene	µg/kg	NC	4.8E+05	ID	1.0E+9(D)	8.4E+07	<300	1100	1200	--	--	--	--	--	--	4100	6200	35100	35100	<300	<300	5200

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Exceeds nonresidential drinking water protection criteria or both GSI and drinking water protection criteria

Exceeds nonresidential direct contact criteria

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(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source

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RACER Trust
Grand Blanc, Michigan

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Arsenic	mg/kg	5.8	4.6	4.6	NLV	37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium	mg/kg	75	1300	440 (G,X)	NLV	1.3E+05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/kg	1.2	6	3 (G,X)	NLV	2100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	mg/kg	18	1.0E+6 (D)	1.0E+6 (G,X,D)	NLV	1.0E+6(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	mg/kg	32	5800	73 (G)	NLV	73000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead (Total)	mg/kg	21	700	2500 (G,X)	NLV	900 (DD)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	mg/kg	0.13	1.7	0.050 (M); 0.0012	89	580	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	mg/kg	0.41	4	0.4	NLV	9600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/kg	1	13	100 (M); 27	NLV	9000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/kg	47	5000	170 (G)	NLV	6.3E+05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	µg/kg	NC	8.8E+05	8700	3.5E+08	1.3E+08	<300	<300	<300	<300	400	<300	<300	<300	800	<300	<300	300	<300	<300	<300
Acenaphthylene	µg/kg	NC	17000	ID	3.00E+06	5.2E+06	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300
Anthracene	µg/kg	NC	41000	ID	1.0E+9(D)	7.3E+08	<300	<300	<300	<300	900	<300	<300	<300	4100	<300	<300	700	800	400	300
Benzo(a)anthracene	µg/kg	NC	NLL	NLL	NLV	80000	700	600	<300	<300	3000	700	1100	300	26400	<300	<300	2100	3900	1900	1600
Benzo(a)pyrene	µg/kg	NC	NLL	NLL	NLV	8000	1000	900	<300	600	3200	1100	1400	1000	27100	400	<300	2800	3600	1800	1500
Benzo(b)fluoranthene	µg/kg	NC	NLL	NLL	ID	80000	1000	800	<300	<300	2500	1100	1500	1000	32800	<300	<300	3000	3300	1900	1400
Benzo(ghi)perylene	µg/kg	NC	NLL	NLL	NLV	7.0E+06	700	700	<300	<300	2300	1100	800	400	6600	<300	<300	900	2200	1100	900
Benzo(k)fluoranthene	µg/kg	NC	NLL	NLL	NLV	8.0E+05	1000	600	<300	<300	3200	900	800	900	24600	<300	<300	2700	3300	1300	1300
Carbazole	µg/kg	NC	39000	1100	NLV	2.4E+06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	µg/kg	NC	NLL	NLL	ID	8.0E+06	1000	700	<300	<300	3200	800	1100	800	25300	<300	<300	2600	4200	1800	1800
Dibenzo(ah)anthracene	µg/kg	NC	NLL	NLL	NLV	8000	<300	<300	<300	<300	<300	<300	<300	<300	900	<300	<300	<300	<300	<300	<300
Dibenzofuran	µg/kg	NC	ID	1700	3.60E+06	ID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	µg/kg	NC	7.30E+05	5500	1.0E+9 (D)	1.3E+08	1300	1400	<300	500	5400	1200	1900	1500	45000	400	<300	5100	6800	3400	2800
Fluorene	µg/kg	NC	8.9E+05	5300	1.0E+9(D)	8.7E+7(DD)	<300	<300	<300	<300	400	<300	<300	<300	800	<300	<300	<300	<300	<300	<300
Indeno(1,2,3-cd)pyrene	µg/kg	NC	NLL	NLL	NLV	80000	700	600	<300	<300	2300	900	800	500	8600	<300	<300	1000	2200	1100	1000
2-Methylnaphthalene	µg/kg	NC	1.70E+05	4200	4.90E+06	2.6E+07	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300
1-Methylnaphthalene	µg/kg	NC	NC	NC	NC	NC	<300	<300	<300	<300	<300	<300	<300	--	--	<300	--	--	<300	<300	<300
Naphthalene	µg/kg	NC	1.00E+05	730	4.7E+05	5.2E+07	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300
Phenanthrene	µg/kg	NC	1.60E+05	2100	5.1E+06	5.2E+06	700	700	<300	<300	3900	500	1200	600	12700	<300	<300	2900	3200	1400	1200
Pyrene	µg/kg	NC	4.8E+05	ID	1.0E+9(D)	8.4E+07	1400	1600	<300	600	6300	1300	2000	1400	42100	500	<300	4700	8100	3700	3200

Bold lettering indicates samples with metals concentrations exceeding the Michigan Statewide Default Background

Exceeds GSI protection criteria only

Exceeds nonresidential drinking water protection criteria or both GSI and drinking water protection criteria

Exceeds nonresidential direct contact criteria

(D) Calculated criterion exceeds 100 percent

(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water

(M) Calculated criterion is below the analytical target detection limit

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source

(DD) Hazardous substances causes developmental effects

(NLL) Means hazardous substances is not likely to leach under most soil conditions

(NLV) Means hazardous substance is not likely to volatilize under most conditions

(ID) Means insufficient data to develop criterion

(NC) Means no criterion or value is available

-- Not analyzed

Table 2
Summary of Soil Analytical Results
RACER Trust
Grand Blanc, Michigan

Parameter		MDEQ Criteria: Statewide Default Background Levels	MDEQ Criteria: Non-Residential Drinking Water Protection Criteria	MDEQ Criteria: Groundwater Surface Water Interface Protection Criteria	MDEQ Criteria: Non-Residential Soil Volatilization to Indoor Air Inhalation Criteria	MDEQ Criteria: Non-Residential Direct Contact Criteria	SS2-38	SS2-39	SS2-40	SS2-41	SS2-42	SS2-43	SS2-43/Dup-10	SS2-46	SS2-46N	SS2-46NN	SS2-46S	SS2-46SS	SS2-46SSS	SS2-46W	SS2-46WW
Arsenic	mg/kg	5.8	4.6	4.6	NLV	37	--	--	--	--	--	--	--	**91.8**	**45.2**	**22.4**	**59.4**	**26.7**	**21**	**48.1**	**29.7**
Barium	mg/kg	75	1300	440 (G,X)	NLV	1.3E+05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/kg	1.2	6	3 (G,X)	NLV	2100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	mg/kg	18	1.0E+6 (D)	1.0E+6 (G,X,D)	NLV	1.0E+6(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	mg/kg	32	5800	73 (G)	NLV	73000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead (Total)	mg/kg	21	700	2500 (G,X)	NLV	900 (DD)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	mg/kg	0.13	1.7	0.050 (M); 0.0012	89	580	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	mg/kg	0.41	4	0.4	NLV	9600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/kg	1	13	100 (M); 27	NLV	9000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/kg	47	5000	170 (G)	NLV	6.3E+05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	µg/kg	NC	8.8E+05	8700	3.5E+08	1.3E+08	3000	1100	<300	<300	<300	<500	<400	--	--	--	--	--	--	--	--
Acenaphthylene	µg/kg	NC	17000	ID	3.00E+06	5.2E+06	<300	<300	<300	<300	<300	<500	<400	--	--	--	--	--	--	--	--
Anthracene	µg/kg	NC	41000	ID	1.0E+9(D)	7.3E+08	11100	5100	<300	600	700	<500	<400	--	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/kg	NC	NLL	NLL	NLV	80000	46500	12800	<300	3300	4500	1300	800	--	--	--	--	--	--	--	--
Benzo(a)pyrene	µg/kg	NC	NLL	NLL	NLV	8000	38700	10400	700	4100	5100	1100	700	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	µg/kg	NC	NLL	NLL	ID	80000	34600	9600	700	3800	4400	1600	1000	--	--	--	--	--	--	--	--
Benzo(ghi)perylene	µg/kg	NC	NLL	NLL	NLV	7.0E+06	22400	6000	700	2100	2600	<500	<400	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/kg	NC	NLL	NLL	NLV	8.0E+05	38000	9700	400	3400	4800	1200	800	--	--	--	--	--	--	--	--
Carbazole	µg/kg	NC	39000	1100	NLV	2.4E+06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	µg/kg	NC	NLL	NLL	ID	8.0E+06	45000	12900	<300	3500	5000	1700	1100	--	--	--	--	--	--	--	--
Dibenzo(ah)anthracene	µg/kg	NC	NLL	NLL	NLV	8000	<300	<300	<300	800	<300	<500	<400	--	--	--	--	--	--	--	--
Dibenzofuran	µg/kg	NC	ID	1700	3.60E+06	ID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	µg/kg	NC	7.30E+05	5500	1.0E+9 (D)	1.3E+08	78400	26500	900	6100	8800	2300	1400	--	--	--	--	--	--	--	--
Fluorene	µg/kg	NC	8.9E+05	5300	1.0E+9(D)	8.7E+7(DD)	3400	1900	<300	<300	<300	<500	<400	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/kg	NC	NLL	NLL	NLV	80000	24000	6200	600	2200	2600	<500	<400	--	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/kg	NC	1.70E+05	4200	4.90E+06	2.6E+07	<300	<300	<300	<300	<300	700	500	--	--	--	--	--	--	--	--
1-Methylnaphthalene	µg/kg	NC	NC	NC	NC	NC	<300	<300	<300	<300	<300	500	400	--	--	--	--	--	--	--	--
Naphthalene	µg/kg	NC	1.00E+05	730	4.7E+05	5.2E+07	<300	<300	<300	<300	<300	<500	<400	--	--	--	--	--	--	--	--
Phenanthrene	µg/kg	NC	1.60E+05	2100	5.1E+06	5.2E+06	39100	18200	400	2200	3500	800	500	--	--	--	--	--	--	--	--
Pyrene	µg/kg	NC	4.8E+05	ID	1.0E+9(D)	8.4E+07	88900	28000	1000	6000	8300	2000	1200	--	--	--	--	--	--	--	--

Bold lettering indicates samples with metals concentrations exceeding the Michigan Statewide Default Background

Exceeds GSI protection criteria only

Exceeds nonresidential drinking water protection criteria or both GSI and drinking water protection criteria

Exceeds nonresidential direct contact criteria

(D) Calculated criterion exceeds 100 percent

(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water

(M) Calculated criterion is below the analytical target detection limit

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source

(DD) Hazardous substances causes developmental effects

(NLL) Means hazardous substances is not likely to leach under most soil conditions

(NLV) Means hazardous substance is not likely to volatilize under most conditions

(ID) Means insufficient data to develop criterion

(NC) Means no criterion or value is available

-- Not analyzed

Table 2
Summary of Soil Analytical Results
RACER Trust
Grand Blanc, Michigan

Parameter		MDEQ Criteria: Statewide Default Background Levels	MDEQ Criteria: Non-Residential Drinking Water Protection Criteria	MDEQ Criteria: Groundwater Surface Water Interface Protection Criteria	MDEQ Criteria: Non-Residential Soil Volatilization to Indoor Air Inhalation Criteria	MDEQ Criteria: Non-Residential Direct Contact Criteria	SS2-46WWW	SS2-47NW	SS2-47NWNW	SS2-48	SS2-48S
Arsenic	mg/kg	5.8	4.6	4.6	NLV	37	4.24	**24.1**	**6.15**	**28**	**50.7**
Barium	mg/kg	75	1300	440 (G,X)	NLV	1.3E+05	--	--	--	--	--
Cadmium	mg/kg	1.2	6	3 (G,X)	NLV	2100	--	--	--	--	--
Chromium	mg/kg	18	1.0E+6 (D)	1.0E+6 (G,X,D)	NLV	1.0E+6(D)	--	--	--	--	--
Copper	mg/kg	32	5800	73 (G)	NLV	73000	--	--	--	--	--
Lead (Total)	mg/kg	21	700	2500 (G,X)	NLV	900 (DD)	--	--	--	--	--
Mercury	mg/kg	0.13	1.7	0.050 (M); 0.0012	89	580	--	--	--	--	--
Selenium	mg/kg	0.41	4	0.4	NLV	9600	--	--	--	--	--
Silver	mg/kg	1	13	100 (M); 27	NLV	9000	--	--	--	--	--
Zinc	mg/kg	47	5000	170 (G)	NLV	6.3E+05	--	--	--	--	--
Acenaphthene	µg/kg	NC	8.8E+05	8700	3.5E+08	1.3E+08	--	--	--	--	--
Acenaphthylene	µg/kg	NC	17000	ID	3.00E+06	5.2E+06	--	--	--	--	--
Anthracene	µg/kg	NC	41000	ID	1.0E+9(D)	7.3E+08	--	--	--	--	--
Benzo(a)anthracene	µg/kg	NC	NLL	NLL	NLV	80000	--	--	--	--	--
Benzo(a)pyrene	µg/kg	NC	NLL	NLL	NLV	8000	--	--	--	--	--
Benzo(b)fluoranthene	µg/kg	NC	NLL	NLL	ID	80000	--	--	--	--	--
Benzo(ghi)perylene	µg/kg	NC	NLL	NLL	NLV	7.0E+06	--	--	--	--	--
Benzo(k)fluoranthene	µg/kg	NC	NLL	NLL	NLV	8.0E+05	--	--	--	--	--
Carbazole	µg/kg	NC	39000	1100	NLV	2.4E+06	--	--	--	--	--
Chrysene	µg/kg	NC	NLL	NLL	ID	8.0E+06	--	--	--	--	--
Dibenzo(ah)anthracene	µg/kg	NC	NLL	NLL	NLV	8000	--	--	--	--	--
Dibenzofuran	µg/kg	NC	ID	1700	3.60E+06	ID	--	--	--	--	--
Fluoranthene	µg/kg	NC	7.30E+05	5500	1.0E+9 (D)	1.3E+08	--	--	--	--	--
Fluorene	µg/kg	NC	8.9E+05	5300	1.0E+9(D)	8.7E+7(DD)	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/kg	NC	NLL	NLL	NLV	80000	--	--	--	--	--
2-Methylnaphthalene	µg/kg	NC	1.70E+05	4200	4.90E+06	2.6E+07	--	--	--	--	--
1-Methylnaphthalene	µg/kg	NC	NC	NC	NC	NC	--	--	--	--	--
Naphthalene	µg/kg	NC	1.00E+05	730	4.7E+05	5.2E+07	--	--	--	--	--
Phenanthrene	µg/kg	NC	1.60E+05	2100	5.1E+06	5.2E+06	--	--	--	--	--
Pyrene	µg/kg	NC	4.8E+05	ID	1.0E+9(D)	8.4E+07	--	--	--	--	--

Bold lettering indicates samples with metals concentrations exceeding the Michigan Statewide Default Background

Exceeds GSI protection criteria only

Exceeds nonresidential drinking water protection criteria or both GSI and drinking water protection criteria

Exceeds nonresidential direct contact criteria

(D) Calculated criterion exceeds 100 percent

(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water

(M) Calculated criterion is below the analytical target detection limit

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source

(DD) Hazardous substances causes developmental effects

(NLL) Means hazardous substances is not likely to leach under most soil conditions

(NLV) Means hazardous substance is not likely to volatilize under most conditions

(ID) Means insufficient data to develop criterion

(NC) Means no criterion or value is available

-- Not analyzed

Table 3
Summary of August 2011 Soil and Floor Block Analytical Results
Dort Highway Land
Grand Blanc, Michigan

Parameter		MDEQ Criteria: Non-Residential Drinking Water Protection Criteria	MDEQ Criteria: Groundwater Surface Water Interface Protection Criteria	MDEQ Criteria: Non-Residential Direct Contact Criteria	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06	SS-07	SS-07 CO-LOCATED	SS-08	SS-09	SS-10	SS-11
Arsenic	mg/kg	4.6	4.6	37	--	--	2.07	2.56	--	--	2.5	2.19	3.64	2.19	1.76	2.87
Barium	mg/kg	1300	440 (G,X)	1.3E+05	--	--	41.5	55	--	--	37	30.2	42.9	54.4	36.4	42.1
Cadmium	mg/kg	6	3 (G,X)	2100	--	--	<0.20	<0.20	--	--	<0.20	0.2	<0.20	<0.20	<0.20	<0.20
Chromium	mg/kg	1.0E+6 (D)	1.0E+6 (G,X,D)	1.0E+6 (D)	--	--	3.82	2.96	--	--	7.45	3.27	6.85	3.31	3.5	2.51
Lead (Total)	mg/kg	700	2500 (G,X)	900 (DD)	--	--	9.79	6	--	--	35	12.6	5.19	6.81	6.48	5.36
Acenaphthene	µg/kg	8.8E+05	8700	1.3E+08	400	<300	--	--	<300	<300	<300	<300	<300	--	--	--
Acenaphthylene	µg/kg	17000	ID	5.2E+06	<300	<300	--	--	<300	<300	<300	<300	<300	--	--	--
Anthracene	µg/kg	41000	ID	7.3E+08	1,000	400	--	--	<300	<300	600	<300	<300	--	--	--
Benzo(a)anthracene	µg/kg	NLL	NLL	80000	3,100	1,500	--	--	<300	<300	2,000	1,000	<300	--	--	--
Benzo(a)pyrene	µg/kg	NLL	NLL	8000	3,800	1,800	--	--	<300	<300	3,200	1,400	<300	--	--	--
Benzo(b)fluoranthene	µg/kg	NLL	NLL	80000	6,900	3,300	--	--	300	400	5,100	2,300	<300	--	--	--
Benzo(k)fluoranthene	µg/kg	NLL	NLL	8.0E+05	7,100	3,200	--	--	<300	300	5,200	2,300	<300	--	--	--
Benzo(ghi)perylene	µg/kg	NLL	NLL	7.0E+06	1,700	1,000	--	--	<300	<300	1,600	900	<300	--	--	--
Chrysene	µg/kg	NLL	NLL	8.0E+06	3,500	1,700	--	--	<300	<300	2,500	1,300	<300	--	--	--
Dibenzo(ah)anthracene	µg/kg	NLL	NLL	8000	<300	<300	--	--	<300	<300	<300	<300	<300	--	--	--
Fluoranthene	µg/kg	7.30E+05	5500	1.3E+08	7,100	3,400	--	--	<300	<300	4,600	2,200	<300	--	--	--
Fluorene	µg/kg	8.9E+05	5300	8.7E+07	400	<300	--	--	<300	<300	300	<300	<300	--	--	--
Indeno(1,2,3-cd)pyrene	µg/kg	NLL	NLL	80000	1,700	1,000	--	--	<300	<300	1,600	900	<300	--	--	--
Naphthalene	µg/kg	1.00E+05	730	5.2E+07	<300	<300	--	--	<300	<300	<300	<300	<300	--	--	--
Phenanthrene	µg/kg	1.60E+05	2100	5.2E+06	4,200	1,800	--	--	<300	<300	2,600	1,100	<300	--	--	--
Pyrene	µg/kg	4.8E+05	ID	8.4E+07	6,000	2,800	--	--	<300	<300	3,800	1,700	<300	--	--	--
2-Methylnaphthalene	µg/kg	1.70E+05	4200	2.6E+07	<300	<300	--	--	<300	<300	<300	<300	<300	--	--	--
1-Methylnaphthalene	µg/kg	NC	NC	NC	<300	<300	--	--	<300	<300	<300	<300	<300	--	--	--

Exceeds GSI protection criteria only
Exceeds nonresidential drinking water protection criteria or both GSI and drinking water protection criteria
Exceeds nonresidential direct contact criteria

(D) Calculated criterion exceeds 100 percent
(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water
(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source
(DD) Hazardous substances causes developmental effects
(NLL) Means hazardous substances is not likely to leach under most soil conditions
(ID) Means insufficient data to develop criterion
(NC) Means no criterion or value is available
-- Not analyzed
* Elevated reporting limit for PAHs due to high target concentration
Equipment blanks, field blanks, trip blank, methanol blank were non-detect; except field blank (FBK-01) which had a detection of 0.006 mg/L for barium

Table 3
Summary of August 2011 Soil and Floor Block Analytical Results
Dort Highway Land
Grand Blanc, Michigan

Parameter		MDEQ Criteria: Non-Residential Drinking Water Protection Criteria	MDEQ Criteria: Groundwater Surface Water Interface Protection Criteria	MDEQ Criteria: Non-Residential Direct Contact Criteria	SS-12	SS-13	SS-14	SS-14 CO-LOCATED	SS-15	SS-16	SS-16 DUP-01	SS-17	SS-18	SS-19	SS-20
Arsenic	mg/kg	4.6	4.6	37	1.41	1.78	0.65	0.74	1.35	1.8	1.92	--	--	--	--
Barium	mg/kg	1300	440 (G,X)	1.3E+05	57.8	44.1	93.5	66	63.6	53.2	44.4	--	--	--	--
Cadmium	mg/kg	6	3 (G,X)	2100	<0.20	0.24	0.2	<0.20	<0.20	0.21	0.22	--	--	--	--
Chromium	mg/kg	1.0E+6 (D)	1.0E+6 (G,X,D)	1.0E+6 (D)	3.57	2.97	3.94	3.53	3.87	6.31	6.06	--	--	--	--
Lead (Total)	mg/kg	700	2500 (G,X)	900 (DD)	4.82	8.44	6.94	8.68	7.36	12.6	13	--	--	--	--
Acenaphthene	µg/kg	8.8E+05	8700	1.3E+08	--	<330	<330	<330	<330	<330	<330	400	<300	<300	<300
Acenaphthylene	µg/kg	17000	ID	5.2E+06	--	<330	<330	<330	<330	<330	<330	<300	<300	<300	<300
Anthracene	µg/kg	41000	ID	7.3E+08	--	<330	<330	<330	<330	<330	<330	2,400	<300	<300	<300
Benzo(a)anthracene	µg/kg	NLL	NLL	80000	--	<330	<330	<330	<330	<330	<330	3,000	<300	<300	<300
Benzo(a)pyrene	µg/kg	NLL	NLL	8000	--	<330	<330	<330	<330	<330	<330	2,700	<300	<300	<300
Benzo(b)fluoranthene	µg/kg	NLL	NLL	80000	--	<330	<330	<330	<330	<330	<330	5,500	<300	<300	<300
Benzo(k)fluoranthene	µg/kg	NLL	NLL	8.0E+05	--	<330	<330	<330	<330	<330	<330	5,500	<300	<300	<300
Benzo(ghi)perylene	µg/kg	NLL	NLL	7.0E+06	--	<330	<330	<330	<330	<330	<330	900	<300	<300	<300
Chrysene	µg/kg	NLL	NLL	8.0E+06	--	<330	<330	<330	<330	<330	<330	3,100	<300	<300	<300
Dibenzo(ah)anthracene	µg/kg	NLL	NLL	8000	--	<330	<330	<330	<330	<330	<330	<300	<300	<300	<300
Fluoranthene	µg/kg	7.30E+05	5500	1.3E+08	--	<330	<330	<330	<330	<330	<330	6,800	<300	<300	<300
Fluorene	µg/kg	8.9E+05	5300	8.7E+07	--	<330	<330	<330	<330	<330	<330	500	<300	<300	<300
Indeno(1,2,3-cd)pyrene	µg/kg	NLL	NLL	80000	--	<330	<330	<330	<330	<330	<330	900	<300	<300	<300
Naphthalene	µg/kg	1.00E+05	730	5.2E+07	--	<330	<330	<330	<330	<330	<330	<300	<300	<300	<300
Phenanthrene	µg/kg	1.60E+05	2100	5.2E+06	--	<330	<330	<330	<330	<330	<330	5,700	<300	<300	<300
Pyrene	µg/kg	4.8E+05	ID	8.4E+07	--	<330	<330	<330	<330	<330	<330	6,200	<300	<300	<300
2-Methylnaphthalene	µg/kg	1.70E+05	4200	2.6E+07	--	<330	<330	<330	<330	<330	<330	<300	<300	<300	<300
1-Methylnaphthalene	µg/kg	NC	NC	NC	--	<330	<330	<330	<330	<330	<330	<300	<300	<300	<300

Exceeds GSI protection criteria only
Exceeds nonresidential drinking water protection criteria or both GSI and drinking water protection criteria
Exceeds nonresidential direct contact criteria

(D) Calculated criterion exceeds 100 percent
(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water
(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source
(DD) Hazardous substances causes developmental effects
(NLL) Means hazardous substances is not likely to leach under most soil conditions
(ID) Means insufficient data to develop criterion
(NC) Means no criterion or value is available
-- Not analyzed
* Elevated reporting limit for PAHs due to high target concentration
Equipment blanks, field blanks, trip blank, methanol blank were non-detect; except field blank (FBK-01) which had a detection of 0.006 mg/L for barium

Table 3
Summary of August 2011 Soil and Floor Block Analytical Results
Dort Highway Land
Grand Blanc, Michigan

Parameter		MDEQ Criteria: Non-Residential Drinking Water Protection Criteria	MDEQ Criteria: Groundwater Surface Water Interface Protection Criteria	MDEQ Criteria: Non-Residential Direct Contact Criteria	FB-01*	FBS-01*	FB-02*	FBS-02*	FB-03*	FB-03* CO-LOCATED	FBS-03	FB-04*	FB-04 DUP-02	FBS-04	FB-05*	FBS-05
Arsenic	mg/kg	4.6	4.6	37	2.43	1.94	1.54	1.29	1.91	2.12	2.55	1.14	1.21	2.51	1.38	2.44
Barium	mg/kg	1300	440 (G,X)	1.3E+05	6.91	69.6	10.1	30.6	23.1	75.5	58.8	8.56	9.82	62.6	22	54.9
Cadmium	mg/kg	6	3 (G,X)	2100	<0.20	<0.20	0.37	0.36	0.42	1	0.57	0.21	0.22	0.24	0.27	<0.20
Chromium	mg/kg	1.0E+6 (D)	1.0E+6 (G,X,D)	1.0E+6 (D)	1.12	4.45	2.49	5.56	7.23	27.5	11.2	1.57	2.33	5.68	3.63	5.53
Lead (Total)	mg/kg	700	2500 (G,X)	900 (DD)	4.77	8.5	10.7	20.4	27.4	69.8	36.7	10.1	10	12.4	22.5	11.5
Acenaphthene	µg/kg	8.8E+05	8700	1.3E+08	190,000	20,800	850,000	3,500	320,000	290,000	<300	850,000	390,000	1,600	540,000	500
Acenaphthylene	µg/kg	17000	ID	5.2E+06	27,000	<2,000	<80,000	<400	80,000	70,000	<300	400,000	110,000	<300	40,000	<300
Anthracene	µg/kg	41000	ID	7.3E+08	338,000	37,600	1,430,000	5,900	550,000	510,000	300	1,200,000	550,000	3,100	630,000	1,100
Benzo(a)anthracene	µg/kg	NLL	NLL	80000	405,000	88,200	2,150,000	16,500	910,000	840,000	2,000	1,850,000	800,000	9,700	890,000	3,800
Benzo(a)pyrene	µg/kg	NLL	NLL	8000	332,000	94,900	1,880,000	18,700	860,000	850,000	3,100	1,750,000	800,000	14,600	740,000	4,700
Benzo(b)fluoranthene	µg/kg	NLL	NLL	80000	680,000	175,800	3,530,000	33,400	1,580,000	1,540,000	6,200	2,890,000	1,390,000	24,400	1,450,000	7,800
Benzo(k)fluoranthene	µg/kg	NLL	NLL	8.0E+05	707,000	200,200	4,010,000	38,000	1,760,000	1,710,000	6,300	3,160,000	1,510,000	26,300	1,590,000	8,100
Benzo(ghi)perylene	µg/kg	NLL	NLL	7.0E+06	95,000	29,000	640,000	6,800	260,000	250,000	1,600	530,000	250,000	5,600	220,000	2,000
Chrysene	µg/kg	NLL	NLL	8.0E+06	474,000	88,200	2,450,000	18,600	1,000,000	930,000	3,200	1,800,000	820,000	10,900	990,000	4,200
Dibenzo(ah)anthracene	µg/kg	NLL	NLL	8000	<15,000	2,400	<80,000	400	30,000	20,000	<300	<80,000	<20,000	400	<40,000	<300
Fluoranthene	µg/kg	7.30E+05	5500	1.3E+08	1,233,000	272,200	6,770,000	44,700	2,640,000	2,530,000	4,400	5,390,000	2,530,000	24,700	2,880,000	8,700
Fluorene	µg/kg	8.9E+05	5300	8.7E+07	251,000	23,100	1,310,000	4,900	470,000	430,000	<300	1,090,000	460,000	1,900	820,000	800
Indeno(1,2,3-cd)pyrene	µg/kg	NLL	NLL	80000	99,000	31,400	700,000	7,500	290,000	280,000	1,700	580,000	280,000	6,100	240,000	2,100
Naphthalene	µg/kg	1.00E+05	730	5.2E+07	256,000	<2,000	<80,000	<400	220,000	140,000	<300	2,070,000	590,000	700	370,000	<300
Phenanthrene	µg/kg	1.60E+05	2100	5.2E+06	1,515,000	159,100	8,280,000	33,200	3,090,000	2,770,000	2,000	7,620,000	3,120,000	14,300	4,330,000	4,700
Pyrene	µg/kg	4.8E+05	ID	8.4E+07	970,000	214,300	4,630,000	33,500	2,000,000	1,930,000	3,600	4,320,000	1,920,000	19,600	1,930,000	6,200
2-Methylnaphthalene	µg/kg	1.70E+05	4200	2.6E+07	136,000	2,300	<80,000	500	170,000	110,000	<300	1,150,000	330,000	400	300,000	<300
1-Methylnaphthalene	µg/kg	NC	NC	NC	76,000	2,200	<80,000	400	120,000	90,000	<300	800,000	250,000	400	190,000	<300

Exceeds GSI protection criteria only
Exceeds nonresidential drinking water protection criteria or both GSI and drinking water protection criteria
Exceeds nonresidential direct contact criteria

(D) Calculated criterion exceeds 100 percent
(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water
(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source
(DD) Hazardous substances causes developmental effects
(NLL) Means hazardous substances is not likely to leach under most soil conditions
(ID) Means insufficient data to develop criterion
(NC) Means no criterion or value is available
-- Not analyzed
* Elevated reporting limit for PAHs due to high target concentration
Equipment blanks, field blanks, trip blank, methanol blank were non-detect; except field blank (FBK-01) which had a detection of 0.006 mg/L for barium

Table 4
Summary of Groundwater Analytical Results
RACER Trust
Grand Blanc, Michigan

Parameter		MDEQ Criteria: Non-Residential Drinking Water Criteria	MDEQ Criteria: Groundwater Surface Water Interface Criteria	MDEQ Criteria: Non-Residential Groundwater Volatilization to Indoor Air Inhalation Criteria	MDEQ Criteria: Non-Residential Direct Contact Criteria	MW2-01 (Dissolved)	MW2-01 (Total)	MW2-02 (Dissolved)	MW2-02 (Total)
Arsenic	mg/L	0.01 (A)	0.1 (X)	NLV	4.3	0.002	0.004	0.002	0.001
Barium	mg/L	2 (A)	0.67 (G,X)	NLV	14000	0.05	0.06	0.09	0.08
Cadmium	mg/L	0.005 (A)	0.0025 (G,X)	NLV	190	<0.0005	<0.0005	<0.0005	<0.0005
Chromium	mg/L	0.1 (A)	0.1 (G,X)	NLV	2.90E+05	<0.005	<0.005	<0.005	0.005
Copper	mg/L	1 (E)	0.013 (G)	NLV	7400	<0.004	<0.004	0.007	0.006
Lead (Total)	mg/L	0.004 (L)	0.014 (G,X)	NLV	ID	<0.003	<0.003	<0.003	<0.003
Mercury	mg/L	0.002 (A)	0.0000013	0.056 (S)	0.056 (S)	<0.0002	<0.0002	<0.0002	<0.0002
Selenium	mg/L	0.05 (A)	0.005	NLV	970	<0.005	<0.005	0.006	<0.005
Silver	mg/L	0.098	0.0002(M);0.00006	NLV	1500	<0.0002	<0.0002	0.0008	0.0004
Zinc	mg/L	5 (E)	0.17 (G)	NLV	110000	0.015	0.012	0.013	0.016
Acenaphthene	µg/L	3800	38	4200 (S)	4200 (S)	<5	--	<5	--
Acenaphthylene	µg/L	150	ID	3900 (S)	3900 (S)	<5	--	<5	--
Anthracene	µg/L	43 (S)	ID	43 (S)	43 (S)	<5	--	<5	--
di-n-Butyl phthalate	µg/L	2,500	9.7	NLV	11,000 (S)	--	--	--	--
Benzo(a)anthracene	µg/L	8.5	ID	NLV	9.4 (S,AA)	<5	--	<5	--
Benzo(a)pyrene	µg/L	5.0 (A)	ID	NLV	1.0(M,AA);0.64	<5	--	<5	--
Benzo(b)fluoranthene	µg/L	1.5 (S,AA)	ID	ID	1.5 (S,AA)	<5	--	<5	--
Benzo(ghi)perylene	µg/L	1.0(M);0.26(S)	ID	NLV	1.0(M,AA);0.26(S)	<5	--	<5	--
Benzo(k)fluoranthene	µg/L	1.0(M);0.8(S)	NA	NLV	1.0(M,AA);0.8(S)	<5	--	<5	--
Carbazole	µg/L	350	10(M);4.0	NLV	7400	--	--	--	--
Chrysene	µg/L	1.6(S)	ID	ID	1.6(S,AA)	<5	--	<5	--
Dibenzo(ah)anthracene	µg/L	2.0(M);0.85	ID	NLV	2.0(M,AA);0.31	<5	--	<5	--
bis(2-Ethylhexyl)phthalate	µg/L	8.3	1.0 (M); 0.79	2.10E+05	5,700	--	--	--	--
Fluoranthene	µg/L	210 (S)	1.6	210 (S)	210 (S)	<5	--	<5	--
Fluorene	µg/L	2000 (S)	12	2000(S)	2000(S)	<5	--	<5	--
Indeno(1,2,3-cd)pyrene	µg/L	2.0(M);0.022(S)	ID	NLV	2.0(M,AA);0.022(S)	<5	--	<5	--
2-Methylnaphthalene	µg/L	750	19	25000 (S)	25000(S)	<5	--	<5	--
Naphthalene	µg/L	1500	11	31000(S)	31000(S)	<5	--	<5	--
Phenanthrene	µg/L	150	2.0 (M);1.4	1000 (S)	1000 (S)	<5	--	<5	--
Pyrene	µg/L	140 (S)	ID	140 (S)	140 (S)	<5	--	<5	--

Notes:

Exceeds GSI Criteria only

(A) Criterion is the state of Michigan drinking water standard.

(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water

(M) Calculated criterion is below the analytical target detection limit

(S) Criterion defaults to the hazardous substance-specific water solubility limit

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source

(AA) Comparison to these criteria may take into account an evaluation of whether the hazardous substances are adsorbed to particulates rather than dissolved in water and whether filtered groundwater samples were used to evaluate groundwater

(NLL) Means hazardous substances is not likely to leach under most soil conditions

(NLV) Means hazardous substance is not likely to volatilize under most conditions

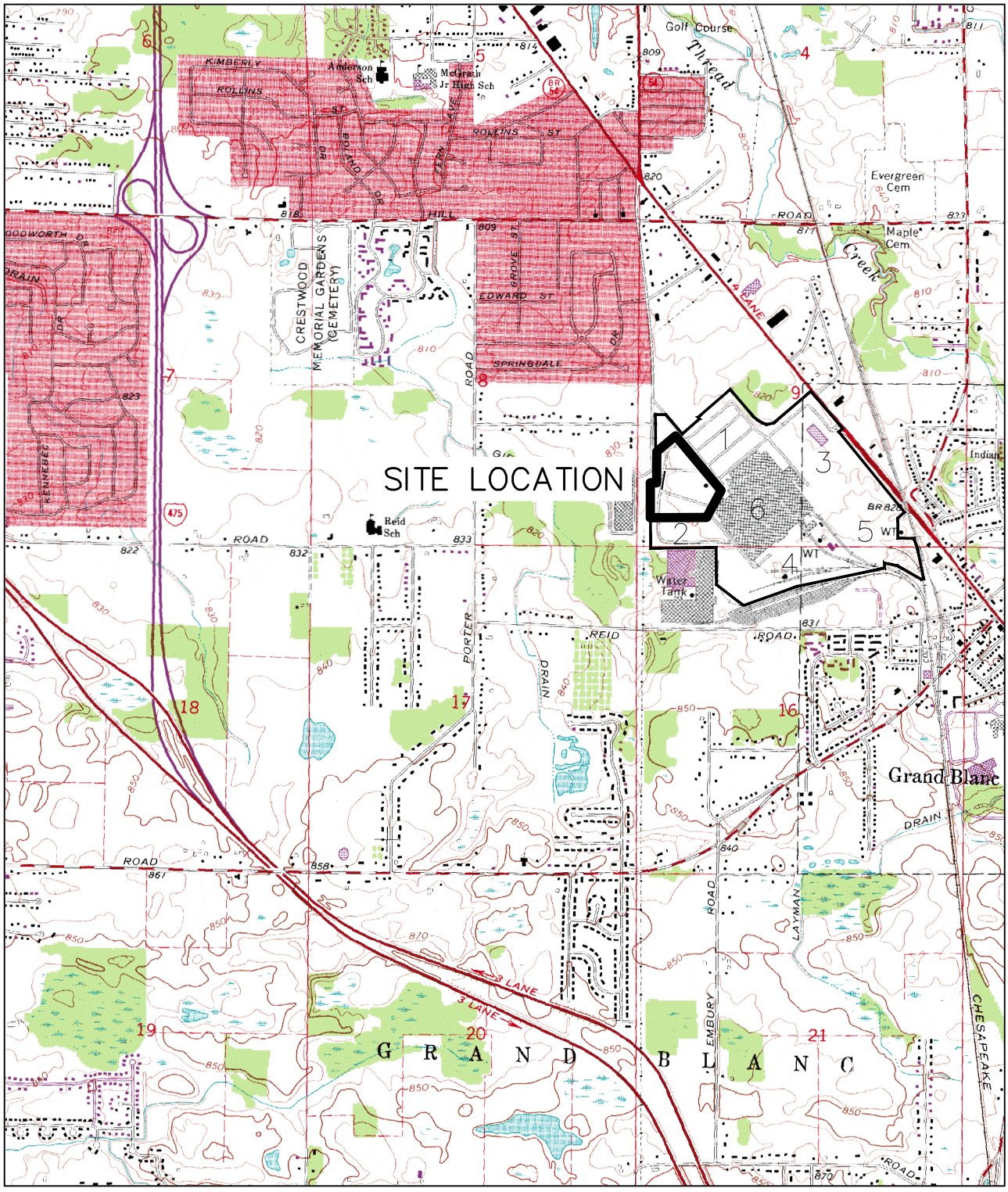
(ID) Means insufficient data to develop criterion

(NC) Means no criterion or value is available

(NA) not analyzed

FIGURES

FIGURE 1



MICHIGAN
QUADRANGLE LOCATION

15388/47852-001
AUGUST 2011

RACER TRUST
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

SITE LOCATION MAP

0 1
APPROXIMATE SCALE
ONE MILE

TRUE NORTH

OBRIEN & GERE
ENGINEERS INC.

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8/22/2011 jmo

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FIGURE 2

DORT HIGHWAY

GATE LOCATION

Flooded area during site visit 03-24-2011

Permeable berm placed by GM LLC allows infiltration of ponded water onto GM property

Fence approx. location

Field observation 03-24-2011, potential wood block area

MISC. EQUIPMENT & MATERIAL STORAGE AREA

MW2-2

Monitoring well MW2-2, not observed on 03-24-2011 may have been covered with snow

Water Test For Tank (Buried)

FORMER ACCESS ROADS & DIE STORAGE AREA

SNOW STORAGE

Proposed gate location

Monitoring well MW2-1, needs stick up protective casing

MW2-1

Former Pumphouse

Pump House and tank have been demolished

CROCK SUMP

EMERGENCY EVACUATION ASSEMBLY AREA

B

TRUE NORTH

1"=120' 60 0 60

LEGEND

- MONITORING WELL LOCATION
- FIELD OBSERVATION 03-24-2011
- FLOODED AREA DURING SITE VISIT 03-24-2011
- APPROXIMATE RACER TRUST PROPERTY LINE
- FORMER TANK TEST TRACK AND DIE STORAGE ACCESS ROADS
- APPROXIMATE FENCE LOCATION
- SURFACE RUNOFF FLOW DIRECTION

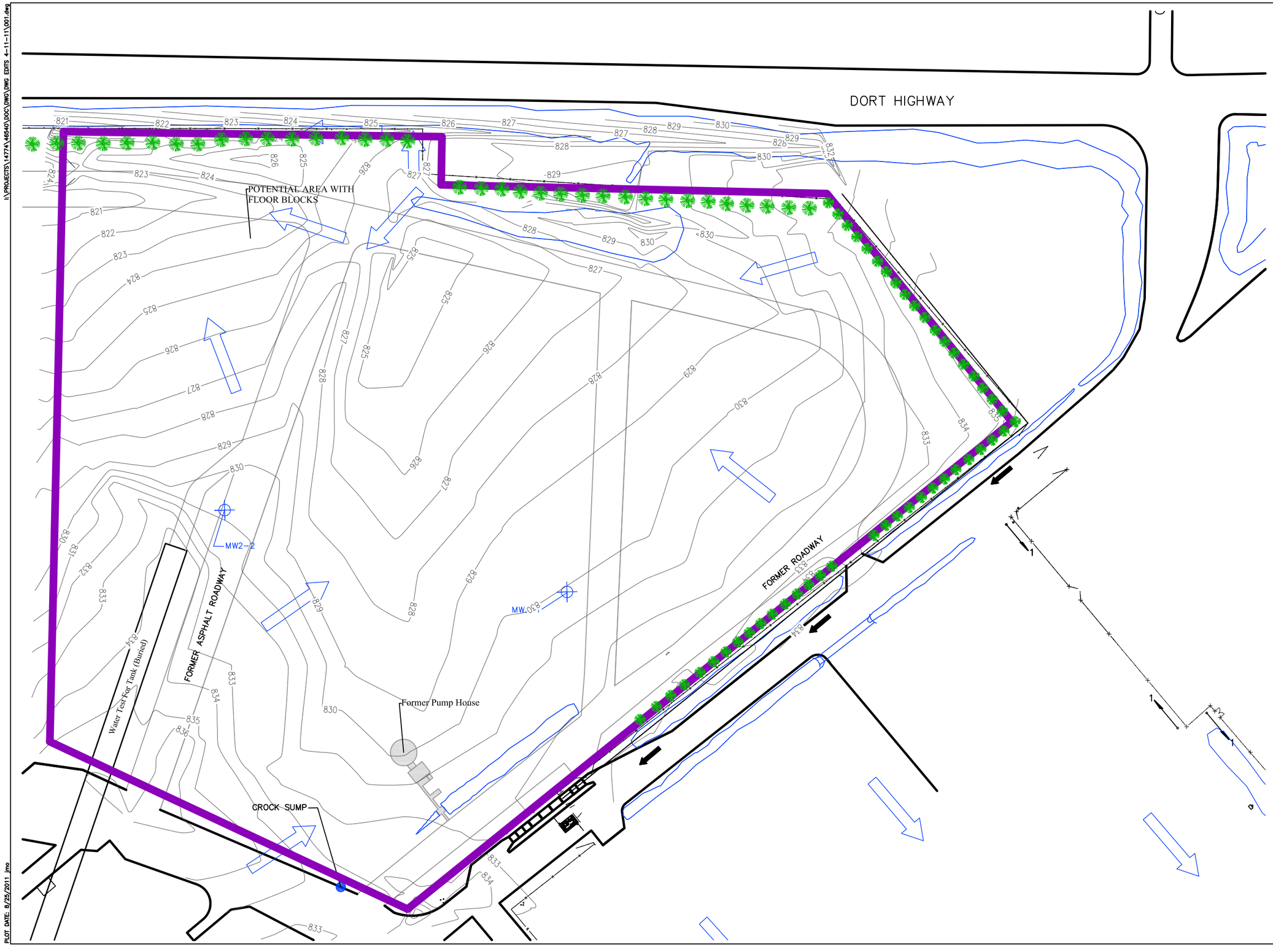
SITE LAYOUT

RACER TRUST
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

15388/47852-002
AUGUST 2011

O'BRIEN & GERE ENGINEERS, INC.

PLOT DATE: 8/22/2011 jmo



SITE TOPOGRAPHY

RACER TRUST
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

FIGURE 3

14774/46540.001
April 2011

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PLOT DATE: 9/25/2011 jmo

DORT HIGHWAY

POTENTIAL AREA WITH FLOOR BLOCKS

B-4

B-2

B-3

C

SS-01 SS-02 SS-03 SS-04 SS-05 SS-06 SS-07 SS-08 SS-09 SS-10 SS-11 SS-12 SS-13 SS-14 SS-15 SS-16 SS-17 SS-18 SS-19 SS-20

FB-01 & FBS-01 FB-02 & FBS-02 FB-03 & FBS-03 FB-04 & FBS-04 FB-05 & FBS-05

SB2-01 SB2-02 SB2-03 SB2-04 SB2-05 SB2-06 SB2-07 SB2-08 SB2-09 SB2-10 SB2-11 SB2-12 SB2-13 SB2-14 SB2-15 SB2-16 SB2-17 SB2-18 SB2-19

MW2-1 MW2-2

FORMER ASPHALT ROADWAY

Water Test For Tank (Buried)

FORMER ROADWAY

Former Pump House

CROCK SUMP

TRUE NORTH

1"=120' 60 0 60

LEGEND

- SOIL BORING LOCATION
- SURFACE SOIL SAMPLE LOCATION
- DELINEATION SOIL SAMPLE LOCATION
- DELINEATION/ CONFIRMATION SOIL SAMPLE LOCATION
- FLOOR BLOCK AREA SOIL SAMPLE LOCATION
- MONITORING WELL LOCATION
- APPROXIMATE RACER TRUST PROPERTY LINE
- FORMER TANK TEST TRACK AND DIE STORAGE ACCESS ROADS
- APPROXIMATE FENCE LOCATION

SAMPLE LOCATIONS

RACER TRUST
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

FIGURE 4

14774/46540.001
April 2011

O'BRIEN & GERE
ENGINEERS, INC.

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PLOT DATE: 9/25/2011 jmo

DORT HIGHWAY

TRUE NORTH

1"=120' 60 0 60

B-4

B-2

B-3

C

SS-14
SS-13
SS-16
SS-15
SS-12
SS-11
SS-10
SS-09
SS-08
SS-07
SS-06
SS-05
SS-04
SS-03
SS-02
SS-01
SS-20
SS-19
SS-18
SS-17

POTENTIAL AREA WITH FLOOR BLOCKS

FB-05 & FBS-05
FB-04 & FBS-04
FB-03 & FBS-03
FB-02 & FBS-02
FB-01 & FBS-01

SS2-46WWW
SS2-46WW
SS2-47NW
SS2-47NWNW
SS2-46W
SS2-46NN
SS2-46SS
SS2-46SSS
SS2-46N
SS2-48
SS2-48S
SS2-46S
SS2-46NNW
SS2-14WW
SS2-14
SS2-14D
SS2-14W
SS2-14SSS
SS2-20W
SS2-20S
SS2-20
SS2-20D
SS2-20N
SS2-14SS
SS2-14S
SS2-03S
SS2-14E
SS2-03
SS2-03E
SS2-24WW
SS2-24W
SS2-24NW
SS2-24S
SS2-24NN
SS2-24
SS2-24D
SS2-24N
SS2-24E
SS2-25
SS2-15W
SS2-14N
SS2-15NN
SS2-15N
SS2-15
SS2-15D
SS2-15E
SS2-26
SS2-43
SS2-42
SS2-41
SS2-38
SS2-37
SS2-36
SS2-27
SS2-27D
SS2-17
SS2-08
SS2-04
SS2-28
SS2-29
SS2-39
SS2-40
SS2-10
SS2-09
SS2-02
SS2-01

SB2-06
SB2-07
SB2-20
SB2-04
SB2-08
SB2-09
SB2-12
SB2-13
SB2-14
SB2-05
SB2-11
SB2-17
SB2-15
SB2-06
SB2-16
SB2-18
SB2-19

MW2-2
MW2-1

Water Test For Tank (Buried)

FORMER ASPHALT ROADWAY

FORMER ROADWAY

Former Pump House

CROCK SUMP

LEGEND

- SOIL BORING LOCATION
- SURFACE SOIL SAMPLE LOCATION
- DELINEATION SOIL SAMPLE LOCATION
- DELINEATION/ CONFIRMATION SOIL SAMPLE LOCATION
- FLOOR BLOCK AREA SOIL SAMPLE LOCATION
- MONITORING WELL LOCATION
- AREA EXCEEDING NON-RESIDENTIAL CRITERIA
- APPROXIMATE RACER TRUST PROPERTY LINE
- FORMER TANK TEST TRACK AND DIE STORAGE ACCESS ROADS
- APPROXIMATE FENCE LOCATION

IMPACTED AREA MAP

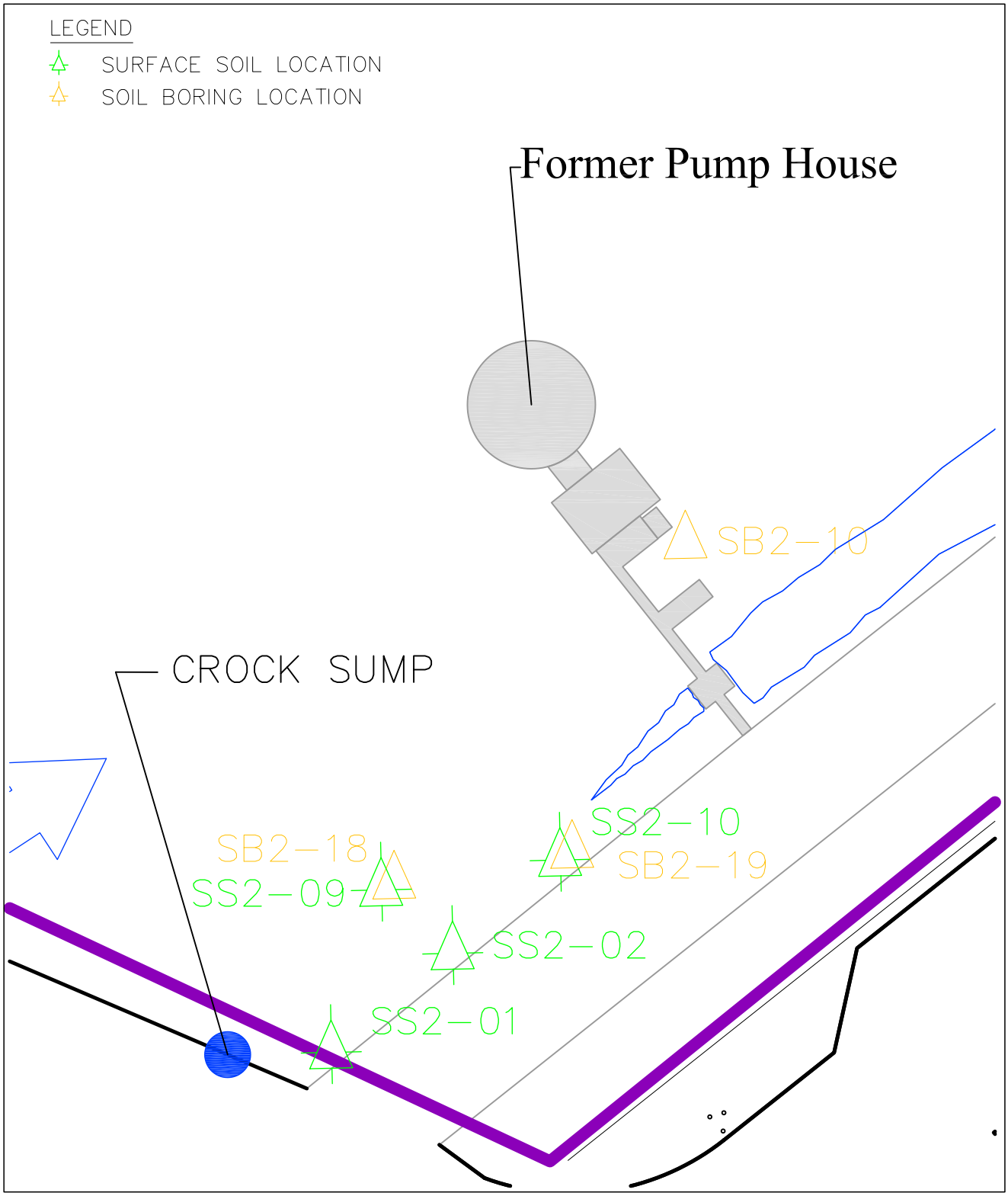
RACER TRUST
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

FIGURE 5

14774/46540.001
April 2011

O'BRIEN & GERE
ENGINEERS, INC.

FIGURE 6



RACER TRUST
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

CROCK SUMP AREA

TRUE NORTH

14774/46540.001
AUGUST 2011

40 0 40
1"=40'

O'BRIEN & GERE ENGINEERS INC.

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PLOT DATE 8/25/2011 jmo

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FIGURE 7

TRUE NORTH

POTENTIAL AREA WITH FLOOR BLOCKS

B-4

B-2

B-3

C

FORMER ASPHALT ROADWAY

Water Test For Tank (Buried)

Former Pump House

SS-14 SS-13 SS-16 SS-15 SS-12 SS-11 SS-04 SS-03 SS-10 SS-09 SS-08 SS-07 SS-06 SS-05 SS-02 SS-01 SS-20 SS-19 SS-18 SS-17

SS2-46WWW SS2-46WW SS2-47NW SS2-47NWNW SS2-46W SS2-46NN SS2-46SS SS2-46N SS2-46SSS SS2-46 SS2-48 SS2-48S SS2-46S SS2-14WWW SS2-26 SS2-14WW SS2-14 SS2-14D SS2-25 SS2-14W SS2-14SSS SS2-20W SS2-15W SS2-14N SS2-15NN SS2-20S SS2-20 SS2-20N SS2-15N SS2-20D SS2-15 SS2-15D SS2-14SS SS2-14S SS2-03S SS2-14E SS2-15E SS2-20E SS2-14EE SS2-03 SS2-03E SS2-24WW SS2-24W SS2-24NW SS2-24NN SS2-24S SS2-24N SS2-24 SS2-24D SS2-24E SS2-43 SS2-42 SS2-41 SS2-38 SS2-37 SS2-36 SS2-27 SS2-27D SS2-29 SS2-39 SS2-40 SS2-17 SS2-28 SS2-06

SB2-06 SB2-20 SB2-07 SB2-04 SB2-08 SB2-09 SB2-14 SB2-05 SB2-11 SB2-17 SB2-15 SB2-16

FB-05 & FBS-05 FB-04 & FBS-04 FB-03 & FBS-03 FB-02 & FBS-02 FB-01 & FBS-01

MW2-2 MW2-1

LEGEND

- SURFACE SOIL LOCATION
- SOIL BORING LOCATION
- SURFACE SOIL DELINEATION LOCATION
- MONITORING WELL LOCATION
- AREA EXCEEDING NONRESIDENTIAL CRITERIA
- SURFACE SOIL DELINEATION/ CONFORMATION LOCATION
- FLOOR BLOCK AND ASSOCIA SOIL SAMPLE LOCATION

RACER TRUST
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

SUB AREAS B AND C

80 0 80
1"=80'

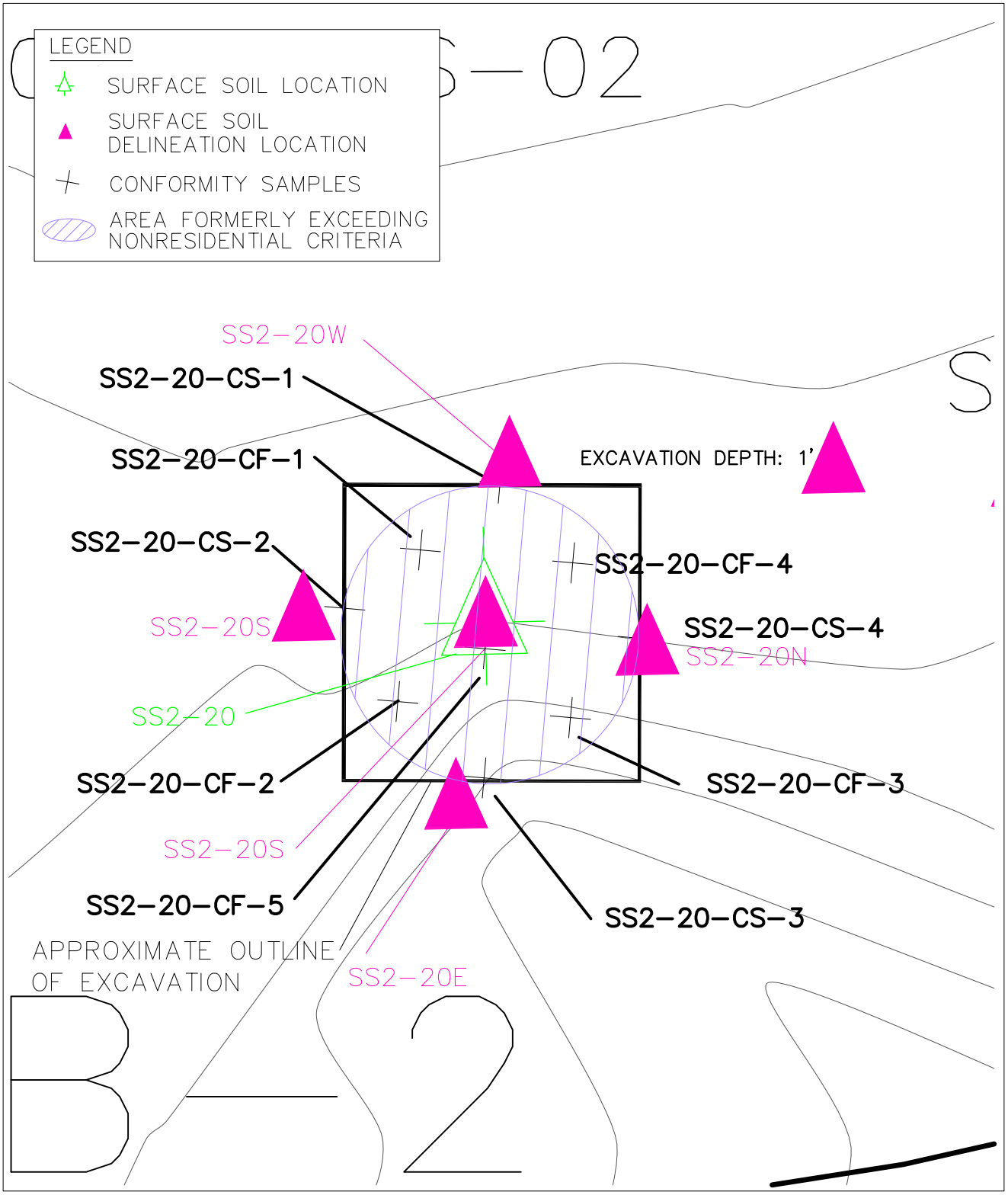
14774/46540.001
AUGUST 2011

O'BRIEN & GERE ENGINEERS INC.

PLOT DATE: 8/25/2011 jmo

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FIGURE 8



RACER TRUST
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

TRUE NORTH

VSR SAMPLE LOCATIONS

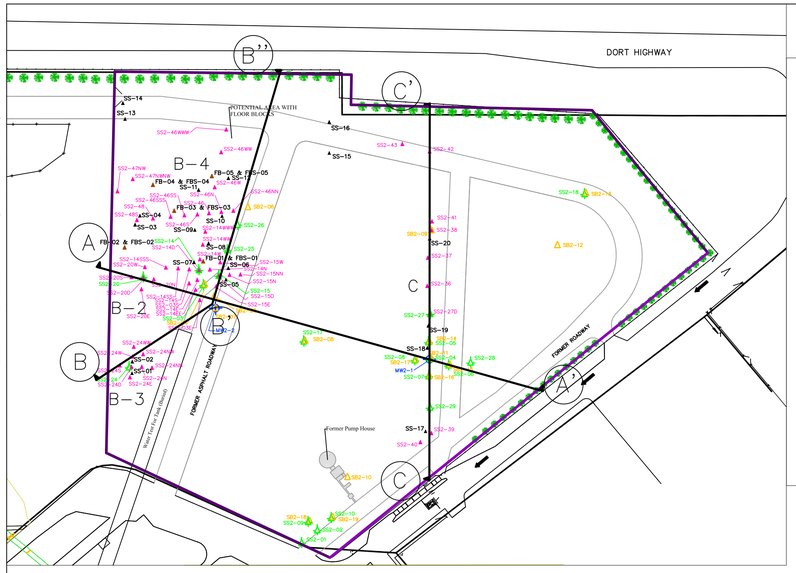
14774/46540.001
AUGUST 2011

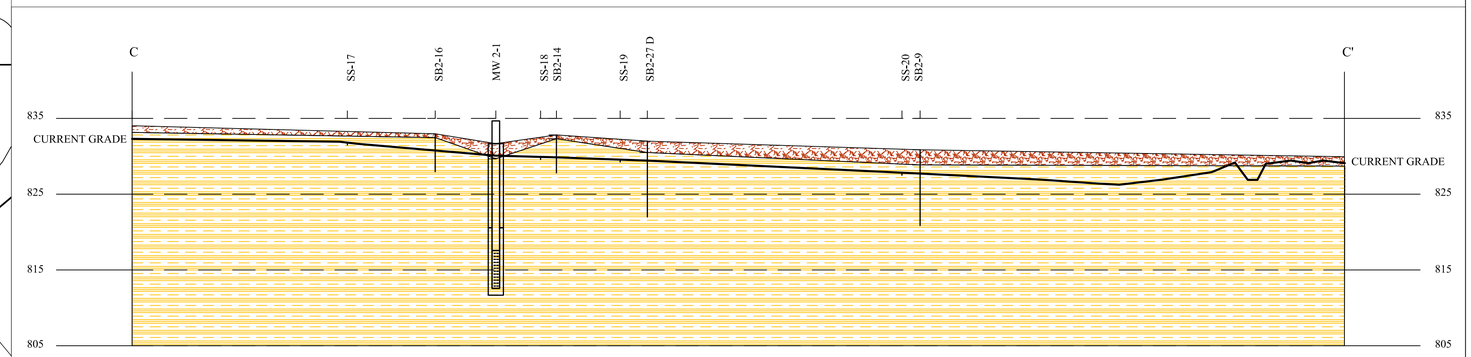
20 0 20
1"=20'

O'BRIEN & GERE

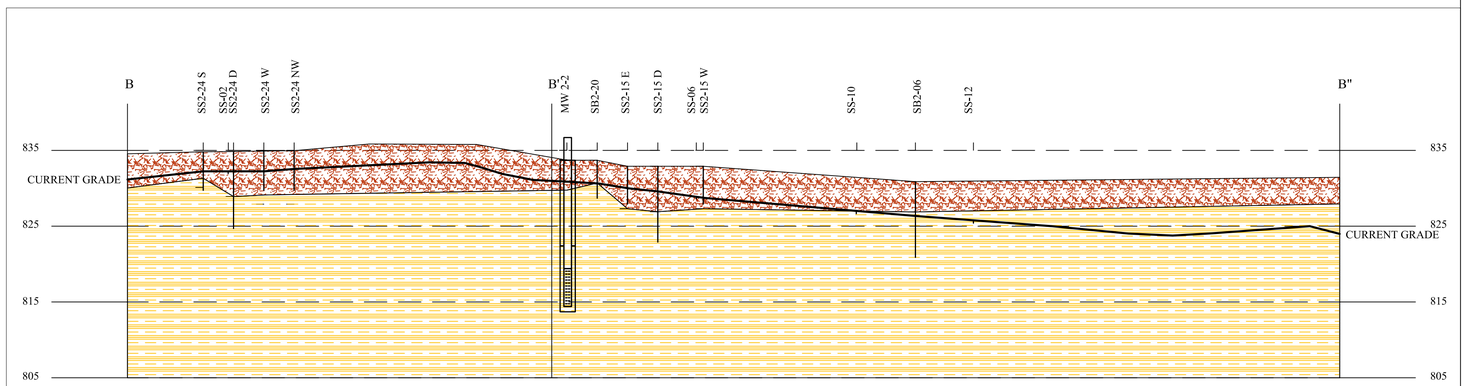
PLOT DATE: 8-25-2011 jmo

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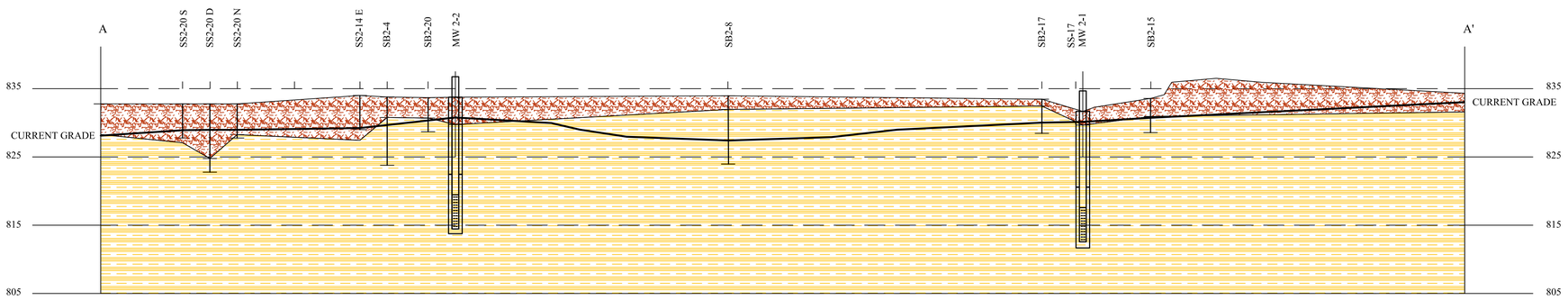




CROSS SECTION C-C'



CROSS SECTION B-B'-B"



CROSS SECTION A-A'

FIGURE 9

LEGEND

FILL SOIL

CLAY

CROSS SECTION

RACER TRUST
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

GEOLOGIC CROSS SECTIONS

1"=10' 10 0 10
VERTICLE SCALE

1"=50' 50 0 50
HORIZONTAL SCALE

FILE NO. 14774-46540.010
MAY 2011

O'BRIEN & GERE
ENGINEERS, INC.

05/04/11 jjp

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PLOT DATE: 8/25/2011 jmo

FIGURE 10

TRUE NORTH

POTENTIAL AREA WITH FLOOR BLOCKS

B-4

B-2

B-3

C

SS-14
SS-13
SS-16
SS-15
SS-12
SS-11
SS-10
SS-09
SS-08
SS-07
SS-06
SS-05
SS-04
SS-03
SS-02
SS-01
SS-20
SS-19
SS-18
SS-17

FB-05 & FBS-05
FB-04 & FBS-04
FB-03 & FBS-03
FB-02 & FBS-02
FB-01 & FBS-01

SS2-46WWW
SS2-47NW
SS2-47NWW
SS2-46W
SS2-46NN
SS2-46SS
SS2-46SSS
SS2-46N
SS2-48
SS2-48S
SS2-46
SS2-46S
SS2-14WWW
SS2-14WW
SS2-14
SS2-14D
SS2-14W
SS2-14SSS
SS2-20W
SS2-15W
SS2-14N
SS2-15NN
SS2-20S
SS2-20
SS2-20N
SS2-15N
SS2-20D
SS2-14SS
SS2-14S
SS2-03S
SS2-14E
SS2-14EE
SS2-03
SS2-03E
SS2-15
SS2-15D
SS2-15E
SS2-24WW
SS2-24W
SS2-24NW
SS2-24NN
SS2-24S
SS2-24
SS2-24D
SS2-24N
SS2-24E
SS2-43
SS2-42
SS2-41
SS2-38
SS2-37
SS2-36
SS2-27
SS2-27D
SS2-17
SS2-08
SS2-05
SS2-04
SS2-28
SS2-06
SS2-07
SS2-29
SS2-39
SS2-40

SB2-06
SB2-26
SB2-25
SB2-20
SB2-07
SB2-04
SB2-08
SB2-09
SB2-14
SB2-11
SB2-17
SB2-15
SB2-16

SS2-26
SS2-25

MW2-2
MW2-1

FORMER ASPHALT ROADWAY

Water Test For Tank (Buried)

Former Pump House

LEGEND

- SURFACE SOIL LOCATION
- SOIL BORING LOCATION
- SURFACE SOIL DELINEATION LOCATION
- MONITORING WELL LOCATION
- AREA EXCEEDING NONRESIDENTIAL CRITERIA
- SURFACE SOIL DELINEATION/ CONFORMATION LOCATION
- FLOOR BLOCK AND ASSOCIA SOIL SAMPLE LOCATION

RACER TRUST
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

SUB AREAS B AND C
CURRENT SITE CONDITION

80 0 80
1"=80'

14774/46540.001
AUGUST 2011

O'BRIEN & GERE
ENGINEERS INC.

APPENDIX A

Historical Cut & Fill Maps

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FIGURE 1

TRUE NORTH

NOTES:

1. DRAWING FOR PRELIMINARY TAKE-OFFS ONLY. PROPOSED CONTOURS TO MATCH EXISTING AT BOUNDARY OF BORROW AREA. BOUNDARY OF BORROW AREA DELINEATED BY SILT FENCE LOCATION.

2. CONTRACTOR TO FOLLOW SOIL EROSION AND SEDIMENTATION REQUIREMENTS PER EXISTING PROJECT REQUIREMENTS.

RACER TRUST
DORT HIGHWAY LAND

GRAND BLANC, MICHIGAN

BORROW PIT

CUT & FILL MAP

1"=120' 60 0 60

FILE NO. 14774.46540
APRIL 2011

O'BRIEN & GERE

04/27/11 078 TJK

I:\Mic\14774\46540\Mic-Dort-Hwy-Lo\Docs\Reports\Site History-Conditions Report

FIGURE 2

TRUE NORTH

NOTES:

1. DRAWING FOR PRELIMINARY TAKE-OFFS ONLY. PROPOSED CONTOURS TO MATCH EXISTING AT BOUNDARY OF BORROW AREA. BOUNDARY OF BORROW AREA DELINEATED BY SILT FENCE LOCATION.

2. CONTRACTOR TO FOLLOW SOIL EROSION AND SEDIMENTATION REQUIREMENTS PER EXISTING PROJECT REQUIREMENTS.

RACER TRUST
DORT HIGHWAY LAND

GRAND BLANC, MICHIGAN

BORROW PIT

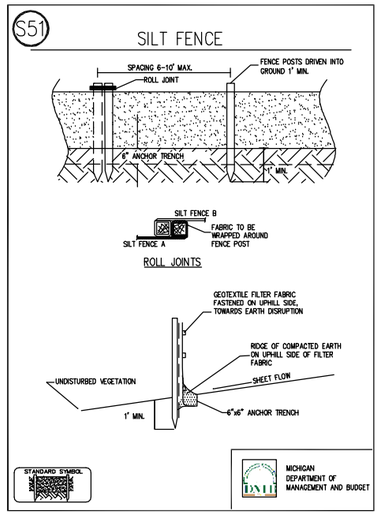
CUT & FILL MAP
WITH GRID

1"=120' 60 0 60

FILE NO. 14774.46540
APRIL 2011

O'BRIEN & GERE

04/27/11 078 TJK

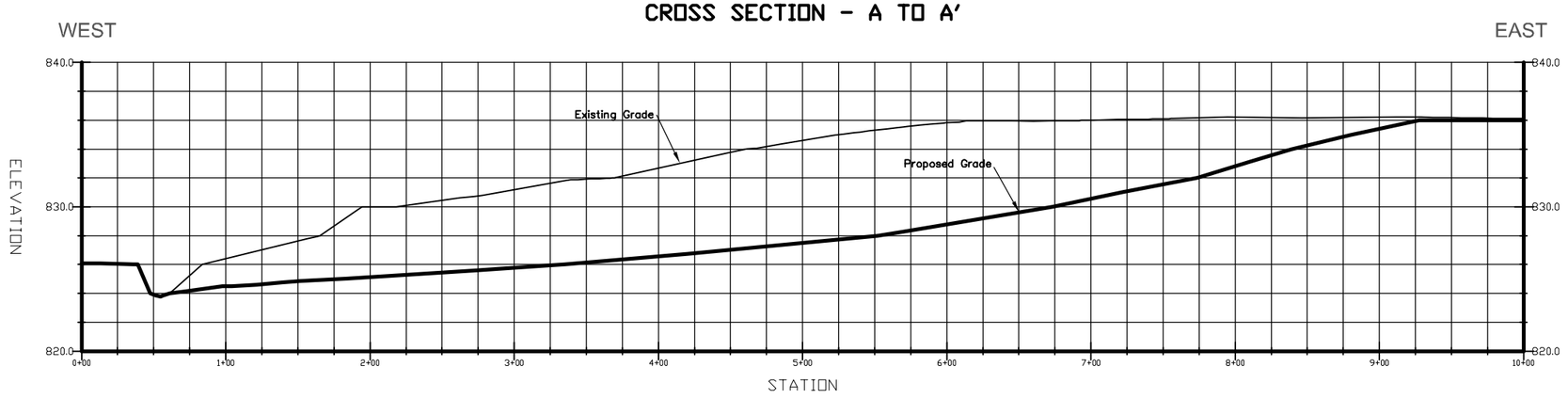


SOURCE: MICHIGAN DEPARTMENT OF MANAGEMENT AND BUDGET, 2003, SOIL EROSION AND SEDIMENTATION CONTROL GUIDEBOOK, DRAWING S51_SiltFenceDwg.dwg, FEBRUARY 2003.

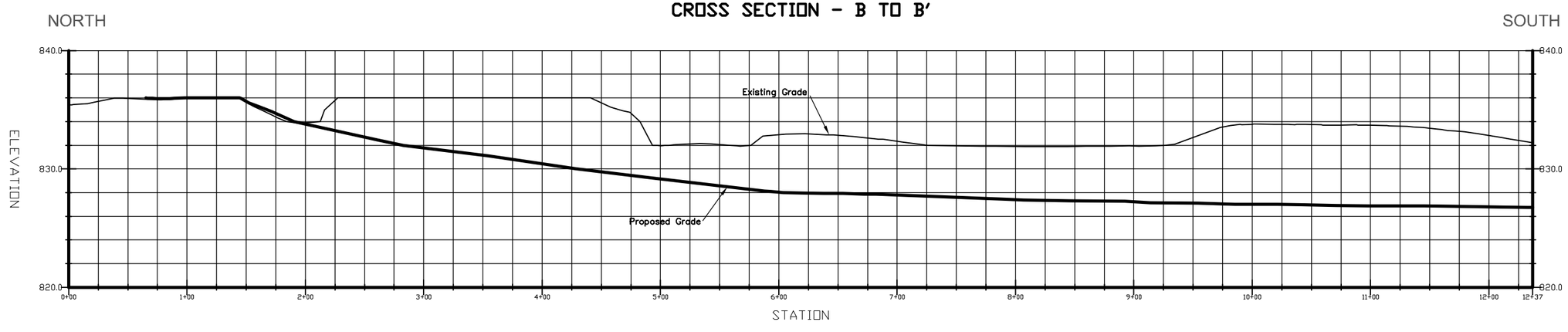
DETAIL – SILT FENCE (TYP.)

NOT TO SCALE

CROSS SECTION - A TO A'



CROSS SECTION - B TO B'



RACER TRUST
DORT HIGHWAY LAND

GRAND BLANC, MICHIGAN

BORROW PIT

CUT & FILL
PROFILE VIEWS

1"=10' 5 0 5
VERTICAL SCALE

1"=100' 50 0 50
HORIZONTAL SCALE

FILE NO. 14774.46540
APRIL 2011

O'BRIEN & GERE

i:\Mic.14774\46540.Mic-Dort-Hwy-Lo\Docs\Reports\Site History-Conditions Report

04/27/11 078 TJK

APPENDIX B

Soil Boring Logs

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB2-4
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/37404**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 10/23/06** **End Date: 10/23/06**
Boring Company: Prosonic Corporation **Foreman: Don Bond** **Drill Rig: Geoprobe 6600 truck-mounted rig** **OBG Geologist: Mike Robison**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	asphalt				
				brown, damp, silty SAND and GRAVEL (Fill)	6" SM-GM			
1								
2							0.0	
3				brown w/ grey mottling, damp, stiff silty CLAY, little gravel	3' CL			
4					4'		0.0	
					4-1'			
5	2	5-10'	5 ft / 5 ft	same as above	5'			
6							0.0	
7				same as above, no grey mottling	7' CL			
8							0.0	
9								
10				End of boring at 10 fbg				
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and asphalt patch at surface.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB2-6
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/37404**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 10/23/06** **End Date: 10/23/06**
Boring Company: Prosonic Corporation **Foreman: Don Bond** **Drill Rig: Geoprobe 6600 truck-mounted rig** **OBG Geologist: Mike Robison**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	brown with orange mottling, damp, silty CLAY, little gravel	CL			
1								
2							0.0	
3								
4				olive brown w/ grey mottling, damp, stiff silty CLAY, little gravel and roots, medium plasticity	4' CL		0.0	
5	2	5-10'	5 ft / 5 ft	same as above, not-plastic	5' CL			
6							0.0	
7								
8							0.0	8'-10' soil
9								
10				End of boring at 10 fbg				
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite and soil at surface.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB2-7

Client: ENCORE
Site: MFD Plant

Proj. Loc: Grand Blanc, MI
File No.: 4966/37404

Drill Method: hydraulic probe
Sampler: 5 ft stainless steel w/ disposable acetate liner

Page 1 of 1
Location: Area 2

Start Date: 10/23/06
End Date: 10/23/06

Boring Company: Prosonic Corporation
Foreman: Don Bond
Drill Rig: Geoprobe 6600 truck-mounted rig
OBG Geologist: Mike Robison

Screen ===
Riser
Sand Pack
Bentonite
Bent/grout

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	asphalt at surface				
				brown with orange mottling, damp, silty CLAY, little gravel	8" CL			
1								
2							0.0	
3								
4				olive brown w/ grey mottling, damp, stiff silty CLAY, little gravel and roots,	4' CL		0.0	
				medium plasticity				
5	2	5-10'	5 ft / 5 ft	same as above, not-plastic	5'			
6							0.0	
7								
8							0.0	8'-10' soil
9								
10				End of boring at 10 fbg				
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite and soil at surface.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB2-8
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/37404**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 11/6/06** **End Date: 11/6/06**
Boring Company: Prosonic Corporation **Foreman: Mike Ade** **Drill Rig: Geoprobe 6600 truck-mounted rig** **OBG Geologist: Mike Robison**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	brown, moist sandy CLAY, little silt and roots	CL			
1				brown, damp silty CLAY, trace gravel and roots	1' CL			1' - 3' soil
2				same as above, grey mottling	2'		0.0	
3								
4							0.0	
5	2	5-10'	5 ft / 5 ft	same as above, stiff	5' CL			
6							0.0	
7								
8							0.0	
9								
10				End of boring at 10 fbg				
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and asphalt patch at surface.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB2-9
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/37404**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 10/24/06** **End Date: 10/24/06**
Boring Company: Prosonic Corporation **Foreman: Don Bond** **Drill Rig: Geoprobe 6600 truck-mounted rig** **OBG Geologist: Mike Robison**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	brown, moist sandy CLAY, little silt and roots	CL			
1				brown, damp silty CLAY, trace gravel and roots	1' CL			
2				same as above, grey mottling	2'		0.0	2'-4' soil
3								
4							0.0	
5	2	5-10'	5 ft / 5 ft	same as above, stiff	5' CL			
6							0.0	
7								
8							0.0	
9								
10				End of boring at 10 fbg				
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and asphalt patch at surface.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB2-10

Client: ENCORE
Site: MFD Plant

Proj. Loc: Grand Blanc, MI
File No.: 4966/37404

Drill Method: hydraulic probe
Sampler: 5 ft stainless steel w/ disposable acetate liner

Page 1 of 1
Location: Area 2

Start Date: 11/06/06
End Date: 11/06/06

Boring Company: Prosonic Corporation
Foreman: Mike Ade
Drill Rig: Geoprobe 6600 truck-mounted rig
OBG Geologist: Mike Robison

Screen ===
Riser
Sand Pack
Bentonite
Bent/grout

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	brown, damp silty CLAY, little roots and gravel	CL			
1								1-3' soil
2				brown with grey mottling, damp silty CLAY, trace gravel, stiff	2' CL		0.0	
3								
4							0.0	
5	2	5-10'	5 ft / 5 ft	same as above	5' CL			
6							0.0	
7								
8				End of boring at 10 fbg				
9								
10								
11								
12								
13								
14								
15								
16								
17								
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22								
23								
24								
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26								
27								
28								
29								
30								

Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and asphalt patch at surface.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB2-11
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/37404**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 10/24/06** **End Date: 10/24/06**
Boring Company: Prosonic Corporation **Foreman: Don Bond** **Drill Rig: Geoprobe 6600 truck-mounted rig** **OBG Geologist: Mike Robison**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	brown, damp silty CLAY, little roots and gravel	CL			
1								
2				brown with grey mottling, damp silty CLAY, trace gravel, stiff	2' CL		0.0	2'-4' soil (DUP-02 also)
3								
4							0.0	
5	2	5-8'	3 ft / 3 ft	same as above	5' CL			
6							0.0	
7								
8				End of boring at 8 fbg				
9								
10								
11								
12								
13								
14								
15								
16								
17								
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19								
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21								
22								
23								
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26								
27								
28								
29								
30								

Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and asphalt patch at surface.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB2-12
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/37404**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 10/24/06** **End Date: 10/24/06**
Boring Company: Prosonic Corporation **Foreman: Don Bond** **Drill Rig: Geoprobe 6600 truck-mounted rig** **OBG Geologist: Mike Robison**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	brown, damp sandy CLAY, few roots	CL			
1								
2							0.0	2'-4' soil
3								
4				brown w/grey mottling, damp silty CLAY, little gravel	4' CL		0.0	
5	2	5-10'	5 ft / 5 ft	same as above, stiff	5'			
6							0.0	
7								
8							0.0	
9								
10				End of boring at 10 fbg				
11								
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29								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and asphalt patch at surface.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB2-13
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/37404**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 10/24/06** **End Date: 10/24/06**
Boring Company: Prosonic Corporation **Foreman: Don Bond** **Drill Rig: Geoprobe 6600 truck-mounted rig** **OBG Geologist: Mike Robison**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	dark brown, damp silty SAND and ROOTS (topsoil)				
				light brown, damp clayey SAND and GRAVEL (Fill)	3" SC-GC			
1				brownish orange, moist fine-coarse SAND and GRAVEL, some silt	1' SM-GM			
2							0.0	2'-4' soil
3								
4				brown w/grey mottling, damp stiff silty CLAY	4' CL		0.0	
5	2	5-9'	4 ft / 4 ft					
6							0.0	
7								
8				grey, damp silty CLAY, little gravel	8' CL		0.0	
9				End of boring at 9 fbg				
10								
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13								
14								
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16								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and asphalt patch at surface.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB2-14
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/37404**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 12/06/06** **End Date: 12/06/06**
Boring Company: Prosonic Corporation **Foreman: Don Bond** **Drill Rig: Geoprobe 6600 truck-mounted rig** **OBG Geologist: Mike Robison**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	vegetation at surface				0-6" soil
				dark brown, moist clayey SAND and ROOTS	SC			
1				brown w/grey mottling, damp silty CLAY, little gravel and roots	6" CL			
2							0.0	
3								
4							0.0	
5				End of boring at 5 fbg				
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and asphalt patch at surface.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB2-15

Client: ENCORE
Site: MFD Plant

Proj. Loc: Grand Blanc, MI
File No.: 4966/37404

Drill Method: hydraulic probe
Sampler: 5 ft stainless steel w/ disposable acetate liner

Page 1 of 1
Location: Area 2

Start Date: 12/06/06
End Date: 12/06/06

Boring Company: Prosonic Corporation
Foreman: Don Bond
Drill Rig: Geoprobe 6600 truck-mounted rig
OBG Geologist: Mike Robison

Screen ===
Riser
Sand Pack
Bentonite
Bent/grout

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change	General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	vegetation at surface					0-6" soil
				dark brown, moist clayey SAND and ROOTS		SC			
1				same as above, brown w/grey mottling	6"				
2				brown w/grey mottling, damp firm silty CLAY, little gravel and roots	2'	CL		0.0	
3									
4								0.0	4'-5' soil
5				End of boring at 5 fbg					
6									
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and asphalt patch at surface.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB2-16

Client: ENCORE
Site: MFD Plant

Proj. Loc: Grand Blanc, MI
File No.: 4966/37404

Drill Method: hydraulic probe
Sampler: 5 ft stainless steel w/ disposable acetate liner

Page 1 of 1
Location: Area 2

Start Date: 12/06/06
End Date: 12/06/06

Boring Company: Prosonic Corporation
Foreman: Don Bond
Drill Rig: Geoprobe 6600 truck-mounted rig
OBG Geologist: Mike Robison

Screen ===
Riser
Sand Pack
Bentonite
Bent/grout

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	vegetation at surface				0-6" soil
				dark brown, moist clayey SAND and ROOTS	SC			
1				brown w/orange grey mottling, damp silty CLAY, little gravel and roots	6" CL			
2							0.0	
3								
4				same as above (no orange mottling)	4' CL		0.0	4'-5' soil
5				End of boring at 5 fbg				
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and asphalt patch at surface.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB2-17

Client: ENCORE
Site: MFD Plant

Proj. Loc: Grand Blanc, MI
File No.: 4966/37404

Drill Method: hydraulic probe
Sampler: 5 ft stainless steel w/ disposable acetate liner

Page 1 of 1
Location: Area 2

Start Date: 12/06/06
End Date: 12/06/06

Boring Company: Prosonic Corporation
Foreman: Don Bond
Drill Rig: Geoprobe 6600 truck-mounted rig
OBG Geologist: Mike Robison

Screen ===
Riser
Sand Pack
Bentonite
Bent/grout

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	vegetation at surface				0-6" soil
				dark brown, moist clayey SAND and ROOTS	SC			
1				brown w/orange grey mottling, moist silty CLAY, little sand, roots and gravel	6"			
				same as above, damp, firm (no sand)	1'			
2							0.0	
3								
4							0.0	4'-5' soil
5				End of boring at 5 fbg				
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and asphalt patch at surface.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB2-18

Client: ENCORE
Site: MFD Plant

Proj. Loc: Grand Blanc, MI
File No.: 4966/37404

Drill Method: hydraulic probe
Sampler: 5 ft stainless steel w/ disposable acetate liner

Page 1 of 1
Location: Area 2

Start Date: 12/06/06
End Date: 12/06/06

Boring Company: Prosonic Corporation
Foreman: Don Bond
Drill Rig: Geoprobe 6600 truck-mounted rig
OBG Geologist: Mike Robison

Screen ===
Riser
Sand Pack
Bentonite
Bent/grout

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	vegetation at surface				0-6" soil
				dark brown, moist clayey SAND and ROOTS	SC			
1				brown, damp silty CLAY, little gravel and roots	3" CL			
				brown, moist clayey SAND, little gravel and roots	1.5' SC			
2							0.0	
				brown w/orange grey mottling, damp firm silty CLAY, little gravel and roots	2.5' CL			
3								
4							0.0	4'-5' soil
5				End of boring at 5 fbg				
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and asphalt patch at surface.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB2-19
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/37404**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 12/06/06** **End Date: 12/06/06**
Boring Company: Prosonic Corporation **Foreman: Don Bond** **Drill Rig: Geoprobe 6600 truck-mounted rig** **OBG Geologist: Mike Robison**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	vegetation at surface				0-6" soil
				brown grey, moist sandy CLAY, little gravel and roots				
1				same as above, damp	6" CL			
				brown orange, wet fine-course SAND and GRAVEL (Fill)	1' SP-GP			
2							0.0	
3				brown w/orange grey mottling, moist silty CLAY, little gravel and roots	3' CL			
				same as above, damp firm	3.5'			
4							0.0	4'-5' soil
5				End of boring at 5 fbg				
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and asphalt patch at surface.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB2-20

Client: ENCORE
Site: MFD Plant

Proj. Loc: Grand Blanc, MI
File No.: 4966/37404

Drill Method: hydraulic probe
Sampler: 5 ft stainless steel w/ disposable acetate liner

Page 1 of 1
Location: Area 2

Start Date: 12/06/06
End Date: 12/06/06

Boring Company: Prosonic Corporation
Foreman: Don Bond
Drill Rig: Geoprobe 6600 truck-mounted rig
OBG Geologist: Mike Robison

Screen ===
Riser
Sand Pack
Bentonite
Bent/grout

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	asphalt at surface				
				concrete	2"			
1				brown, damp SILT, SAND, AND GRAVEL (Fill)	6" SM-GM			6"-1' soil
				brownish orange, moist silty SAND, little gravel	1'			
2							0.0	
3				brown w/orange grey mottling, damp silty CLAY, little gravel and roots	3' CL			
4							0.0	4'-5' soil
5				End of boring at 5 fbg				
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and asphalt patch at surface.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-14 D
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 7/24/07** **End Date: 7/24/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	4 ft/ 5 ft	top soil				
				dark brown, damp SAND, little gravel, little wood and roots (FILL)	3"			
1				medium brown, sandy CLAY, trace gravel	1'			
				pale brown, damp SAND and gravel	1.5'			
2							0.0	
3								
4							0.0	
				pale brown, moist fine SAND and silt	4.5'			
5		5-10	4 ft/ 5 ft					
6							0.0	
7				same as above, coarse sand	7'			
				pale brown, moist CLAY, orange and gray mottling	7.5'			
8							0.0	8'
9								
10				End of Boring at 10 fbg	10'			
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-14 N
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 7/24/07** **End Date: 7/24/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	3.5 ft/ 5 ft	dark brown, dry SAND				0-6" soil
				dark orangish gray, dry CLAY, trace gravel	6"			
1								
2							0.0	
3				pale brown, damp SAND, trace gravel (FILL)	3'			
				same as above, clay	3.5'			
4				pale brown, damp SAND	4'		0.0	
				pale brown, damp CLAY				
5				End of Boring at 5 fbg	5'			
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-14 S
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 7/24/07** **End Date: 7/24/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	3.5 ft/ 5 ft	gravel				0-6" soil
				dark brown, damp SAND and clay, little gravel and glass (FILL)	6"			
1								
2							0.0	
				pale brown, damp CLAY, little gravel	2.5'			
3								
				wood (FILL)	3.5'			
4				dark brown, damp silty CLAY, little sand, trace gravel	4.2'		0.0	
5				End of Boring at 5 fbg	5'			
6								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-14 E
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 7/24/07** **End Date: 7/24/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	3.5 ft/ 5 ft	pale brown, dry SAND and gravel				0-6" soil
				dark brown, damp sandy CLAY, trace gravel	8"			
1								
2							0.0	
3								
				medium brown, damp SAND, trace gravel	3.8'			
4							0.0	
				dark brown, damp sandy CLAY, trace gravel	4.5'			
5				End of Boring at 5 fbg	5'			
6								
7								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-14 W
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 7/24/07** **End Date: 7/24/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	3.5 ft/ 5 ft	gravel				0-6" soil
				brown, damp SAND, little silt	6"			
1								
2				gravel (FILL)	2'		0.0	
3				brown, damp coarse SAND, trace clay	3'			
4							0.0	
5				End of Boring at 5 fbg	5'			
6								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-14 NN
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 8/9/07** **End Date: 8/9/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	light grayish brown, dry SAND and gravel				0-6" soil
1				light brown, damp SAND	1'			
2				light olive gray, clayey SILT, little gravel (FILL)	2'		0.0	
3								
4							0.0	
5				End of Boring at 5 fbg	5'			
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-14 SS

Client: ENCORE
Site: MFD Plant

Proj. Loc: Grand Blanc, MI
File No.: 4966/39923

Drill Method: hydraulic probe
Sampler: 5 ft stainless steel w/ disposable acetate liner

Page 1 of 1
Location: Area 2

Start Date: 8/9/07
End Date: 8/9/07

Boring Company: Boart Longyear
Foreman: Larry Weiss
Drill Rig: Geoprobe 6600 track rig
OBG Geologist: Kevin Schneider

Screen ===
Riser
Sand Pack
Bentonite
Bent/grout

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	3.5 ft/ 5 ft	dark gray, dry SAND and gravel				0-6" soil
1				light brown, damp clayey SILT, little sand, trace gravel	1'			
2							0.0	
3								
4				light brown olive, damp CLAY, medium soft, gray mottling	4'		0.0	
				gravel (FILL)	4.5'			
5				End of Boring at 5 fbg	5'			
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-14 EE
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 8/9/07** **End Date: 8/9/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	3.5 ft/ 5 ft	brown, wet SAND, some gravel				0-6" soil
				light brown, SAND and gravel, little silt (FILL)	4"			
1								
2							0.0	
3								
				light brown, SAND, little clay, trace gravel	3.5'			
4							0.0	
5				End of Boring at 5 fbg	5'			
6								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-14 WW
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 8/9/07** **End Date: 8/9/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	3 ft/ 5 ft	dark brown, damp silty SAND				0-6" soil
				light brown, silty SAND	5"			
1				gravel (FILL)	1.2'			
				light brown, damp clayey SAND, some gravel (FILL)	1.7'			
2							0.0	
3								
				same as above	3.5'			
4							0.0	
5				End of Boring at 5 fbg	5'			
6								
7								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-15 D
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 7/24/07** **End Date: 7/24/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	3 ft/ 5 ft	dark brown, damp SAND				
				brown, damp, coarse SAND and GRAVEL (FILL)	4"			
1								
2							0.0	
3								
4							0.0	
				brown, damp, coarse SAND, some gravel	4.5'			
5		5-10	4 ft/ 5 ft					
6				brown, damp CLAY, gray mottling	6'		0.0	
7								7'
8							0.0	
9								
10				End of Boring at 10 fbg	10'			
11								
12								
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14								
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22								
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26								
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28								
29								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-15 N
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 7/24/07** **End Date: 7/24/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	3 ft/ 5 ft	asphalt				0-6" soil
				dark yellowish orange, damp SAND and GRAVEL (FILL)	3"			
1				brown, damp SAND and GRAVEL	1'			
2							0.0	
3								
4				large gravel, trace sand	4'		0.0	
5				End of Boring at 5 fbg	5'			
6								
7								
8								
9								
10								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-15 E
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 7/24/07** **End Date: 7/24/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	3 ft/ 5 ft	gravel, some brown, damp, sand				0-6" soil
				brown, damp coarse SAND and GRAVEL (FILL)	3"			
1								
2							0.0	
				brown, damp coarse SAND, some GRAVEL	2.5'			
3								
4							0.0	
5				End of Boring at 5 fbg	5'			
6								
7								
8								
9								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-15 W
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 7/24/07** **End Date: 7/24/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	4 ft/ 5 ft	dark brown, dry, SAND, some gravel, little roots				0-6" soil
				dark yellowish orange, damp SAND and gravel	6"			
1								
2							0.0	
				gravel (FILL)	2.8'			
3				dark yellowish orange, damp SAND	3.2'			
				gravel (FILL)	3.6'			
4				dark yellowish orange, dry SAND, little gravel	4'		0.0	
				dark yellowish orange, damp sandy CLAY, orange and gray mottling				
5				End of Boring at 5 fbg	5'			
6								
7								
8								
9								
10								
11								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-15 NN
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 8/9/07** **End Date: 8/9/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	4 ft/ 5 ft	asphalt				0-6" soil
				light brown, damp SAND and gravel, some coarse gravel (FILL)	6"			
1								
2							0.0	
				same as above	2.5'			
3								
4							0.0	
				olive brown, damp, CLAY	4.5'			
5				End of Boring at 5 fbg	5'			
6								
7								
8								
9								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-20 D
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 7/24/07** **End Date: 7/24/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	3 ft/ 5 ft	gravel				
				brown, damp SAND and gravel, little clay	7"			
1				brown, damp silty CLAY	8"			
				concrete and gravel (FILL)	1'			
2				brown, damp CLAY, little sand, trace gravel	2'		0.0	
3								
4							0.0	
				gravel (FILL)	4.5'			
5		5-10	4 ft/ 5 ft	brown, damp coarse SAND, trace gravel (FILL)	4.7'			
6							0.0	
				pale brown, damp fine SAND, little gravel (FILL)	6'			
7								
8				brown, damp CLAY, orange and gray mottling	8'		0.0	8'
9								
10				End of Boring at 10 fbg	10'			
11								
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13								
14								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-20 N

Client: ENCORE
Site: MFD Plant

Proj. Loc: Grand Blanc, MI
File No.: 4966/39923

Drill Method: hydraulic probe
Sampler: 5 ft stainless steel w/ disposable acetate liner

Page 1 of 1
Location: Area 2

Start Date: 7/24/07
End Date: 7/24/07

Boring Company: Boart Longyear
Foreman: Larry Weiss
Drill Rig: Geoprobe 6600 track rig
OBG Geologist: Kevin Schneider

Screen ===
Riser
Sand Pack
Bentonite
Bent/grout

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	4 ft/ 5 ft	gravel				0-6" soil
				brown, damp CLAY, some silt, little gravel	6"			
1								
2							0.0	
3								
4				dark yellowish orange, damp SAND, trace gravel	4'		0.0	
				pale brown, damp CLAY, trace gravel	4.5'			
5				End of Boring at 5 fbg				
6								
7								
8								
9								
10								
11								
12								
13								
14								
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17								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-20 S
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 7/24/07** **End Date: 7/24/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	4 ft/ 5 ft	dark yellowish orange, dry SAND and gravel (FILL)				0-6" soil
1				dark yellowish orange, damp CLAY, little silt, trace gravel	1'			
2							0.0	
3				same as above	3'			
4							0.0	
5				End of Boring at 5 fbg	5'			
6								
7								
8								
9								
10								
11								
12								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-20 E

Client: ENCORE
Site: MFD Plant

Proj. Loc: Grand Blanc, MI
File No.: 4966/39923

Drill Method: hydraulic probe
Sampler: 5 ft stainless steel w/ disposable acetate liner

Page 1 of 1
Location: Area 2

Start Date: 7/24/07
End Date: 7/24/07

Boring Company: Boart Longyear
Foreman: Larry Weiss
Drill Rig: Geoprobe 6600 track rig
OBG Geologist: Kevin Schneider

Screen ===
Riser
Sand Pack
Bentonite
Bent/grout

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	4 ft/ 5 ft	pale brown, dry SAND and gravel				0-6" soil
				pale brown, damp CLAY	8"			
1								
				gravel (FILL)	1.5'			
2				pale brown, damp sand and CLAY	2'		0.0	
3								
4				gravel (FILL)	4		0.0	
				pale brown, damp CLAY	4.5'			
5				End of Boring at 5 fbg	5'			
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-20 W

Client: ENCORE
Site: MFD Plant

Proj. Loc: Grand Blanc, MI
File No.: 4966/39923

Drill Method: hydraulic probe
Sampler: 5 ft stainless steel w/ disposable acetate liner

Page 1 of 1
Location: Area 2

Start Date: 7/24/07
End Date: 7/24/07

Boring Company: Boart Longyear
Foreman: Larry Weiss
Drill Rig: Geoprobe 6600 track rig
OBG Geologist: Kevin Schneider

Screen ===
Riser
Sand Pack
Bentonite
Bent/grout

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	4 ft/ 5 ft	asphalt, pale brown, dry gravel, SAND (FILL)				0-6" soil
				pale brown, damp SAND and clay	6"			
1								
2							0.0	
				gravel (FILL)	2.5'			
3				dark yellowish orange, damp CLAY, little silt, trace gravel	3'			
4							0.0	
5				End of Boring at 5 fbg	5'			
6								
7								
8								
9								
10								
11								
12								
13								
14								
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24								
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27								
28								
29								
30								

Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-24 D

Client: ENCORE
Site: MFD Plant

Proj. Loc: Grand Blanc, MI
File No.: 4966/39923

Drill Method: hydraulic probe
Sampler: 5 ft stainless steel w/ disposable acetate liner

Page 1 of 1
Location: Area 2

Start Date: 7/24/07
End Date: 7/24/07

Boring Company: Boart Longyear
Foreman: Larry Weiss
Drill Rig: Geoprobe 6600 track rig
OBG Geologist: Kevin Schneider

Screen ===
Riser
Sand Pack
Bentonite
Bent/grout

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	gravel				
				grayish orange, damp SAND and gravel, slight odor	6"			
1								
2				dark yellowish orange, damp sandy CLAY, some gravel	2'		0.0	
3								
				dark gray, damp CLAY some coal (FILL)	3.5'			
4							0.0	
5		5-10'	4 ft/ 5ft	gravel (FILL)	5'			
				dark loam, trace roots	5.5'			
6				brown, damp CLAY, orange and gray mottling	5.8'			
7								
8				same as above	8'			
								8.5'
9								
10				End of Boring at 10 fbg	10'			
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
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26								
27								
28								
29								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-24 N
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 7/24/07** **End Date: 7/24/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	pale brown, damp SAND and GRAVEL (FILL)				0-6" soil
1				pale brown, damp CLAY, little gravel (FILL)	1'			
2							0.0	
3								
				same as above	3.5'			
4							0.0	
5				End of Boring at 5 fbg	5'			
6								
7								
8								
9								
10								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-24 S
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 7/24/07** **End Date: 7/24/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	pale brown, damp SAND and GRAVEL (FILL)				0-6" soil
1				dark yellowish orange, damp sandy CLAY, little gravel	1'			
2							0.0	
3				gravel (FILL)	3'			
				wood (FILL)	3.2'			
4				pale olive, damp CLAY, trace gravel, gray mottling	3.4'		0.0	
5				End of Boring at 5 fbg	5'			
6								
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8								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-24 E
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 7/24/07** **End Date: 7/24/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	pale brown, damp SAND and GRAVEL (FILL)				0-6" soil
1				pale brown, damp CLAY, trace gravel	1'			
2							0.0	
3								
4				same as above, less gravel	4'		0.0	
5				End of Boring at 5 fbg	5'			
6								
7								
8								
9								
10								
11								
12								
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Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-24 W

Client: ENCORE
Site: MFD Plant

Proj. Loc: Grand Blanc, MI
File No.: 4966/39923

Drill Method: hydraulic probe
Sampler: 5 ft stainless steel w/ disposable acetate liner

Page 1 of 1
Location: Area 2

Start Date: 7/24/07
End Date: 7/24/07

Boring Company: Boart Longyear
Foreman: Larry Weiss
Drill Rig: Geoprobe 6600 track rig
OBG Geologist: Kevin Schneider

Screen ===
Riser
Sand Pack
Bentonite
Bent/grout

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	pale brown, damp SAND and GRAVEL (FILL)				0-6" soil
1				pale brown, damp CLAY, little gravel (FILL)	1'			
2							0.0	
3								
4							0.0	
				gravel	4.5'			
5				End of Boring at 5 fbg	5'			
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-24 WW

Client: ENCORE
Site: MFD Plant

Proj. Loc: Grand Blanc, MI
File No.: 4966/39923

Drill Method: hydraulic probe
Sampler: 5 ft stainless steel w/ disposable acetate liner

Page 1 of 1
Location: Area 2

Start Date: 8/9/07
End Date: 8/9/07

Boring Company: Boart Longyear
Foreman: Larry Weiss
Drill Rig: Geoprobe 6600 track rig
OBG Geologist: Kevin Schneider

Screen ===
Riser
Sand Pack
Bentonite
Bent/grout

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	brown, wet SAND, little gravel				0-6" soil
				light brown, damp SAND, some gravel, little clay	4"			
1								
2							0.0	
3				pale olive brown, damp, silty CLAY, trace gravel	3'			
4							0.0	
5				End of Boring at 5 fbg	5'			
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SS2-24 NW
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 8/9/07** **End Date: 8/9/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	light brown, dry SAND and GRAVEL, some coarse gravel (FILL)				0-6" soil
1				light olive brown, silty SAND, little clay, little gravel (FILL)	1'			
2							0.0	
3				gravel (FILL)	3'			
				pale olive, damp silty CLAY, trace gravel (FILL)	3.4'			
4							0.0	
5				End of Boring at 5 fbg	5'			
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB2-27 D
Client: ENCORE **Site: MFD Plant** **Proj. Loc: Grand Blanc, MI** **File No.: 4966/39923**	**Drill Method: hydraulic probe** **Sampler: 5 ft stainless steel w/ disposable acetate liner**	**Page 1 of 1** **Location: Area 2** **Start Date: 7/24/07** **End Date: 7/24/07**
Boring Company: Boart Longyear **Foreman: Larry Weiss** **Drill Rig: Geoprobe 6600 track rig** **OBG Geologist: Kevin Schneider**		**Screen** === **Riser** **Sand Pack** **Bentonite** **Bent/grout**

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0	1	0-5'	5 ft/ 5 ft	top soil				
				brown, damp clayey SAND, (FILL)	4"			
1								
				brown, damp CLAY, orange and gray mottling	1.5'			
2							0.0	
								2.5'
3								
4							0.0	
5		5-10'	5 ft/5 ft					
6				SAA, less orange and gray mottling	6'		0.0	
7								
8							0.0	
9								
10				End of Boring at 10 fbg	10'			
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Notes:

1. Subsequent to soil sampling activities the borehole was backfilled with bentonite, and the surface was restored.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

APPENDIX C

Monitoring Well Construction Details

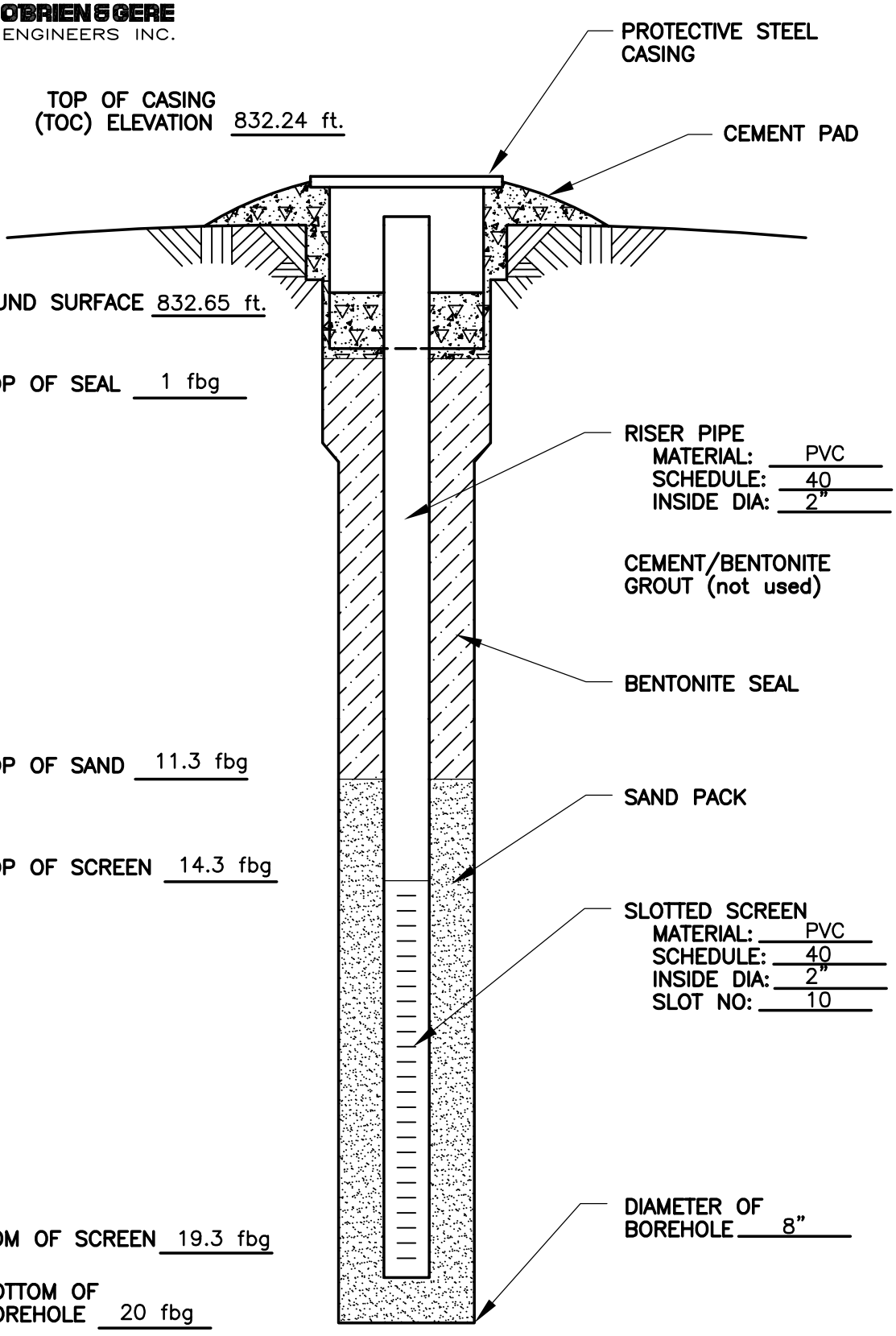
O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW2-1
Client: ENCORE Site: MFD Plant Proj. Loc: Grand Blanc, MI File No.: 4966/37404	Drill Method: 4.25" Hollow Stem Augers Sampler: 5 ft stainless steel w/ disposable acetate liner	Page 1 of 1 Location: Area 2 Start Date: 11/20/06 End Date: 11/20/06
Boring Company: Prosonic Corporation Foreman: Don Bond Drill Rig: Geoprobe 6600 truck-mounted rig OBG Geologist: Mike Robison		Screen === Riser Sand Pack Bentonite Bent/grout

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0				Blind drilled to 10 ft, see boring log for adjacent boring SB2-11 for a description of the stratigraphy from 0-10 ft.				
1								
2								
3								
4								
5								
6								
7								
8							0.0	
9								
10	1	10-15'	5 ft/ 5 ft	brown w/orange grey mottling, damp stiff silty CLAY, little gravel	10' CL			
11							0.0	
12								
13							0.0	
14				half-inch seam of moist very firm SAND	14' SP			
15	2	15-20'	5 ft/ 5 ft	grey, damp firm silty CLAY, trace gravel medium plasticity	14.5' CL	===	0.0	
16						===		
17				same as above, little sand	17'	===	0.0	
18				grey, damp firm silty CLAY, trace gravel	17.5' CL	===		
19						===		
20				End of boring at 20 fbg				
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Notes:

1. Subsequent to soil sampling activities a flushmount monitoring well was installed (see well construction detail for MW2-1) using 2 inch dia. flush-threaded PVC riser and a 5 ft long 0.010 inch slot PVC well screen.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE
ENGINEERS INC.



GRAND BLANC – MFD
GRAND BLANC, MICHIGAN
MONITORING WELL MW2–1

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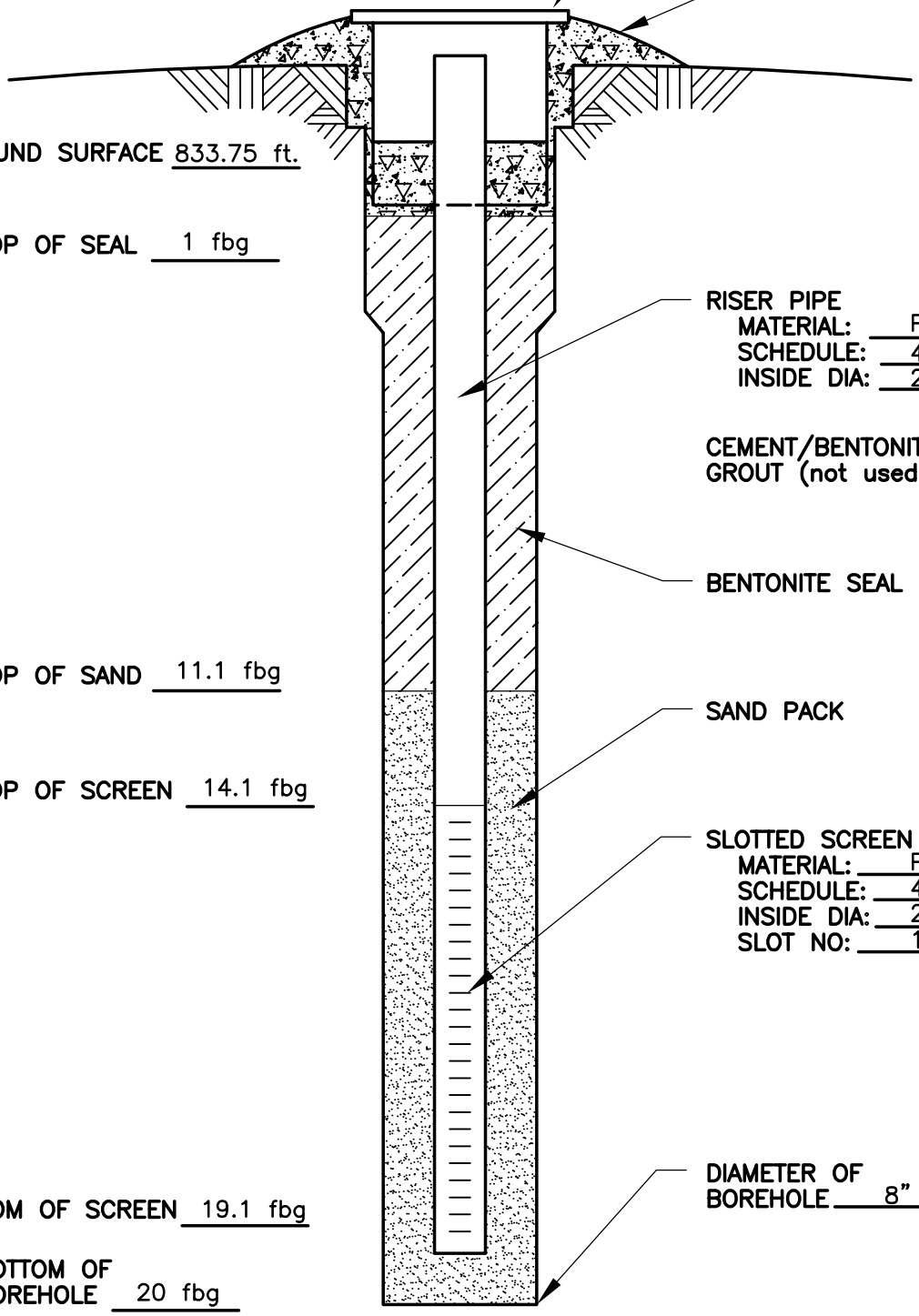
O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW2-2
Client: ENCORE Site: MFD Plant Proj. Loc: Grand Blanc, MI File No.: 4966/37404	Drill Method: 4.25" Hollow Stem Augers Sampler: 5 ft stainless steel w/ disposable acetate liner	Page 1 of 1 Location: Area 2 Start Date: 11/20/06 End Date: 11/20/06
Boring Company: Prosonic Corporation Foreman: Don Bond Drill Rig: Geoprobe 6600 truck-mounted rig OBG Geologist: Mike Robison		Screen === Riser Sand Pack Bentonite Bent/grout

Depth Below Grade	No.	Depth (feet)	Penetr/ Recovery	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing Lab samples
0				asphalt/concrete/gravel mix				
				Blind drilled to 3 ft, see boring log for adjacent boring SB2-7 for a description of the				
1				stratigraphy from 0-3 ft.				
2								
3				brown w/orange mottling, damp silty CLAY, little gravel	3' CL			
4				olive brown w/grey mottling, damp silty CLAY, little gravel and roots, medium plasticity	4' CL			
5	1	5-10'	5 ft/ 5 ft	brown w/grey mottling, damp silty CLAY, little gravel (non-plastic)	5' CL			
6								
7								
8							0.0	
9								
10	2	10-12'	5 ft/ 5 ft	same as above, stiff	10'			
11							0.0	
12								
13							0.0	
14								
15	3	15-20'	5 ft/ 5 ft	same as above	15'	===	0.0	
						===		
16						===		
						===		
17						===	0.0	
				brown, wet sandy CLAY, little silt	17.5' CL	===		
18				brown w/grey mottling, damp stiff silty CLAY, little gravel	18' CL	===		
						===		
19								
				brown, moist sandy CLAY, little silt and gravel	19.5' CL			
20				End of boring at 20 fbg				
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Notes:

1. Subsequent to soil sampling activities a flushmount monitoring well was installed (see well construction detail for MW2-2) using 2 inch dia. flush-threaded PVC riser and a 5 ft long 0.010 inch slot PVC well screen.
2. 5 ft hydraulic probe macro core sampler used, therefore no blow counts.

O'BRIEN & GERE
ENGINEERS INC.



GRAND BLANC – MFD
GRAND BLANC, MICHIGAN
MONITORING WELL MW2–2

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APPENDIX D

Soil Analytical Results

Analytical Laboratory Report

Supplemental Report

Report ID: S40169.01(02)
Generated on 04/01/2009
Replaces report S40169.01(01) generated on 03/19/2009

Report to

Attention: Clifford Yantz/ Kevin Schneider
O'Brien & Gere Engineers, Inc.
33469 West 14 Mile Road Suite 150
Farmington Hills. MI 48331

Phone: 248-477-5701 FAX: 248-661-4057
Email: YantzCS@obg.com/SchneiKB@obg.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S40169.01-S40169.12
Project: Grand Blanc Area 5 Add. Services SSOW# E029004
Collected Date: 03/17/2009
Submitted Date/Time: 03/17/2009 15:00
Sampled by: Kevin Schneider
P.O. #: 4020457

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak
Laboratory Director

Sample Summary (12 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S40169.01	SS2-20-CF-1	Soil	03/17/2009 12:30
S40169.02	SS2-20-CF-2	Soil	03/17/2009 12:40
S40169.03	SS2-20-CF-3	Soil	03/17/2009 12:45
S40169.04	SS2-20-CF-4	Soil	03/17/2009 12:50
S40169.05	SS2-20-CF-5	Soil	03/17/2009 12:55
S40169.06	SS2-20-CS-1	Soil	03/17/2009 13:00
S40169.07	SS2-20-CS-2	Soil	03/17/2009 13:05
S40169.08	SS2-20-CS-3	Soil	03/17/2009 13:10
S40169.09	SS2-20-CS-3 MS	Soil	03/17/2009 13:10
S40169.10	SS2-20-CS-3 MSD	Soil	03/17/2009 13:10
S40169.11	SS2-20-CS-4	Soil	03/17/2009 13:15
S40169.12	SS2-20-DUP-1	Soil	03/17/2009

Lab Sample ID: S40169.01
Sample Tag: SS2-20-CF-1
Collected Date/Time: 03/17/2009 12:30
Matrix: Soil
COC Reference: 49043

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	4.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	03/18/09 13:00	JRT		
Inorganics								
Total Solids	93	%	1	Std M 2540 B	03/18/09 12:00	DJS		
Metals								
Mercury	0.264	mg/kg	0.050	7471A	03/19/09 13:45	JRT	7439-97-6	

Lab Sample ID: S40169.02
Sample Tag: SS2-20-CF-2
Collected Date/Time: 03/17/2009 12:40
Matrix: Soil
COC Reference: 49043

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	4.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	03/18/09 13:00	JRT		
Inorganics								
Total Solids	90	%	1	Std M 2540 B	03/18/09 12:00	DJS		
Metals								
Mercury	Not detected	mg/kg	0.050	7471A	03/19/09 13:47	JRT	7439-97-6	

Lab Sample ID: S40169.03
Sample Tag: SS2-20-CF-3
Collected Date/Time: 03/17/2009 12:45
Matrix: Soil
COC Reference: 49043

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	4.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	03/18/09 13:00	JRT		
Inorganics								
Total Solids	91	%	1	Std M 2540 B	03/18/09 12:00	DJS		
Metals								
Mercury	0.123	mg/kg	0.050	7471A	03/19/09 13:49	JRT	7439-97-6	

Lab Sample ID: S40169.04
Sample Tag: SS2-20-CF-4
Collected Date/Time: 03/17/2009 12:50
Matrix: Soil
COC Reference: 49043

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	4.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	03/18/09 13:00	JRT		
Inorganics								
Total Solids	91	%	1	Std M 2540 B	03/18/09 12:00	DJS		
Metals								
Mercury	0.405	mg/kg	0.050	7471A	03/19/09 13:51	JRT	7439-97-6	

Lab Sample ID: S40169.05
Sample Tag: SS2-20-CF-5
Collected Date/Time: 03/17/2009 12:55
Matrix: Soil
COC Reference: 49043

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	4.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	03/18/09 13:00	JRT		
Inorganics								
Total Solids	93	%	1	Std M 2540 B	03/18/09 12:00	DJS		
Metals								
Mercury	Not detected	mg/kg	0.050	7471A	03/19/09 13:52	JRT	7439-97-6	

Lab Sample ID: S40169.06
Sample Tag: SS2-20-CS-1
Collected Date/Time: 03/17/2009 13:00
Matrix: Soil
COC Reference: 49043

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	4.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	03/18/09 13:00	JRT		
Inorganics								
Total Solids	94	%	1	Std M 2540 B	03/18/09 12:00	DJS		
Metals								
Mercury	0.440	mg/kg	0.050	7471A	03/19/09 13:54	JRT	7439-97-6	

Lab Sample ID: S40169.07
Sample Tag: SS2-20-CS-2
Collected Date/Time: 03/17/2009 13:05
Matrix: Soil
COC Reference: 49043

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	4.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	03/18/09 13:00	JRT		
Mercury Digestion	Completed			7470A	03/30/09 10:30	JRT		
SPLP Extraction								
% Solids	100			1312	03/26/09 16:00	WAR		
Sample Used g	100			1312	03/26/09 16:00	WAR		
Final Volume mL	2,000			1312	03/26/09 16:00	WAR		
Final Extract pH	10.36			1312	03/26/09 16:00	WAR		
Inorganics								
Total Solids	89	%	1	Std M 2540 B	03/18/09 12:00	DJS		
Metals								
Mercury	1.146	mg/kg	0.050	7471A	03/19/09 14:04	JRT	7439-97-6	
Mercury, SPLP	0.0006	mg/L	0.0002	7471A	03/30/09 13:50	JRT	7439-97-6	

Lab Sample ID: S40169.08
Sample Tag: SS2-20-CS-3
Collected Date/Time: 03/17/2009 13:10
Matrix: Soil
COC Reference: 49043

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	4.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	03/18/09 13:00	JRT		
Inorganics								
Total Solids	89	%	1	Std M 2540 B	03/18/09 12:00	DJS		
Metals								
Mercury	0.103	mg/kg	0.050	7471A	03/19/09 14:08	JRT	7439-97-6	

Lab Sample ID: S40169.09
Sample Tag: SS2-20-CS-3 MS
Collected Date/Time: 03/17/2009 13:10
Matrix: Soil
COC Reference: 49043

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	4.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	03/18/09 13:00	JRT		
Inorganics								
Total Solids	88	%	1	Std M 2540 B	03/18/09 12:00	DJS		
Metals								
Mercury	0.230	mg/kg	0.050	7471A	03/19/09 14:22	JRT	7439-97-6	

Lab Sample ID: S40169.10
Sample Tag: SS2-20-CS-3 MSD
Collected Date/Time: 03/17/2009 13:10
Matrix: Soil
COC Reference: 49043

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	4.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	03/18/09 13:00	JRT		
Inorganics								
Total Solids	86	%	1	Std M 2540 B	03/18/09 12:00	DJS		
Metals								
Mercury	0.243	mg/kg	0.050	7471A	03/19/09 14:24	JRT	7439-97-6	

Lab Sample ID: S40169.11
Sample Tag: SS2-20-CS-4
Collected Date/Time: 03/17/2009 13:15
Matrix: Soil
COC Reference: 49043

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	4.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	03/18/09 13:00	JRT		
Inorganics								
Total Solids	95	%	1	Std M 2540 B	03/18/09 12:00	DJS		
Metals								
Mercury	0.692	mg/kg	0.050	7471A	03/19/09 14:01	JRT	7439-97-6	

Lab Sample ID: S40169.12
Sample Tag: SS2-20-DUP-1
Collected Date/Time: 03/17/2009 :
Matrix: Soil
COC Reference: 49043

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	4.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	03/18/09 13:00	JRT		
Inorganics								
Total Solids	94	%	1	Std M 2540 B	03/18/09 12:00	DJS		
Metals								
Mercury	0.216	mg/kg	0.050	7471A	03/19/09 14:06	JRT	7439-97-6	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-6333
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

49043

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Cliff Yantz / Kevin Schneider
COMPANY: O'Brien & Gere
ADDRESS: 37000 Grand River
CITY: Farmington Hills STATE: MI ZIP CODE: 48335
PHONE NO: 248-477-5701 FAX NO: P.O. NO:
E-MAIL ADDRESS: QUOTE NO:

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO: FAX NO: P.O. NO

PROJECT NO./NAME: GM MFD Grand Blanc
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Schneider
TURNAROUND TIME REQUIRED: ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER
DELIVERABLES REQUIRED: ☒ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

SPECIAL INSTRUCTIONS/NOTES:
SSOW
E02900 4 pg

MERIT LAB NO.	DATE (2009)	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Mercury
40169.01	3/17	1230	SS2-20-CF-1	S	1	X							X
.02		1240	SS2-20-CF-2	S	1	X							X
.03		1245	SS2-20-CF-3	S	1	X							X
.04		1250	SS2-20-CF-4	S	1	X							X
.05		1255	SS2-20-CF-5	S	1	X							X
.06		1300	SS2-20-CS-1	S	1	X							X
.07		1305	SS2-20-CS-2	S	1	X							X
.08		1310	SS2-20-CS-3	S	1	X							X
.09/10		1310	SS2-20-CS-3MS/MSD	S	2	X							X
.10		1315	SS2-20-CS-4	S	1	X							X
.11		—	SS2-20-DUP-1	S	1	X							X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Kevin Schneider O'Brien & Gere	3/17/09	1255
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Merit	3.17.09	1255
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

RELINQUISHED BY SIGNATURE/ORGANIZATION	DATE	TIME
Christine Merit	3-17-09	1500
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Paul Anderson	3-17-09	1500

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS | NOTES: TEMP ON ARRIVAL 4.1

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Analytical Laboratory Report

Supplemental Report

Report ID: S29247.01(02)
Generated on 11/06/2006
Replaces report S29247.01(01) generated on 11/01/2006

Report to

Attention: Mr. Clifford Yantz
O'Brien & Gere Engineers
33469 West 14 Mile Road, Suite 150
Farmington Hills, MI 48331

Phone: 248-661-3745 FAX: 248-661-4057

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S29247.01-S29247.19
Project: GM MFD Grand Blanc
Submitted Date/Time: 10/24/2006 15:15
Sampled by: Mike Robison
P.O. #: 10610474EST

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak
Laboratory Director

Sample Summary (19 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S29247.01	SB1-01-10	Soil	10/23/2006 09:45
S29247.02	SB1-02-04	Soil	10/23/2006 10:00
S29247.03	SB1-03-10	Soil	10/23/2006 10:40
S29247.04	DUP-01	Soil	10/23/2006
S29247.05	SB2-01-04	Soil	10/23/2006 11:20
S29247.06	SB2-02-04	Soil	10/23/2006 11:45
S29247.07	SB2-02-GW	Groundwater	10/23/2006 12:10
S29247.08	SB2-03-10	Soil	10/23/2006 14:40
S29247.09	SB2-07-10	Soil	10/23/2006 15:05
S29247.10	SB2-06-10	Soil	10/23/2006 16:40
S29247.11	SB2-13-04	Soil	10/24/2006 08:45
S29247.12	SB2-12-04	Soil	10/24/2006 09:05
S29247.13	SB2-12-04 MS	Soil	10/24/2006 09:05
S29247.14	SB2-12-04 MSD	Soil	10/24/2006 09:05
S29247.15	EB-01	Liquid	10/24/2006 09:30
S29247.16	TB-01	Liquid	10/24/2006
S29247.17	SS2-01	Soil	10/24/2006 10:40
S29247.18	SS2-02	Soil	10/24/2006 10:45
S29247.19	SB2-09-04	Soil	10/24/2006 11:25

Lab Sample ID: S29247.09
Sample Tag: SB2-07-10
Collected Date/Time: 10/23/2006 15:05
Matrix: Soil
COC Reference: 038404

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.7	IR
1	40ml Glass	MeOH	Yes	4.7	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	10/25/06 20:33	EMR		
Extraction, PCB	Completed			3550B	10/26/06 15:51	TAS		
Lead, Coarse Digestion	Completed			3050B	10/26/06 14:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	10/26/06 09:00	JRT		
Lead, Fine Digestion	Completed			3050B	10/26/06 14:00	PER		
Mercury Digestion	Completed			7471A	10/26/06 10:00	JRT		
Metal Digestion	Completed			3050B	10/26/06 12:00	SLS		
Metals								
% Coarse by Weight	94.3	%			10/26/06 09:00	JRT		
% Fine by Weight	5.7	%			10/26/06 09:00	JRT		
Total Solids	88	%	1	160.3	10/26/06 08:30	JRT		
Arsenic	2.18	mg/kg	0.10	6020	10/26/06 15:06	SLS	7440-38-2	
Barium	54.3	mg/kg	1.0	6020	10/26/06 15:06	SLS	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	10/26/06 15:06	SLS	7440-43-9	
Chromium	5.5	mg/kg	2.0	6020	10/26/06 15:06	SLS	7440-47-3	
Copper	6.3	mg/kg	1.0	6020	10/26/06 15:06	SLS	7440-50-8	
Lead, Coarse	5.5	mg/kg	1.0	6020	10/26/06 15:08	PER		
Lead, Fine	45.7	mg/kg	1.0	6020	10/26/06 15:32	PER		
Lead, Total Calculated	7.79	mg/kg	1.0	6020	10/26/06 16:00	PER	7439-92-1C	
Mercury	Not detected	mg/kg	0.050	7471	10/26/06 15:36	JRT	7439-97-6	
Selenium	1.31	mg/kg	0.20	6020	10/26/06 15:06	SLS	7782-49-2	
Silver	Not detected	mg/kg	0.10	6020	10/26/06 15:06	SLS	7440-22-4	
Zinc	11.8	mg/kg	1.0	6020	10/26/06 15:06	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	10/27/06 12:00	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/27/06 12:00	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/27/06 12:00	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/27/06 12:00	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/27/06 12:00	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/27/06 12:00	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	10/27/06 12:00	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	10/27/06 12:00	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/27/06 12:00	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/27/06 12:00	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/27/06 12:00	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/27/06 12:00	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/27/06 12:00	JANB	11097-69-1	

Lab Sample ID: S29247.09 (continued)
Sample Tag: SB2-07-10

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - PCBs/Pesticides (continued)								
TCL PCB List (Column 2) (continued)								
PCB-1260	Not detected	ug/kg	330	8082	10/27/06 12:00	JANB	11096-82-5	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	208-96-8	
Acetophenone	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	98-86-2	
Anthracene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	120-12-7	
Atrazine	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	84-74-2	
Benzaldehyde	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	100-52-7	
Benzo(a)anthracene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	85-68-7	
2-Chloronaphthalene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	91-58-7	
2-Chlorophenol	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	59-50-7	
4-Chloroaniline	Not detected	ug/kg	670	8270C	10/27/06 23:04	ARH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	7005-72-3	
Caprolactam	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	105-60-2	
Carbazole	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	108-60-1	
Chrysene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/kg	670	8270C	10/27/06 23:04	ARH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	606-20-2	
3,3'-Dichlorobenzidine	Not detected	ug/kg	670	8270C	10/27/06 23:04	ARH	91-94-1	
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	670	8270C	10/27/06 23:04	ARH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	53-70-3	
Dibenzofuran	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	132-64-9	
Diethyl phthalate	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	84-66-2	
Dimethyl phthalate	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	117-81-7	
Fluoranthene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	206-44-0	
Fluorene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	86-73-7	
Hexachlorobenzene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	118-74-1	
Hexachlorobutadiene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	77-47-4	
Hexachloroethane	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	193-39-5	

Lab Sample ID: S29247.09 (continued)
Sample Tag: SB2-07-10

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Isophorone	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	78-59-1	
2-Methylnaphthalene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	91-57-6	
2-Methylphenol	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	108-39-4	
2-Nitroaniline	Not detected	ug/kg	670	8270C	10/27/06 23:04	ARH	88-74-4	
2-Nitrophenol	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	88-75-5	
3-Nitroaniline	Not detected	ug/kg	670	8270C	10/27/06 23:04	ARH	99-09-2	
4-Nitroaniline	Not detected	ug/kg	670	8270C	10/27/06 23:04	ARH	100-01-6	
4-Nitrophenol	Not detected	ug/kg	670	8270C	10/27/06 23:04	ARH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	86-30-6	
Naphthalene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	91-20-3	
Nitrobenzene	Not detected	ug/kg	200	8270C	10/27/06 23:04	ARH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	117-84-0	
Pentachlorophenol	Not detected	ug/kg	670	8270C	10/27/06 23:04	ARH	87-86-5	
Phenanthrene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	85-01-8	
Phenol	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	108-95-2	
Pyrene	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/kg	330	8270C	10/27/06 23:04	ARH	88-06-2	
Organics - Volatiles								
TCL Volatile Organics 5035/8260								
Acetone	Not detected	ug/kg	800	5035/8260B	10/26/06 18:21	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	800	5035/8260B	10/26/06 18:21	JGH	78-93-3	
Benzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	71-43-2	
Bromodichloromethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	75-27-4	
Bromoform	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	75-25-2	
Bromomethane	Not detected	ug/kg	300	5035/8260B	10/26/06 18:21	JGH	74-83-9	
Carbon disulfide	Not detected	ug/kg	300	5035/8260B	10/26/06 18:21	JGH	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	108-90-7	
Chloroethane	Not detected	ug/kg	300	5035/8260B	10/26/06 18:21	JGH	75-00-3	
Chloroform	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	67-66-3	
Chloromethane	Not detected	ug/kg	300	5035/8260B	10/26/06 18:21	JGH	74-87-3	
Cyclohexane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	110-82-7	
1,1-Dichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	75-34-3	
1,1-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	106-93-4	
1,2-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	95-50-1	
1,2-Dichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	107-06-2	
1,2-Dichloropropane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	78-87-5	
1,3-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	106-46-7	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	10061-01-5	
Dibromochloromethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	124-48-1	
Dichlorodifluoromethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	75-71-8	

Lab Sample ID: S29247.09 (continued)
Sample Tag: SB2-07-10

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 5035/8260 (continued)								
trans-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	10061-02-6	
Ethylbenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	100-41-4	
2-Hexanone	Not detected	ug/kg	3,000	5035/8260B	10/26/06 18:21	JGH	591-78-6	
Isopropylbenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	98-82-8	
Methyl Acetate	Not detected	ug/kg	3,000	5035/8260B	10/26/06 18:21	JGH	79-20-9	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	5035/8260B	10/26/06 18:21	JGH	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	5035/8260B	10/26/06 18:21	JGH	1634-04-4	
Methyl cyclohexane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	108-87-2	
Methylene chloride	Not detected	ug/kg	300	5035/8260B	10/26/06 18:21	JGH	75-09-2	
Styrene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	100-42-5	
1,1,1-Trichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	79-34-5	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	5035/8260B	10/26/06 18:21	JGH	76-13-1	
1,1,2-Trichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	79-00-5	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	5035/8260B	10/26/06 18:21	JGH	120-82-1	
Tetrachloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	108-88-3	
Trichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	5035/8260B	10/26/06 18:21	JGH	75-69-4	
Vinyl chloride	Not detected	ug/kg	100	5035/8260B	10/26/06 18:21	JGH	75-01-4	
o-Xylene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH	95-47-6	
p,m-Xylene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:21	JGH		

Lab Sample ID: S29247.10
Sample Tag: SB2-06-10
Collected Date/Time: 10/23/2006 16:40
Matrix: Soil
COC Reference: 038404

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.7	IR
1	40ml Glass	MeOH	Yes	4.7	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	10/25/06 20:33	EMR		
Extraction, PCB	Completed			3550B	10/26/06 15:51	TAS		
Lead, Coarse Digestion	Completed			3050B	10/26/06 14:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	10/26/06 09:00	JRT		
Lead, Fine Digestion	Completed			3050B	10/26/06 14:00	PER		
Mercury Digestion	Completed			7471A	10/26/06 10:00	JRT		
Metal Digestion	Completed			3050B	10/26/06 12:00	SLS		
Metals								
% Coarse by Weight	98.7	%			10/26/06 09:00	JRT		
% Fine by Weight	1.3	%			10/26/06 09:00	JRT		
Total Solids	83	%	1	160.3	10/26/06 08:30	JRT		
Arsenic	0.56	mg/kg	0.10	6020	10/26/06 15:09	SLS	7440-38-2	
Barium	60.3	mg/kg	1.0	6020	10/26/06 15:09	SLS	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	10/26/06 15:09	SLS	7440-43-9	
Chromium	3.6	mg/kg	2.0	6020	10/26/06 15:09	SLS	7440-47-3	
Copper	7.4	mg/kg	1.0	6020	10/26/06 15:09	SLS	7440-50-8	
Lead, Coarse	9.9	mg/kg	1.0	6020	10/26/06 15:09	PER		
Lead, Fine	66.5	mg/kg	1.0	6020	10/26/06 15:33	PER		
Lead, Total Calculated	10.6	mg/kg	1.0	6020	10/26/06 16:00	PER	7439-92-1C	
Mercury	Not detected	mg/kg	0.050	7471	10/26/06 15:38	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.20	6020	10/26/06 15:09	SLS	7782-49-2	
Silver	Not detected	mg/kg	0.10	6020	10/26/06 15:09	SLS	7440-22-4	
Zinc	6.7	mg/kg	1.0	6020	10/26/06 15:09	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	10/27/06 12:12	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/27/06 12:12	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/27/06 12:12	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/27/06 12:12	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/27/06 12:12	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/27/06 12:12	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	10/27/06 12:12	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	10/27/06 12:12	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/27/06 12:12	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/27/06 12:12	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/27/06 12:12	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/27/06 12:12	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/27/06 12:12	JANB	11097-69-1	

Lab Sample ID: S29247.10 (continued)
Sample Tag: SB2-06-10

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - PCBs/Pesticides (continued)								
TCL PCB List (Column 2) (continued)								
PCB-1260	Not detected	ug/kg	330	8082	10/27/06 12:12	JANB	11096-82-5	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	83-32-9	I
Acenaphthylene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	208-96-8	I
Acetophenone	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	98-86-2	I
Anthracene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	120-12-7	I
Atrazine	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	1912-24-9	I
1,1'-Biphenyl	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	92-52-4	I
4-Bromophenyl phenyl ether	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	101-55-3	I
di-n-Butyl phthalate	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	84-74-2	I
Benzaldehyde	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	100-52-7	I
Benzo(a)anthracene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	56-55-3	I
Benzo(a)pyrene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	50-32-8	I
Benzo(b)fluoranthene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	205-99-2	I
Benzo(ghi)perylene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	191-24-2	I
Benzo(k)fluoranthene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	207-08-9	I
Butyl benzyl phthalate	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	85-68-7	I
2-Chloronaphthalene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	91-58-7	I
2-Chlorophenol	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	95-57-8	I
4-Chloro-3-methylphenol	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	59-50-7	I
4-Chloroaniline	Not detected	ug/kg	670	8270C	10/27/06 23:39	ARH	106-47-8	I
4-Chlorophenyl phenyl ether	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	7005-72-3	I
Caprolactam	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	105-60-2	I
Carbazole	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	86-74-8	I
bis(2-Chloroethoxy)methane	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	111-91-1	I
bis(2-Chloroethyl)ether	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	111-44-4	I
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	108-60-1	I
Chrysene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	218-01-9	I
2,4-Dichlorophenol	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	120-83-2	I
2,4-Dimethylphenol	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	105-67-9	I
2,4-Dinitrophenol	Not detected	ug/kg	670	8270C	10/27/06 23:39	ARH	51-28-5	I
2,4-Dinitrotoluene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	121-14-2	I
2,6-Dinitrotoluene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	606-20-2	I
3,3'-Dichlorobenzidine	Not detected	ug/kg	670	8270C	10/27/06 23:39	ARH	91-94-1	I
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	670	8270C	10/27/06 23:39	ARH	534-52-1	I
Dibenzo(ah)anthracene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	53-70-3	I
Dibenzofuran	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	132-64-9	I
Diethyl phthalate	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	84-66-2	I
Dimethyl phthalate	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	131-11-3	I
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	117-81-7	I
Fluoranthene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	206-44-0	I
Fluorene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	86-73-7	I
Hexachlorobenzene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	118-74-1	I
Hexachlorobutadiene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	87-68-3	I
Hexachlorocyclopentadiene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	77-47-4	I
Hexachloroethane	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	67-72-1	I

I-Matrix interference with internal standard

Lab Sample ID: S29247.10 (continued)
Sample Tag: SB2-06-10

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	193-39-5	I
Isophorone	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	78-59-1	I
2-Methylnaphthalene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	91-57-6	I
2-Methylphenol	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	95-48-7	I
3-, 4-Methylphenol	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	108-39-4	I
2-Nitroaniline	Not detected	ug/kg	670	8270C	10/27/06 23:39	ARH	88-74-4	I
2-Nitrophenol	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	88-75-5	I
3-Nitroaniline	Not detected	ug/kg	670	8270C	10/27/06 23:39	ARH	99-09-2	I
4-Nitroaniline	Not detected	ug/kg	670	8270C	10/27/06 23:39	ARH	100-01-6	I
4-Nitrophenol	Not detected	ug/kg	670	8270C	10/27/06 23:39	ARH	100-02-7	I
N-Nitrosodi-n-propylamine	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	621-64-7	I
N-Nitrosodiphenylamine	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	86-30-6	I
Naphthalene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	91-20-3	I
Nitrobenzene	Not detected	ug/kg	200	8270C	10/27/06 23:39	ARH	98-95-3	I
di-n-Octyl phthalate	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	117-84-0	I
Pentachlorophenol	Not detected	ug/kg	670	8270C	10/27/06 23:39	ARH	87-86-5	I
Phenanthrene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	85-01-8	I
Phenol	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	108-95-2	I
Pyrene	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	129-00-0	I
2,4,5-Trichlorophenol	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	95-95-4	I
2,4,6-Trichlorophenol	Not detected	ug/kg	330	8270C	10/27/06 23:39	ARH	88-06-2	I
TCL Semi-Volatile Organics (Replicate 01)								
Acenaphthene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	83-32-9	I
Acenaphthylene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	208-96-8	I
Acetophenone	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	98-86-2	I
Anthracene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	120-12-7	I
Atrazine	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	1912-24-9	I
1,1'-Biphenyl	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	92-52-4	I
4-Bromophenyl phenyl ether	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	101-55-3	I
di-n-Butyl phthalate	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	84-74-2	I
Benzaldehyde	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	100-52-7	I
Benzo(a)anthracene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	56-55-3	I
Benzo(a)pyrene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	50-32-8	I
Benzo(b)fluoranthene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	205-99-2	I
Benzo(ghi)perylene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	191-24-2	I
Benzo(k)fluoranthene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	207-08-9	I
Butyl benzyl phthalate	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	85-68-7	I
2-Chloronaphthalene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	91-58-7	I
2-Chlorophenol	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	95-57-8	I
4-Chloro-3-methylphenol	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	59-50-7	I
4-Chloroaniline	Not detected	ug/kg	670	8270C	10/31/06 17:27	ARH	106-47-8	I
4-Chlorophenyl phenyl ether	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	7005-72-3	I
Caprolactam	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	105-60-2	I
Carbazole	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	86-74-8	I
bis(2-Chloroethoxy)methane	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	111-91-1	I
bis(2-Chloroethyl)ether	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	111-44-4	I
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	108-60-1	I

I-Matrix interference with internal standard

Lab Sample ID: S29247.10 (continued)
Sample Tag: SB2-06-10

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (Replicate 01) (continued)								
Chrysene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	218-01-9	I
2,4-Dichlorophenol	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	120-83-2	I
2,4-Dimethylphenol	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	105-67-9	I
2,4-Dinitrophenol	Not detected	ug/kg	670	8270C	10/31/06 17:27	ARH	51-28-5	I
2,4-Dinitrotoluene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	121-14-2	I
2,6-Dinitrotoluene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	606-20-2	I
3,3'-Dichlorobenzidine	Not detected	ug/kg	670	8270C	10/31/06 17:27	ARH	91-94-1	I
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	670	8270C	10/31/06 17:27	ARH	534-52-1	I
Dibenzo(ah)anthracene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	53-70-3	I
Dibenzofuran	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	132-64-9	I
Diethyl phthalate	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	84-66-2	I
Dimethyl phthalate	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	131-11-3	I
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	117-81-7	I
Fluoranthene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	206-44-0	I
Fluorene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	86-73-7	I
Hexachlorobenzene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	118-74-1	I
Hexachlorobutadiene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	87-68-3	I
Hexachlorocyclopentadiene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	77-47-4	I
Hexachloroethane	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	67-72-1	I
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	193-39-5	I
Isophorone	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	78-59-1	I
2-Methylnaphthalene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	91-57-6	I
2-Methylphenol	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	95-48-7	I
3-, 4-Methylphenol	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	108-39-4	I
2-Nitroaniline	Not detected	ug/kg	670	8270C	10/31/06 17:27	ARH	88-74-4	I
2-Nitrophenol	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	88-75-5	I
3-Nitroaniline	Not detected	ug/kg	670	8270C	10/31/06 17:27	ARH	99-09-2	I
4-Nitroaniline	Not detected	ug/kg	670	8270C	10/31/06 17:27	ARH	100-01-6	I
4-Nitrophenol	Not detected	ug/kg	670	8270C	10/31/06 17:27	ARH	100-02-7	I
N-Nitrosodi-n-propylamine	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	621-64-7	I
N-Nitrosodiphenylamine	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	86-30-6	I
Naphthalene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	91-20-3	I
Nitrobenzene	Not detected	ug/kg	200	8270C	10/31/06 17:27	ARH	98-95-3	I
di-n-Octyl phthalate	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	117-84-0	I
Pentachlorophenol	Not detected	ug/kg	670	8270C	10/31/06 17:27	ARH	87-86-5	I
Phenanthrene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	85-01-8	I
Phenol	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	108-95-2	I
Pyrene	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	129-00-0	I
2,4,5-Trichlorophenol	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	95-95-4	I
2,4,6-Trichlorophenol	Not detected	ug/kg	330	8270C	10/31/06 17:27	ARH	88-06-2	I
Organics - Volatiles								
TCL Volatile Organics 5035/8260								
Acetone	Not detected	ug/kg	900	5035/8260B	10/26/06 18:39	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	900	5035/8260B	10/26/06 18:39	JGH	78-93-3	
Benzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	71-43-2	
Bromodichloromethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	75-27-4	
Bromoform	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	75-25-2	

I-Matrix interference with internal standard

Lab Sample ID: S29247.10 (continued)
Sample Tag: SB2-06-10

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 5035/8260 (continued)								
Bromomethane	Not detected	ug/kg	300	5035/8260B	10/26/06 18:39	JGH	74-83-9	
Carbon disulfide	Not detected	ug/kg	300	5035/8260B	10/26/06 18:39	JGH	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	108-90-7	
Chloroethane	Not detected	ug/kg	300	5035/8260B	10/26/06 18:39	JGH	75-00-3	
Chloroform	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	67-66-3	
Chloromethane	Not detected	ug/kg	300	5035/8260B	10/26/06 18:39	JGH	74-87-3	
Cyclohexane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	110-82-7	
1,1-Dichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	75-34-3	
1,1-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	106-93-4	
1,2-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	95-50-1	
1,2-Dichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	107-06-2	
1,2-Dichloropropane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	78-87-5	
1,3-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	106-46-7	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	10061-01-5	
Dibromochloromethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	124-48-1	
Dichlorodifluoromethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	75-71-8	
trans-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	10061-02-6	
Ethylbenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	100-41-4	
2-Hexanone	Not detected	ug/kg	3,000	5035/8260B	10/26/06 18:39	JGH	591-78-6	
Isopropylbenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	98-82-8	
Methyl Acetate	Not detected	ug/kg	3,000	5035/8260B	10/26/06 18:39	JGH	79-20-9	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	5035/8260B	10/26/06 18:39	JGH	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	5035/8260B	10/26/06 18:39	JGH	1634-04-4	
Methyl cyclohexane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	108-87-2	
Methylene chloride	Not detected	ug/kg	300	5035/8260B	10/26/06 18:39	JGH	75-09-2	
Styrene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	100-42-5	
1,1,1-Trichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	79-34-5	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	5035/8260B	10/26/06 18:39	JGH	76-13-1	
1,1,2-Trichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	79-00-5	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	5035/8260B	10/26/06 18:39	JGH	120-82-1	
Tetrachloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	108-88-3	
Trichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	5035/8260B	10/26/06 18:39	JGH	75-69-4	
Vinyl chloride	Not detected	ug/kg	100	5035/8260B	10/26/06 18:39	JGH	75-01-4	
o-Xylene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH	95-47-6	
p,m-Xylene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:39	JGH		

Lab Sample ID: S29247.11
Sample Tag: SB2-13-04
Collected Date/Time: 10/24/2006 08:45
Matrix: Soil
COC Reference: 038404

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.7	IR
1	40ml Glass	MeOH	Yes	4.7	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	10/25/06 20:33	EMR		
Extraction, PCB	Completed			3550B	10/26/06 15:51	TAS		
Lead, Coarse Digestion	Completed			3050B	10/26/06 14:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	10/26/06 09:00	JRT		
Lead, Fine Digestion	Completed			3050B	10/26/06 14:00	PER		
Mercury Digestion	Completed			7471A	10/26/06 10:00	JRT		
Metal Digestion	Completed			3050B	10/26/06 12:00	SLS		
Metals								
% Coarse by Weight	96.3	%			10/26/06 09:00	JRT		
% Fine by Weight	3.7	%			10/26/06 09:00	JRT		
Total Solids	85	%	1	160.3	10/26/06 08:30	JRT		
Arsenic	1.59	mg/kg	0.10	6020	10/26/06 15:13	SLS	7440-38-2	
Barium	36.5	mg/kg	1.0	6020	10/26/06 15:13	SLS	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	10/26/06 15:13	SLS	7440-43-9	
Chromium	4.8	mg/kg	2.0	6020	10/26/06 15:13	SLS	7440-47-3	
Copper	4.3	mg/kg	1.0	6020	10/26/06 15:13	SLS	7440-50-8	
Lead, Coarse	5.0	mg/kg	1.0	6020	10/26/06 15:12	PER		
Lead, Fine	31.9	mg/kg	1.0	6020	10/26/06 15:36	PER		
Lead, Total Calculated	5.99	mg/kg	1.0	6020	10/26/06 16:00	PER	7439-92-1C	
Mercury	Not detected	mg/kg	0.050	7471	10/26/06 15:40	JRT	7439-97-6	
Selenium	0.50	mg/kg	0.20	6020	10/26/06 15:13	SLS	7782-49-2	
Silver	Not detected	mg/kg	0.10	6020	10/26/06 15:13	SLS	7440-22-4	
Zinc	10.0	mg/kg	1.0	6020	10/26/06 15:13	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	10/27/06 12:36	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/27/06 12:36	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/27/06 12:36	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/27/06 12:36	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/27/06 12:36	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/27/06 12:36	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	10/27/06 12:36	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	10/27/06 12:36	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/27/06 12:36	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/27/06 12:36	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/27/06 12:36	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/27/06 12:36	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/27/06 12:36	JANB	11097-69-1	

Lab Sample ID: S29247.11 (continued)
Sample Tag: SB2-13-04

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - PCBs/Pesticides (continued)								
TCL PCB List (Column 2) (continued)								
PCB-1260	Not detected	ug/kg	330	8082	10/27/06 12:36	JANB	11096-82-5	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	208-96-8	
Acetophenone	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	98-86-2	
Anthracene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	120-12-7	
Atrazine	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	84-74-2	
Benzaldehyde	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	100-52-7	
Benzo(a)anthracene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	85-68-7	
2-Chloronaphthalene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	91-58-7	
2-Chlorophenol	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	59-50-7	
4-Chloroaniline	Not detected	ug/kg	670	8270C	10/28/06 00:13	ARH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	7005-72-3	
Caprolactam	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	105-60-2	
Carbazole	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	108-60-1	
Chrysene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/kg	670	8270C	10/28/06 00:13	ARH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	606-20-2	
3,3'-Dichlorobenzidine	Not detected	ug/kg	670	8270C	10/28/06 00:13	ARH	91-94-1	
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	670	8270C	10/28/06 00:13	ARH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	53-70-3	
Dibenzofuran	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	132-64-9	
Diethyl phthalate	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	84-66-2	
Dimethyl phthalate	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	117-81-7	
Fluoranthene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	206-44-0	
Fluorene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	86-73-7	
Hexachlorobenzene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	118-74-1	
Hexachlorobutadiene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	77-47-4	
Hexachloroethane	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	193-39-5	

Lab Sample ID: S29247.11 (continued)
Sample Tag: SB2-13-04

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Isophorone	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	78-59-1	
2-Methylnaphthalene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	91-57-6	
2-Methylphenol	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	108-39-4	
2-Nitroaniline	Not detected	ug/kg	670	8270C	10/28/06 00:13	ARH	88-74-4	
2-Nitrophenol	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	88-75-5	
3-Nitroaniline	Not detected	ug/kg	670	8270C	10/28/06 00:13	ARH	99-09-2	
4-Nitroaniline	Not detected	ug/kg	670	8270C	10/28/06 00:13	ARH	100-01-6	
4-Nitrophenol	Not detected	ug/kg	670	8270C	10/28/06 00:13	ARH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	86-30-6	
Naphthalene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	91-20-3	
Nitrobenzene	Not detected	ug/kg	200	8270C	10/28/06 00:13	ARH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	117-84-0	
Pentachlorophenol	Not detected	ug/kg	670	8270C	10/28/06 00:13	ARH	87-86-5	
Phenanthrene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	85-01-8	
Phenol	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	108-95-2	
Pyrene	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/kg	330	8270C	10/28/06 00:13	ARH	88-06-2	
Organics - Volatiles								
TCL Volatile Organics 5035/8260								
Acetone	Not detected	ug/kg	900	5035/8260B	10/26/06 18:58	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	900	5035/8260B	10/26/06 18:58	JGH	78-93-3	
Benzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	71-43-2	
Bromodichloromethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	75-27-4	
Bromoform	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	75-25-2	
Bromomethane	Not detected	ug/kg	300	5035/8260B	10/26/06 18:58	JGH	74-83-9	
Carbon disulfide	Not detected	ug/kg	300	5035/8260B	10/26/06 18:58	JGH	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	108-90-7	
Chloroethane	Not detected	ug/kg	300	5035/8260B	10/26/06 18:58	JGH	75-00-3	
Chloroform	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	67-66-3	
Chloromethane	Not detected	ug/kg	300	5035/8260B	10/26/06 18:58	JGH	74-87-3	
Cyclohexane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	110-82-7	
1,1-Dichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	75-34-3	
1,1-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	106-93-4	
1,2-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	95-50-1	
1,2-Dichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	107-06-2	
1,2-Dichloropropane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	78-87-5	
1,3-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	106-46-7	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	10061-01-5	
Dibromochloromethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	124-48-1	
Dichlorodifluoromethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	75-71-8	

Lab Sample ID: S29247.11 (continued)
Sample Tag: SB2-13-04

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 5035/8260 (continued)								
trans-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	10061-02-6	
Ethylbenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	100-41-4	
2-Hexanone	Not detected	ug/kg	3,000	5035/8260B	10/26/06 18:58	JGH	591-78-6	
Isopropylbenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	98-82-8	
Methyl Acetate	Not detected	ug/kg	3,000	5035/8260B	10/26/06 18:58	JGH	79-20-9	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	5035/8260B	10/26/06 18:58	JGH	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	5035/8260B	10/26/06 18:58	JGH	1634-04-4	
Methyl cyclohexane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	108-87-2	
Methylene chloride	Not detected	ug/kg	300	5035/8260B	10/26/06 18:58	JGH	75-09-2	
Styrene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	100-42-5	
1,1,1-Trichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	79-34-5	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	5035/8260B	10/26/06 18:58	JGH	76-13-1	
1,1,2-Trichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	79-00-5	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	5035/8260B	10/26/06 18:58	JGH	120-82-1	
Tetrachloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	108-88-3	
Trichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	5035/8260B	10/26/06 18:58	JGH	75-69-4	
Vinyl chloride	Not detected	ug/kg	100	5035/8260B	10/26/06 18:58	JGH	75-01-4	
o-Xylene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH	95-47-6	
p,m-Xylene	Not detected	ug/kg	60	5035/8260B	10/26/06 18:58	JGH		

Lab Sample ID: S29247.12
Sample Tag: SB2-12-04
Collected Date/Time: 10/24/2006 09:05
Matrix: Soil
COC Reference: 038404

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.7	IR
1	40ml Glass	MeOH	Yes	4.7	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	10/25/06 20:33	EMR		
Extraction, PCB	Completed			3550B	10/26/06 15:51	TAS		
Lead, Coarse Digestion	Completed			3050B	10/26/06 14:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	10/26/06 09:00	JRT		
Lead, Fine Digestion	Completed			3050B	10/26/06 14:00	PER		
Mercury Digestion	Completed			7471A	10/26/06 10:00	JRT		
Metal Digestion	Completed			3050B	10/26/06 12:00	SLS		
Metals								
% Coarse by Weight	95.3	%			10/26/06 09:00	JRT		
% Fine by Weight	4.7	%			10/26/06 09:00	JRT		
Total Solids	86	%	1	160.3	10/26/06 08:30	JRT		
Arsenic	0.46	mg/kg	0.10	6020	10/26/06 14:43	SLS	7440-38-2	
Barium	66.8	mg/kg	1.0	6020	10/26/06 14:43	SLS	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	10/26/06 14:43	SLS	7440-43-9	
Chromium	4.1	mg/kg	2.0	6020	10/26/06 14:43	SLS	7440-47-3	
Copper	3.9	mg/kg	1.0	6020	10/26/06 14:43	SLS	7440-50-8	
Lead, Coarse	7.5	mg/kg	1.0	6020	10/26/06 15:14	PER		
Lead, Fine	14.0	mg/kg	1.0	6020	10/26/06 15:37	PER		
Lead, Total Calculated	7.80	mg/kg	1.0	6020	10/26/06 16:00	PER	7439-92-1C	
Mercury	Not detected	mg/kg	0.050	7471	10/26/06 15:21	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.20	6020	10/26/06 14:43	SLS	7782-49-2	
Silver	Not detected	mg/kg	0.10	6020	10/26/06 14:43	SLS	7440-22-4	
Zinc	10.7	mg/kg	1.0	6020	10/26/06 14:43	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	10/27/06 10:49	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/27/06 10:49	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/27/06 10:49	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/27/06 10:49	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/27/06 10:49	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/27/06 10:49	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	10/27/06 10:49	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	10/27/06 10:49	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/27/06 10:49	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/27/06 10:49	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/27/06 10:49	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/27/06 10:49	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/27/06 10:49	JANB	11097-69-1	

Lab Sample ID: S29247.12 (continued)
Sample Tag: SB2-12-04

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - PCBs/Pesticides (continued)								
TCL PCB List (Column 2) (continued)								
PCB-1260	Not detected	ug/kg	330	8082	10/27/06 10:49	JANB	11096-82-5	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	208-96-8	
Acetophenone	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	98-86-2	
Anthracene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	120-12-7	
Atrazine	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	84-74-2	
Benzaldehyde	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	100-52-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	85-68-7	
2-Chloronaphthalene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	91-58-7	
2-Chlorophenol	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	59-50-7	
4-Chloroaniline	Not detected	ug/kg	700	8270C	10/30/06 17:03	ARH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	7005-72-3	
Caprolactam	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	105-60-2	
Carbazole	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	108-60-1	
Chrysene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/kg	700	8270C	10/30/06 17:03	ARH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	606-20-2	
3,3'-Dichlorobenzidine	Not detected	ug/kg	700	8270C	10/30/06 17:03	ARH	91-94-1	
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	700	8270C	10/30/06 17:03	ARH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	53-70-3	
Dibenzofuran	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	132-64-9	
Diethyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	84-66-2	
Dimethyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	117-81-7	
Fluoranthene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	86-73-7	
Hexachlorobenzene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	118-74-1	
Hexachlorobutadiene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	77-47-4	
Hexachloroethane	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	193-39-5	

Lab Sample ID: S29247.12 (continued)
Sample Tag: SB2-12-04

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Isophorone	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	78-59-1	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	91-57-6	
2-Methylphenol	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	108-39-4	
2-Nitroaniline	Not detected	ug/kg	700	8270C	10/30/06 17:03	ARH	88-74-4	
2-Nitrophenol	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	88-75-5	
3-Nitroaniline	Not detected	ug/kg	700	8270C	10/30/06 17:03	ARH	99-09-2	
4-Nitroaniline	Not detected	ug/kg	700	8270C	10/30/06 17:03	ARH	100-01-6	
4-Nitrophenol	Not detected	ug/kg	700	8270C	10/30/06 17:03	ARH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	86-30-6	
Naphthalene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	91-20-3	
Nitrobenzene	Not detected	ug/kg	200	8270C	10/30/06 17:03	ARH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	117-84-0	
Pentachlorophenol	Not detected	ug/kg	700	8270C	10/30/06 17:03	ARH	87-86-5	
Phenanthrene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	85-01-8	
Phenol	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	108-95-2	
Pyrene	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/kg	300	8270C	10/30/06 17:03	ARH	88-06-2	
Organics - Volatiles								
TCL Volatile Organics 5035/8260								
Acetone	Not detected	ug/kg	900	5035/8260B	10/26/06 19:16	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	900	5035/8260B	10/26/06 19:16	JGH	78-93-3	
Benzene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	71-43-2	
Bromodichloromethane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	75-27-4	
Bromoform	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	75-25-2	
Bromomethane	Not detected	ug/kg	300	5035/8260B	10/26/06 19:16	JGH	74-83-9	
Carbon disulfide	Not detected	ug/kg	300	5035/8260B	10/26/06 19:16	JGH	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	108-90-7	
Chloroethane	Not detected	ug/kg	300	5035/8260B	10/26/06 19:16	JGH	75-00-3	
Chloroform	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	67-66-3	
Chloromethane	Not detected	ug/kg	300	5035/8260B	10/26/06 19:16	JGH	74-87-3	
Cyclohexane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	110-82-7	
1,1-Dichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	75-34-3	
1,1-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	106-93-4	
1,2-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	95-50-1	
1,2-Dichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	107-06-2	
1,2-Dichloropropane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	78-87-5	
1,3-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	106-46-7	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	10061-01-5	
Dibromochloromethane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	124-48-1	
Dichlorodifluoromethane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	75-71-8	

Lab Sample ID: S29247.12 (continued)
Sample Tag: SB2-12-04

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 5035/8260 (continued)								
trans-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	10061-02-6	
Ethylbenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	100-41-4	
2-Hexanone	Not detected	ug/kg	3,000	5035/8260B	10/26/06 19:16	JGH	591-78-6	
Isopropylbenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	98-82-8	
Methyl Acetate	Not detected	ug/kg	3,000	5035/8260B	10/26/06 19:16	JGH	79-20-9	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	5035/8260B	10/26/06 19:16	JGH	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	5035/8260B	10/26/06 19:16	JGH	1634-04-4	
Methyl cyclohexane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	108-87-2	
Methylene chloride	Not detected	ug/kg	300	5035/8260B	10/26/06 19:16	JGH	75-09-2	
Styrene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	100-42-5	
1,1,1-Trichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	79-34-5	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	5035/8260B	10/26/06 19:16	JGH	76-13-1	
1,1,2-Trichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	79-00-5	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	5035/8260B	10/26/06 19:16	JGH	120-82-1	
Tetrachloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	108-88-3	
Trichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	5035/8260B	10/26/06 19:16	JGH	75-69-4	
Vinyl chloride	Not detected	ug/kg	100	5035/8260B	10/26/06 19:16	JGH	75-01-4	
o-Xylene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH	95-47-6	
p,m-Xylene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:16	JGH		

Lab Sample ID: S29247.13
Sample Tag: SB2-12-04 MS
Collected Date/Time: 10/24/2006 09:05
Matrix: Soil
COC Reference: 038405

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.7	IR
1	40ml Glass	MeOH	Yes	4.7	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	10/25/06 20:33	EMR		
Extraction, PCB	Completed			3550B	10/26/06 15:51	TAS		
Lead, Coarse Digestion	Completed			3050B	10/26/06 14:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	10/26/06 09:00	JRT		
Lead, Fine Digestion	Completed			3050B	10/26/06 14:00	PER		
Mercury Digestion	Completed			7471A	10/26/06 10:00	JRT		
Metal Digestion	Completed			3050B	10/26/06 12:00	SLS		
Metals								
% Coarse by Weight	86.3	%			10/26/06 09:00	JRT		
% Fine by Weight	13.7	%			10/26/06 09:00	JRT		
Total Solids	86	%	1	160.3	10/26/06 08:30	JRT		
Arsenic	25.5	mg/kg	0.10	6020	10/26/06 14:47	SLS	7440-38-2	
Barium	91.0	mg/kg	1.0	6020	10/26/06 14:47	SLS	7440-39-3	
Cadmium	24.38	mg/kg	0.20	6020	10/26/06 14:47	SLS	7440-43-9	
Chromium	29.3	mg/kg	2.0	6020	10/26/06 14:47	SLS	7440-47-3	
Copper	28.8	mg/kg	1.0	6020	10/26/06 14:47	SLS	7440-50-8	
Lead, Coarse	38.5	mg/kg	1.0	6020	10/26/06 15:15	PER		
Lead, Fine	66.0	mg/kg	1.0	6020	10/26/06 15:38	PER		
Lead, Total Calculated	42.2	mg/kg	1.0	6020	10/26/06 16:00	PER	7439-92-1C	
Mercury	0.119	mg/kg	0.050	7471	10/26/06 15:25	JRT	7439-97-6	
Selenium	25.3	mg/kg	0.20	6020	10/26/06 14:47	SLS	7782-49-2	
Silver	24.79	mg/kg	0.10	6020	10/26/06 14:47	SLS	7440-22-4	
Zinc	35.5	mg/kg	1.0	6020	10/26/06 14:47	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	20	ug/kg	330	8082	10/27/06 10:25	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/27/06 10:25	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/27/06 10:25	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/27/06 10:25	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/27/06 10:25	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/27/06 10:25	JANB	11097-69-1	
PCB-1260	20	ug/kg	330	8082	10/27/06 10:25	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	20	ug/kg	330	8082	10/27/06 10:25	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/27/06 10:25	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/27/06 10:25	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/27/06 10:25	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/27/06 10:25	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/27/06 10:25	JANB	11097-69-1	

Lab Sample ID: S29247.13 (continued)
Sample Tag: SB2-12-04 MS

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - PCBs/Pesticides (continued)								
TCL PCB List (Column 2) (continued)								
PCB-1260	20	ug/kg	330	8082	10/27/06 10:25	JANB	11096-82-5	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	1,600	ug/kg	300	8270C	10/30/06 17:38	ARH	83-32-9	1
Acenaphthylene	1,900	ug/kg	300	8270C	10/30/06 17:38	ARH	208-96-8	1
Acetophenone	1,700	ug/kg	300	8270C	10/30/06 17:38	ARH	98-86-2	1
Anthracene	1,900	ug/kg	300	8270C	10/30/06 17:38	ARH	120-12-7	1
Atrazine	1,700	ug/kg	300	8270C	10/30/06 17:38	ARH	1912-24-9	1
1,1'-Biphenyl	1,500	ug/kg	300	8270C	10/30/06 17:38	ARH	92-52-4	1
4-Bromophenyl phenyl ether	1,900	ug/kg	300	8270C	10/30/06 17:38	ARH	101-55-3	1
di-n-Butyl phthalate	2,000	ug/kg	300	8270C	10/30/06 17:38	ARH	84-74-2	1
Benzaldehyde	1,300	ug/kg	300	8270C	10/30/06 17:38	ARH	100-52-7	1
Benzo(a)anthracene	1,800	ug/kg	300	8270C	10/30/06 17:38	ARH	56-55-3	1
Benzo(a)pyrene	2,600	ug/kg	300	8270C	10/30/06 17:38	ARH	50-32-8	1
Benzo(b)fluoranthene	2,500	ug/kg	300	8270C	10/30/06 17:38	ARH	205-99-2	1
Benzo(ghi)perylene	2,400	ug/kg	300	8270C	10/30/06 17:38	ARH	191-24-2	1
Benzo(k)fluoranthene	2,500	ug/kg	300	8270C	10/30/06 17:38	ARH	207-08-9	1
Butyl benzyl phthalate	1,800	ug/kg	300	8270C	10/30/06 17:38	ARH	85-68-7	1
2-Chloronaphthalene	1,500	ug/kg	300	8270C	10/30/06 17:38	ARH	91-58-7	1
2-Chlorophenol	1,600	ug/kg	300	8270C	10/30/06 17:38	ARH	95-57-8	1
4-Chloro-3-methylphenol	1,800	ug/kg	300	8270C	10/30/06 17:38	ARH	59-50-7	1
4-Chloroaniline	800	ug/kg	700	8270C	10/30/06 17:38	ARH	106-47-8	1
4-Chlorophenyl phenyl ether	1,700	ug/kg	300	8270C	10/30/06 17:38	ARH	7005-72-3	1
Caprolactam	1,600	ug/kg	300	8270C	10/30/06 17:38	ARH	105-60-2	1
Carbazole	2,200	ug/kg	300	8270C	10/30/06 17:38	ARH	86-74-8	1
bis(2-Chloroethoxy)methane	1,900	ug/kg	300	8270C	10/30/06 17:38	ARH	111-91-1	1
bis(2-Chloroethyl)ether	1,600	ug/kg	300	8270C	10/30/06 17:38	ARH	111-44-4	1
bis(2-Chloroisopropyl)ether	1,700	ug/kg	300	8270C	10/30/06 17:38	ARH	108-60-1	1
Chrysene	1,900	ug/kg	300	8270C	10/30/06 17:38	ARH	218-01-9	1
2,4-Dichlorophenol	1,700	ug/kg	300	8270C	10/30/06 17:38	ARH	120-83-2	1
2,4-Dimethylphenol	1,800	ug/kg	300	8270C	10/30/06 17:38	ARH	105-67-9	1
2,4-Dinitrophenol	1,200	ug/kg	700	8270C	10/30/06 17:38	ARH	51-28-5	1
2,4-Dinitrotoluene	1,700	ug/kg	300	8270C	10/30/06 17:38	ARH	121-14-2	1
2,6-Dinitrotoluene	1,600	ug/kg	300	8270C	10/30/06 17:38	ARH	606-20-2	1
3,3'-Dichlorobenzidine	1,600	ug/kg	700	8270C	10/30/06 17:38	ARH	91-94-1	1
4,6-Dinitro-2-methylphenol	1,000	ug/kg	700	8270C	10/30/06 17:38	ARH	534-52-1	1
Dibenzo(ah)anthracene	2,600	ug/kg	300	8270C	10/30/06 17:38	ARH	53-70-3	1
Dibenzofuran	1,600	ug/kg	300	8270C	10/30/06 17:38	ARH	132-64-9	1
Diethyl phthalate	1,500	ug/kg	300	8270C	10/30/06 17:38	ARH	84-66-2	1
Dimethyl phthalate	1,600	ug/kg	300	8270C	10/30/06 17:38	ARH	131-11-3	1
bis(2-Ethylhexyl)phthalate	1,900	ug/kg	300	8270C	10/30/06 17:38	ARH	117-81-7	1
Fluoranthene	1,900	ug/kg	300	8270C	10/30/06 17:38	ARH	206-44-0	1
Fluorene	1,600	ug/kg	300	8270C	10/30/06 17:38	ARH	86-73-7	1
Hexachlorobenzene	1,800	ug/kg	300	8270C	10/30/06 17:38	ARH	118-74-1	1
Hexachlorobutadiene	1,500	ug/kg	300	8270C	10/30/06 17:38	ARH	87-68-3	1
Hexachlorocyclopentadiene	1,800	ug/kg	300	8270C	10/30/06 17:38	ARH	77-47-4	1
Hexachloroethane	1,400	ug/kg	300	8270C	10/30/06 17:38	ARH	67-72-1	1

1-Dry Weight Spike: 1.93 mg/kg

Lab Sample ID: S29247.13 (continued)
Sample Tag: SB2-12-04 MS

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Indeno(1,2,3-cd)pyrene	2,500	ug/kg	300	8270C	10/30/06 17:38	ARH	193-39-5	1
Isophorone	1,700	ug/kg	300	8270C	10/30/06 17:38	ARH	78-59-1	1
2-Methylnaphthalene	1,700	ug/kg	300	8270C	10/30/06 17:38	ARH	91-57-6	1
2-Methylphenol	1,600	ug/kg	300	8270C	10/30/06 17:38	ARH	95-48-7	1
3-, 4-Methylphenol	1,800	ug/kg	300	8270C	10/30/06 17:38	ARH	108-39-4	1
2-Nitroaniline	1,600	ug/kg	700	8270C	10/30/06 17:38	ARH	88-74-4	1
2-Nitrophenol	1,600	ug/kg	300	8270C	10/30/06 17:38	ARH	88-75-5	1
3-Nitroaniline	1,600	ug/kg	700	8270C	10/30/06 17:38	ARH	99-09-2	1
4-Nitroaniline	1,600	ug/kg	700	8270C	10/30/06 17:38	ARH	100-01-6	1
4-Nitrophenol	1,600	ug/kg	700	8270C	10/30/06 17:38	ARH	100-02-7	1
N-Nitrosodi-n-propylamine	1,700	ug/kg	300	8270C	10/30/06 17:38	ARH	621-64-7	1
N-Nitrosodiphenylamine	500	ug/kg	300	8270C	10/30/06 17:38	ARH	86-30-6	1
Naphthalene	1,400	ug/kg	300	8270C	10/30/06 17:38	ARH	91-20-3	1
Nitrobenzene	1,600	ug/kg	200	8270C	10/30/06 17:38	ARH	98-95-3	1
di-n-Octyl phthalate	1,900	ug/kg	300	8270C	10/30/06 17:38	ARH	117-84-0	1
Pentachlorophenol	1,800	ug/kg	700	8270C	10/30/06 17:38	ARH	87-86-5	1
Phenanthrene	1,800	ug/kg	300	8270C	10/30/06 17:38	ARH	85-01-8	1
Phenol	1,700	ug/kg	300	8270C	10/30/06 17:38	ARH	108-95-2	1
Pyrene	1,700	ug/kg	300	8270C	10/30/06 17:38	ARH	129-00-0	1
2,4,5-Trichlorophenol	1,700	ug/kg	300	8270C	10/30/06 17:38	ARH	95-95-4	1
2,4,6-Trichlorophenol	1,500	ug/kg	300	8270C	10/30/06 17:38	ARH	88-06-2	1
Organics - Volatiles								
TCL Volatile Organics 5035/8260								
Acetone	1,900	ug/kg	800	5035/8260B	10/26/06 20:47	JGH	67-64-1	2
2-Butanone (MEK)	2,000	ug/kg	800	5035/8260B	10/26/06 20:47	JGH	78-93-3	2
Benzene	2,520	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	71-43-2	2
Bromodichloromethane	2,410	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	75-27-4	2
Bromoform	2,290	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	75-25-2	2
Bromomethane	600	ug/kg	300	5035/8260B	10/26/06 20:47	JGH	74-83-9	2
Carbon disulfide	2,500	ug/kg	300	5035/8260B	10/26/06 20:47	JGH	75-15-0	2
Carbon tetrachloride	2,380	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	56-23-5	2
Chlorobenzene	2,250	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	108-90-7	2
Chloroethane	900	ug/kg	300	5035/8260B	10/26/06 20:47	JGH	75-00-3	2
Chloroform	2,620	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	67-66-3	2
Chloromethane	2,000	ug/kg	300	5035/8260B	10/26/06 20:47	JGH	74-87-3	2
Cyclohexane	1,260	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	110-82-7	2
1,1-Dichloroethane	2,610	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	75-34-3	2
1,1-Dichloroethene	2,450	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	75-35-4	2
1,2-Dibromo-3-chloropropane	2,250	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	96-12-8	2
1,2-Dibromoethane	2,240	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	106-93-4	2
1,2-Dichlorobenzene	2,340	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	95-50-1	2
1,2-Dichloroethane	2,450	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	107-06-2	2
1,2-Dichloropropane	2,650	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	78-87-5	2
1,3-Dichlorobenzene	2,290	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	541-73-1	2
1,4-Dichlorobenzene	2,450	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	106-46-7	2
cis-1,2-Dichloroethene	2,700	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	156-59-2	2

1-Dry Weight Spike: 1.93 mg/kg
2-Spiked at 2.5mg/kg

Lab Sample ID: S29247.13 (continued)
Sample Tag: SB2-12-04 MS

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 5035/8260 (continued)								
cis-1,3-Dichloropropene	2,370	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	10061-01-5	1
Dibromochloromethane	2,190	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	124-48-1	1
Dichlorodifluoromethane	1,190	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	75-71-8	1
trans-1,2-Dichloroethene	2,530	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	156-60-5	1
trans-1,3-Dichloropropene	2,380	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	10061-02-6	1
Ethylbenzene	2,340	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	100-41-4	1
2-Hexanone	Not detected	ug/kg	3,000	5035/8260B	10/26/06 20:47	JGH	591-78-6	1
Isopropylbenzene	2,380	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	98-82-8	1
Methyl Acetate	Not detected	ug/kg	3,000	5035/8260B	10/26/06 20:47	JGH	79-20-9	1
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	5035/8260B	10/26/06 20:47	JGH	108-10-1	1
tert-Methyl butyl ether (MTBE)	2,700	ug/kg	300	5035/8260B	10/26/06 20:47	JGH	1634-04-4	1
Methyl cyclohexane	2,270	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	108-87-2	1
Methylene chloride	2,600	ug/kg	300	5035/8260B	10/26/06 20:47	JGH	75-09-2	1
Styrene	2,200	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	100-42-5	1
1,1,1-Trichloroethane	2,430	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	71-55-6	1
1,1,2,2-Tetrachloroethane	2,200	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	79-34-5	1
1,1,2-Trichloro-1,2,2-trifluoroethane	2,400	ug/kg	100	5035/8260B	10/26/06 20:47	JGH	76-13-1	1
1,1,2-Trichloroethane	2,430	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	79-00-5	1
1,2,4-Trichlorobenzene	2,200	ug/kg	100	5035/8260B	10/26/06 20:47	JGH	120-82-1	1
Tetrachloroethene	2,470	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	127-18-4	1
Toluene	2,460	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	108-88-3	1
Trichloroethene	2,420	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	79-01-6	1
Trichlorofluoromethane	1,300	ug/kg	100	5035/8260B	10/26/06 20:47	JGH	75-69-4	1
Vinyl chloride	2,300	ug/kg	100	5035/8260B	10/26/06 20:47	JGH	75-01-4	1
o-Xylene	2,310	ug/kg	60	5035/8260B	10/26/06 20:47	JGH	95-47-6	1
p,m-Xylene	4,480	ug/kg	60	5035/8260B	10/26/06 20:47	JGH		1

1-Spiked at 2.5mg/kg

Lab Sample ID: S29247.14
Sample Tag: SB2-12-04 MSD
Collected Date/Time: 10/24/2006 09:05
Matrix: Soil
COC Reference: 038405

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.7	IR
1	40ml Glass	MeOH	Yes	4.7	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	10/25/06 20:33	EMR		
Extraction, PCB	Completed			3550B	10/26/06 15:51	TAS		
Lead, Coarse Digestion	Completed			3050B	10/26/06 14:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	10/26/06 09:00	JRT		
Lead, Fine Digestion	Completed			3050B	10/26/06 14:00	PER		
Mercury Digestion	Completed			7471A	10/26/06 10:00	JRT		
Metal Digestion	Completed			3050B	10/26/06 12:00	SLS		
Metals								
% Coarse by Weight	86.3	%			10/26/06 09:00	JRT		
% Fine by Weight	13.7	%			10/26/06 09:00	JRT		
Total Solids	86	%	1	160.3	10/26/06 08:30	JRT		
Arsenic	25.9	mg/kg	0.10	6020	10/26/06 14:50	SLS	7440-38-2	
Barium	91.3	mg/kg	1.0	6020	10/26/06 14:50	SLS	7440-39-3	
Cadmium	24.48	mg/kg	0.20	6020	10/26/06 14:50	SLS	7440-43-9	
Chromium	29.3	mg/kg	2.0	6020	10/26/06 14:50	SLS	7440-47-3	
Copper	28.9	mg/kg	1.0	6020	10/26/06 14:50	SLS	7440-50-8	
Lead, Coarse	38.8	mg/kg	1.0	6020	10/26/06 15:16	PER		
Lead, Fine	64.8	mg/kg	1.0	6020	10/26/06 15:39	PER		
Lead, Total Calculated	42.3	mg/kg	1.0	6020	10/26/06 16:00	PER	7439-92-1C	
Mercury	0.121	mg/kg	0.050	7471	10/26/06 15:27	JRT	7439-97-6	
Selenium	26.0	mg/kg	0.20	6020	10/26/06 14:50	SLS	7782-49-2	
Silver	24.87	mg/kg	0.10	6020	10/26/06 14:50	SLS	7440-22-4	
Zinc	36.1	mg/kg	1.0	6020	10/26/06 14:50	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	20	ug/kg	330	8082	10/27/06 10:37	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/27/06 10:37	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/27/06 10:37	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/27/06 10:37	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/27/06 10:37	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/27/06 10:37	JANB	11097-69-1	
PCB-1260	20	ug/kg	330	8082	10/27/06 10:37	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	20	ug/kg	330	8082	10/27/06 10:37	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/27/06 10:37	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/27/06 10:37	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/27/06 10:37	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/27/06 10:37	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/27/06 10:37	JANB	11097-69-1	

Lab Sample ID: S29247.14 (continued)
Sample Tag: SB2-12-04 MSD

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - PCBs/Pesticides (continued)								
TCL PCB List (Column 2) (continued)								
PCB-1260	20	ug/kg	330	8082	10/27/06 10:37	JANB	11096-82-5	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	1,800	ug/kg	300	8270C	10/30/06 18:12	ARH	83-32-9	1
Acenaphthylene	2,100	ug/kg	300	8270C	10/30/06 18:12	ARH	208-96-8	1
Acetophenone	1,800	ug/kg	300	8270C	10/30/06 18:12	ARH	98-86-2	1
Anthracene	2,000	ug/kg	300	8270C	10/30/06 18:12	ARH	120-12-7	1
Atrazine	1,800	ug/kg	300	8270C	10/30/06 18:12	ARH	1912-24-9	1
1,1'-Biphenyl	1,600	ug/kg	300	8270C	10/30/06 18:12	ARH	92-52-4	1
4-Bromophenyl phenyl ether	2,000	ug/kg	300	8270C	10/30/06 18:12	ARH	101-55-3	1
di-n-Butyl phthalate	2,100	ug/kg	300	8270C	10/30/06 18:12	ARH	84-74-2	1
Benzaldehyde	1,500	ug/kg	300	8270C	10/30/06 18:12	ARH	100-52-7	1
Benzo(a)anthracene	1,900	ug/kg	300	8270C	10/30/06 18:12	ARH	56-55-3	1
Benzo(a)pyrene	2,800	ug/kg	300	8270C	10/30/06 18:12	ARH	50-32-8	1
Benzo(b)fluoranthene	2,600	ug/kg	300	8270C	10/30/06 18:12	ARH	205-99-2	1
Benzo(ghi)perylene	2,700	ug/kg	300	8270C	10/30/06 18:12	ARH	191-24-2	1
Benzo(k)fluoranthene	2,700	ug/kg	300	8270C	10/30/06 18:12	ARH	207-08-9	1
Butyl benzyl phthalate	1,900	ug/kg	300	8270C	10/30/06 18:12	ARH	85-68-7	1
2-Chloronaphthalene	1,600	ug/kg	300	8270C	10/30/06 18:12	ARH	91-58-7	1
2-Chlorophenol	1,700	ug/kg	300	8270C	10/30/06 18:12	ARH	95-57-8	1
4-Chloro-3-methylphenol	1,900	ug/kg	300	8270C	10/30/06 18:12	ARH	59-50-7	1
4-Chloroaniline	800	ug/kg	700	8270C	10/30/06 18:12	ARH	106-47-8	1
4-Chlorophenyl phenyl ether	1,800	ug/kg	300	8270C	10/30/06 18:12	ARH	7005-72-3	1
Caprolactam	1,700	ug/kg	300	8270C	10/30/06 18:12	ARH	105-60-2	1
Carbazole	2,300	ug/kg	300	8270C	10/30/06 18:12	ARH	86-74-8	1
bis(2-Chloroethoxy)methane	2,000	ug/kg	300	8270C	10/30/06 18:12	ARH	111-91-1	1
bis(2-Chloroethyl)ether	1,800	ug/kg	300	8270C	10/30/06 18:12	ARH	111-44-4	1
bis(2-Chloroisopropyl)ether	1,800	ug/kg	300	8270C	10/30/06 18:12	ARH	108-60-1	1
Chrysene	2,000	ug/kg	300	8270C	10/30/06 18:12	ARH	218-01-9	1
2,4-Dichlorophenol	1,900	ug/kg	300	8270C	10/30/06 18:12	ARH	120-83-2	1
2,4-Dimethylphenol	1,900	ug/kg	300	8270C	10/30/06 18:12	ARH	105-67-9	1
2,4-Dinitrophenol	1,200	ug/kg	700	8270C	10/30/06 18:12	ARH	51-28-5	1
2,4-Dinitrotoluene	1,800	ug/kg	300	8270C	10/30/06 18:12	ARH	121-14-2	1
2,6-Dinitrotoluene	1,800	ug/kg	300	8270C	10/30/06 18:12	ARH	606-20-2	1
3,3'-Dichlorobenzidine	1,800	ug/kg	700	8270C	10/30/06 18:12	ARH	91-94-1	1
4,6-Dinitro-2-methylphenol	1,200	ug/kg	700	8270C	10/30/06 18:12	ARH	534-52-1	1
Dibenzo(ah)anthracene	2,900	ug/kg	300	8270C	10/30/06 18:12	ARH	53-70-3	1
Dibenzofuran	1,700	ug/kg	300	8270C	10/30/06 18:12	ARH	132-64-9	1
Diethyl phthalate	1,700	ug/kg	300	8270C	10/30/06 18:12	ARH	84-66-2	1
Dimethyl phthalate	1,800	ug/kg	300	8270C	10/30/06 18:12	ARH	131-11-3	1
bis(2-Ethylhexyl)phthalate	2,100	ug/kg	300	8270C	10/30/06 18:12	ARH	117-81-7	1
Fluoranthene	2,000	ug/kg	300	8270C	10/30/06 18:12	ARH	206-44-0	1
Fluorene	1,800	ug/kg	300	8270C	10/30/06 18:12	ARH	86-73-7	1
Hexachlorobenzene	1,900	ug/kg	300	8270C	10/30/06 18:12	ARH	118-74-1	1
Hexachlorobutadiene	1,700	ug/kg	300	8270C	10/30/06 18:12	ARH	87-68-3	1
Hexachlorocyclopentadiene	2,200	ug/kg	300	8270C	10/30/06 18:12	ARH	77-47-4	1
Hexachloroethane	1,600	ug/kg	300	8270C	10/30/06 18:12	ARH	67-72-1	1

1-Dry Weight Spike: 1.93 mg/kg

Lab Sample ID: S29247.14 (continued)
Sample Tag: SB2-12-04 MSD

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Indeno(1,2,3-cd)pyrene	2,800	ug/kg	300	8270C	10/30/06 18:12	ARH	193-39-5	1
Isophorone	1,900	ug/kg	300	8270C	10/30/06 18:12	ARH	78-59-1	1
2-Methylnaphthalene	1,800	ug/kg	300	8270C	10/30/06 18:12	ARH	91-57-6	1
2-Methylphenol	1,800	ug/kg	300	8270C	10/30/06 18:12	ARH	95-48-7	1
3-, 4-Methylphenol	1,900	ug/kg	300	8270C	10/30/06 18:12	ARH	108-39-4	1
2-Nitroaniline	1,800	ug/kg	700	8270C	10/30/06 18:12	ARH	88-74-4	1
2-Nitrophenol	1,700	ug/kg	300	8270C	10/30/06 18:12	ARH	88-75-5	1
3-Nitroaniline	1,600	ug/kg	700	8270C	10/30/06 18:12	ARH	99-09-2	1
4-Nitroaniline	1,700	ug/kg	700	8270C	10/30/06 18:12	ARH	100-01-6	1
4-Nitrophenol	1,700	ug/kg	700	8270C	10/30/06 18:12	ARH	100-02-7	1
N-Nitrosodi-n-propylamine	1,800	ug/kg	300	8270C	10/30/06 18:12	ARH	621-64-7	1
N-Nitrosodiphenylamine	600	ug/kg	300	8270C	10/30/06 18:12	ARH	86-30-6	1
Naphthalene	1,600	ug/kg	300	8270C	10/30/06 18:12	ARH	91-20-3	1
Nitrobenzene	1,800	ug/kg	200	8270C	10/30/06 18:12	ARH	98-95-3	1
di-n-Octyl phthalate	2,000	ug/kg	300	8270C	10/30/06 18:12	ARH	117-84-0	1
Pentachlorophenol	1,800	ug/kg	700	8270C	10/30/06 18:12	ARH	87-86-5	1
Phenanthrene	1,900	ug/kg	300	8270C	10/30/06 18:12	ARH	85-01-8	1
Phenol	1,900	ug/kg	300	8270C	10/30/06 18:12	ARH	108-95-2	1
Pyrene	1,900	ug/kg	300	8270C	10/30/06 18:12	ARH	129-00-0	1
2,4,5-Trichlorophenol	1,800	ug/kg	300	8270C	10/30/06 18:12	ARH	95-95-4	1
2,4,6-Trichlorophenol	1,600	ug/kg	300	8270C	10/30/06 18:12	ARH	88-06-2	1
Organics - Volatiles								
TCL Volatile Organics 5035/8260								
Acetone	1,900	ug/kg	800	5035/8260B	10/26/06 21:05	JGH	67-64-1	2
2-Butanone (MEK)	2,000	ug/kg	800	5035/8260B	10/26/06 21:05	JGH	78-93-3	2
Benzene	2,610	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	71-43-2	2
Bromodichloromethane	2,540	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	75-27-4	2
Bromoform	2,330	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	75-25-2	2
Bromomethane	700	ug/kg	300	5035/8260B	10/26/06 21:05	JGH	74-83-9	2
Carbon disulfide	2,600	ug/kg	300	5035/8260B	10/26/06 21:05	JGH	75-15-0	2
Carbon tetrachloride	2,590	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	56-23-5	2
Chlorobenzene	2,310	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	108-90-7	2
Chloroethane	900	ug/kg	300	5035/8260B	10/26/06 21:05	JGH	75-00-3	2
Chloroform	2,700	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	67-66-3	2
Chloromethane	2,100	ug/kg	300	5035/8260B	10/26/06 21:05	JGH	74-87-3	2
Cyclohexane	1,320	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	110-82-7	2
1,1-Dichloroethane	2,720	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	75-34-3	2
1,1-Dichloroethene	2,540	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	75-35-4	2
1,2-Dibromo-3-chloropropane	2,450	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	96-12-8	2
1,2-Dibromoethane	2,240	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	106-93-4	2
1,2-Dichlorobenzene	2,470	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	95-50-1	2
1,2-Dichloroethane	2,550	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	107-06-2	2
1,2-Dichloropropane	2,780	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	78-87-5	2
1,3-Dichlorobenzene	2,410	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	541-73-1	2
1,4-Dichlorobenzene	2,490	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	106-46-7	2
cis-1,2-Dichloroethene	2,860	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	156-59-2	2

1-Dry Weight Spike: 1.93 mg/kg
2-Spiked at 2.5mg/kg

Lab Sample ID: S29247.14 (continued)
Sample Tag: SB2-12-04 MSD

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 5035/8260 (continued)								
cis-1,3-Dichloropropene	2,480	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	10061-01-5	1
Dibromochloromethane	2,290	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	124-48-1	1
Dichlorodifluoromethane	1,170	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	75-71-8	1
trans-1,2-Dichloroethene	2,670	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	156-60-5	1
trans-1,3-Dichloropropene	2,480	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	10061-02-6	1
Ethylbenzene	2,390	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	100-41-4	1
2-Hexanone	Not detected	ug/kg	3,000	5035/8260B	10/26/06 21:05	JGH	591-78-6	1
Isopropylbenzene	2,520	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	98-82-8	1
Methyl Acetate	Not detected	ug/kg	3,000	5035/8260B	10/26/06 21:05	JGH	79-20-9	1
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	5035/8260B	10/26/06 21:05	JGH	108-10-1	1
tert-Methyl butyl ether (MTBE)	2,900	ug/kg	300	5035/8260B	10/26/06 21:05	JGH	1634-04-4	1
Methyl cyclohexane	2,420	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	108-87-2	1
Methylene chloride	2,800	ug/kg	300	5035/8260B	10/26/06 21:05	JGH	75-09-2	1
Styrene	2,270	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	100-42-5	1
1,1,1-Trichloroethane	2,600	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	71-55-6	1
1,1,2,2-Tetrachloroethane	2,300	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	79-34-5	1
1,1,2-Trichloro-1,2,2-trifluoroethane	2,500	ug/kg	100	5035/8260B	10/26/06 21:05	JGH	76-13-1	1
1,1,2-Trichloroethane	2,590	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	79-00-5	1
1,2,4-Trichlorobenzene	2,400	ug/kg	100	5035/8260B	10/26/06 21:05	JGH	120-82-1	1
Tetrachloroethene	2,610	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	127-18-4	1
Toluene	2,570	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	108-88-3	1
Trichloroethene	2,480	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	79-01-6	1
Trichlorofluoromethane	1,300	ug/kg	100	5035/8260B	10/26/06 21:05	JGH	75-69-4	1
Vinyl chloride	2,300	ug/kg	100	5035/8260B	10/26/06 21:05	JGH	75-01-4	1
o-Xylene	2,380	ug/kg	60	5035/8260B	10/26/06 21:05	JGH	95-47-6	1
p,m-Xylene	4,620	ug/kg	60	5035/8260B	10/26/06 21:05	JGH		1

1-Spiked at 2.5mg/kg

Lab Sample ID: S29247.15
Sample Tag: EB-01
Collected Date/Time: 10/24/2006 09:30
Matrix: Liquid
COC Reference: 038405

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	4.7	IR
2	40ml Glass	HCL	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	10/26/06 16:43	DLR		
Extraction, PCB	Completed			3510C	10/27/06 15:07	TAS		
Mercury Digestion	Completed			7470A	10/25/06 09:00	JRT		
Metal Digestion	Completed			3015A	10/27/06 12:00	SLS		
Metals								
Arsenic	Not detected	mg/L	0.001	200.8	10/27/06 12:41	SLS	7440-38-2	
Barium	Not detected	mg/L	0.01	200.8	10/27/06 12:41	SLS	7440-39-3	
Cadmium	Not detected	mg/L	0.0005	200.8	10/27/06 12:41	SLS	7440-43-9	
Chromium	Not detected	mg/L	0.005	200.8	10/27/06 12:41	SLS	7440-47-3	
Copper	Not detected	mg/L	0.004	200.8	10/27/06 12:41	SLS	7440-50-8	
Lead	Not detected	mg/L	0.003	200.8	10/27/06 12:41	SLS	7439-92-1	
Mercury	Not detected	mg/L	0.0002	245.1	10/26/06 14:20	JRT	7439-97-6	
Selenium	Not detected	mg/L	0.005	200.8	10/27/06 12:41	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0002	200.8	10/27/06 12:41	SLS	7440-22-4	
Zinc	Not detected	mg/L	0.005	200.8	10/27/06 12:41	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/L	0.1	8082	10/27/06 15:02	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.1	8082	10/27/06 15:02	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.1	8082	10/27/06 15:02	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	8082	10/27/06 15:02	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.1	8082	10/27/06 15:02	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	8082	10/27/06 15:02	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	8082	10/27/06 15:02	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/L	0.1	8082	10/27/06 15:02	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.1	8082	10/27/06 15:02	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.1	8082	10/27/06 15:02	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	8082	10/27/06 15:02	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.1	8082	10/27/06 15:02	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	8082	10/27/06 15:02	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	8082	10/27/06 15:02	JANB	11096-82-5	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	2	8270C	10/27/06 19:34	ARH	83-32-9	I
Acenaphthylene	Not detected	ug/L	2	8270C	10/27/06 19:34	ARH	208-96-8	I

I-Matrix interference with internal standard

Lab Sample ID: S29247.15 (continued)
Sample Tag: EB-01

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Acetophenone	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	98-86-2	I
Anthracene	Not detected	ug/L	2	8270C	10/27/06 19:34	ARH	120-12-7	I
Atrazine	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	1912-24-9	I
1,1'-Biphenyl	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	92-52-4	I
4-Bromophenyl phenyl ether	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	101-55-3	I
di-n-Butyl phthalate	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	84-74-2	I
Benzaldehyde	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	100-52-7	I
Benzo(a)anthracene	Not detected	ug/L	1	8270C	10/27/06 19:34	ARH	56-55-3	I
Benzo(a)pyrene	Not detected	ug/L	2	8270C	10/27/06 19:34	ARH	50-32-8	I
Benzo(b)fluoranthene	Not detected	ug/L	2	8270C	10/27/06 19:34	ARH	205-99-2	I
Benzo(ghi)perylene	Not detected	ug/L	2	8270C	10/27/06 19:34	ARH	191-24-2	I
Benzo(k)fluoranthene	Not detected	ug/L	2	8270C	10/27/06 19:34	ARH	207-08-9	I
Butyl benzyl phthalate	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	85-68-7	I
2-Chloronaphthalene	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	91-58-7	I
2-Chlorophenol	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	95-57-8	I
4-Chloro-3-methylphenol	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	59-50-7	I
4-Chloroaniline	Not detected	ug/L	20	8270C	10/27/06 19:34	ARH	106-47-8	I
4-Chlorophenyl phenyl ether	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	7005-72-3	I
Caprolactam	Not detected	ug/L	10	8270C	10/27/06 19:34	ARH	105-60-2	I
Carbazole	Not detected	ug/L	10	8270C	10/27/06 19:34	ARH	86-74-8	I
bis(2-Chloroethoxy)methane	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	111-91-1	I
bis(2-Chloroethyl)ether	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	111-44-4	I
bis(2-Chloroisopropyl)ether	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	108-60-1	I
Chrysene	Not detected	ug/L	2	8270C	10/27/06 19:34	ARH	218-01-9	I
2,4-Dichlorophenol	Not detected	ug/L	10	8270C	10/27/06 19:34	ARH	120-83-2	I
2,4-Dimethylphenol	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	105-67-9	I
2,4-Dinitrophenol	Not detected	ug/L	20	8270C	10/27/06 19:34	ARH	51-28-5	I
2,4-Dinitrotoluene	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	121-14-2	I
2,6-Dinitrotoluene	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	606-20-2	I
3,3'-Dichlorobenzidine	Not detected	ug/L	20	8270C	10/27/06 19:34	ARH	91-94-1	I
4,6-Dinitro-2-methylphenol	Not detected	ug/L	20	8270C	10/27/06 19:34	ARH	534-52-1	I
Dibenzo(ah)anthracene	Not detected	ug/L	2	8270C	10/27/06 19:34	ARH	53-70-3	I
Dibenzofuran	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	132-64-9	I
Diethyl phthalate	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	84-66-2	I
Dimethyl phthalate	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	131-11-3	I
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	117-81-7	I
Fluoranthene	Not detected	ug/L	2	8270C	10/27/06 19:34	ARH	206-44-0	I
Fluorene	Not detected	ug/L	2	8270C	10/27/06 19:34	ARH	86-73-7	I
Hexachlorobenzene	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	118-74-1	I
Hexachlorobutadiene	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	87-68-3	I
Hexachlorocyclopentadiene	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	77-47-4	I
Hexachloroethane	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	67-72-1	I
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	2	8270C	10/27/06 19:34	ARH	193-39-5	I
Isophorone	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	78-59-1	I
2-Methylnaphthalene	Not detected	ug/L	2	8270C	10/27/06 19:34	ARH	91-57-6	I
2-Methylphenol	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	95-48-7	I
3-, 4-Methylphenol	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	108-39-4	I
2-Nitroaniline	Not detected	ug/L	20	8270C	10/27/06 19:34	ARH	88-74-4	I

I-Matrix interference with internal standard

Lab Sample ID: S29247.15 (continued)
Sample Tag: EB-01

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Nitrophenol	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	88-75-5	I
3-Nitroaniline	Not detected	ug/L	20	8270C	10/27/06 19:34	ARH	99-09-2	I
4-Nitroaniline	Not detected	ug/L	20	8270C	10/27/06 19:34	ARH	100-01-6	I
4-Nitrophenol	Not detected	ug/L	20	8270C	10/27/06 19:34	ARH	100-02-7	I
N-Nitrosodi-n-propylamine	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	621-64-7	I
N-Nitrosodiphenylamine	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	86-30-6	I
Naphthalene	Not detected	ug/L	2	8270C	10/27/06 19:34	ARH	91-20-3	I
Nitrobenzene	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	98-95-3	I
di-n-Octyl phthalate	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	117-84-0	I
Pentachlorophenol	Not detected	ug/L	20	8270C	10/27/06 19:34	ARH	87-86-5	I
Phenanthrene	Not detected	ug/L	2	8270C	10/27/06 19:34	ARH	85-01-8	I
Phenol	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	108-95-2	I
Pyrene	Not detected	ug/L	2	8270C	10/27/06 19:34	ARH	129-00-0	I
2,4,5-Trichlorophenol	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	95-95-4	I
2,4,6-Trichlorophenol	Not detected	ug/L	5	8270C	10/27/06 19:34	ARH	88-06-2	I
TCL Semi-Volatile Organics (Replicate 01)								
Acenaphthene	Not detected	ug/L	2	8270C	10/31/06 16:18	ARH	83-32-9	
Acenaphthylene	Not detected	ug/L	2	8270C	10/31/06 16:18	ARH	208-96-8	
Acetophenone	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	98-86-2	
Anthracene	Not detected	ug/L	2	8270C	10/31/06 16:18	ARH	120-12-7	
Atrazine	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	84-74-2	
Benzaldehyde	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	8270C	10/31/06 16:18	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	2	8270C	10/31/06 16:18	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	2	8270C	10/31/06 16:18	ARH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	2	8270C	10/31/06 16:18	ARH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	2	8270C	10/31/06 16:18	ARH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	91-58-7	
2-Chlorophenol	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	59-50-7	
4-Chloroaniline	Not detected	ug/L	20	8270C	10/31/06 16:18	ARH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	7005-72-3	
Caprolactam	Not detected	ug/L	10	8270C	10/31/06 16:18	ARH	105-60-2	
Carbazole	Not detected	ug/L	10	8270C	10/31/06 16:18	ARH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	108-60-1	
Chrysene	Not detected	ug/L	2	8270C	10/31/06 16:18	ARH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	10	8270C	10/31/06 16:18	ARH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	20	8270C	10/31/06 16:18	ARH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	606-20-2	

I-Matrix interference with internal standard

Lab Sample ID: S29247.15 (continued)
Sample Tag: EB-01

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (Replicate 01) (continued)								
3,3'-Dichlorobenzidine	Not detected	ug/L	20	8270C	10/31/06 16:18	ARH	91-94-1	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	20	8270C	10/31/06 16:18	ARH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	8270C	10/31/06 16:18	ARH	53-70-3	
Dibenzofuran	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	132-64-9	
Diethyl phthalate	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	84-66-2	
Dimethyl phthalate	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	117-81-7	
Fluoranthene	Not detected	ug/L	2	8270C	10/31/06 16:18	ARH	206-44-0	
Fluorene	Not detected	ug/L	2	8270C	10/31/06 16:18	ARH	86-73-7	
Hexachlorobenzene	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	118-74-1	
Hexachlorobutadiene	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	77-47-4	
Hexachloroethane	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	2	8270C	10/31/06 16:18	ARH	193-39-5	
Isophorone	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	2	8270C	10/31/06 16:18	ARH	91-57-6	
2-Methylphenol	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	108-39-4	
2-Nitroaniline	Not detected	ug/L	20	8270C	10/31/06 16:18	ARH	88-74-4	
2-Nitrophenol	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	88-75-5	
3-Nitroaniline	Not detected	ug/L	20	8270C	10/31/06 16:18	ARH	99-09-2	
4-Nitroaniline	Not detected	ug/L	20	8270C	10/31/06 16:18	ARH	100-01-6	
4-Nitrophenol	Not detected	ug/L	20	8270C	10/31/06 16:18	ARH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	86-30-6	
Naphthalene	Not detected	ug/L	2	8270C	10/31/06 16:18	ARH	91-20-3	
Nitrobenzene	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	117-84-0	
Pentachlorophenol	Not detected	ug/L	20	8270C	10/31/06 16:18	ARH	87-86-5	
Phenanthrene	Not detected	ug/L	2	8270C	10/31/06 16:18	ARH	85-01-8	
Phenol	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	108-95-2	
Pyrene	Not detected	ug/L	2	8270C	10/31/06 16:18	ARH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	5	8270C	10/31/06 16:18	ARH	88-06-2	
Organics - Volatiles								
TCL Volatile Organics 8260								
Acetone	Not detected	ug/L	20	8260B	10/31/06 17:49	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/L	20	8260B	10/31/06 17:49	JGH	78-93-3	
Benzene	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	71-43-2	
Bromodichloromethane	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	75-27-4	
Bromoform	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	75-25-2	
Bromomethane	Not detected	ug/L	2	8260B	10/31/06 17:49	JGH	74-83-9	
Carbon disulfide	Not detected	ug/L	5	8260B	10/31/06 17:49	JGH	75-15-0	
Carbon tetrachloride	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	56-23-5	
Chlorobenzene	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	108-90-7	
Chloroethane	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	75-00-3	
Chloroform	4	ug/L	1	8260B	10/31/06 17:49	JGH	67-66-3	
Chloromethane	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	74-87-3	

Lab Sample ID: S29247.15 (continued)
Sample Tag: EB-01

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Cyclohexane	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	110-82-7	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	75-34-3	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	106-93-4	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	95-50-1	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	107-06-2	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	78-87-5	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	106-46-7	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	10061-01-5	
Dibromochloromethane	3	ug/L	1	8260B	10/31/06 17:49	JGH	124-48-1	
Dichlorodifluoromethane	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	75-71-8	
trans-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	10061-02-6	
Ethylbenzene	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	100-41-4	
2-Hexanone	Not detected	ug/L	50	8260B	10/31/06 17:49	JGH	591-78-6	
Isopropylbenzene	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	98-82-8	
Methyl Acetate	Not detected	ug/L	10	8260B	10/31/06 17:49	JGH	79-20-9	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	8260B	10/31/06 17:49	JGH	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	8260B	10/31/06 17:49	JGH	1634-04-4	
Methyl cyclohexane	Not detected	ug/L	20	8260B	10/31/06 17:49	JGH	108-87-2	
Methylene chloride	Not detected	ug/L	5	8260B	10/31/06 17:49	JGH	75-09-2	
Styrene	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	100-42-5	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	79-34-5	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	30	8260B	10/31/06 17:49	JGH	76-13-1	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	79-00-5	
1,2,4-Trichlorobenzene	Not detected	ug/L	2	8260B	10/31/06 17:49	JGH	120-82-1	
Tetrachloroethene	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	127-18-4	
Toluene	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	108-88-3	
Trichloroethene	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	75-69-4	
Vinyl chloride	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	75-01-4	
o-Xylene	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH	95-47-6	
p,m-Xylene	Not detected	ug/L	1	8260B	10/31/06 17:49	JGH		

Lab Sample ID: S29247.17
Sample Tag: SS2-01
Collected Date/Time: 10/24/2006 10:40
Matrix: Soil
COC Reference: 038405

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.7	IR
1	40ml Glass	MeOH	Yes	4.7	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	10/25/06 20:33	EMR		
Extraction, PCB	Completed			3550B	10/26/06 15:51	TAS		
Lead, Coarse Digestion	Completed			3050B	10/26/06 14:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	10/26/06 09:00	JRT		
Lead, Fine Digestion	Completed			3050B	10/26/06 14:00	PER		
Mercury Digestion	Completed			7471A	10/26/06 10:00	JRT		
Metal Digestion	Completed			3050B	10/26/06 12:00	SLS		
Metals								
% Coarse by Weight	83.8	%			10/26/06 09:00	JRT		
% Fine by Weight	16.2	%			10/26/06 09:00	JRT		
Total Solids	91	%	1	160.3	10/26/06 08:30	JRT		
Arsenic	1.26	mg/kg	0.10	6020	10/26/06 15:16	SLS	7440-38-2	
Barium	16.2	mg/kg	1.0	6020	10/26/06 15:16	SLS	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	10/26/06 15:16	SLS	7440-43-9	
Chromium	4.5	mg/kg	2.0	6020	10/26/06 15:16	SLS	7440-47-3	
Copper	5.6	mg/kg	1.0	6020	10/26/06 15:16	SLS	7440-50-8	
Lead, Coarse	10.5	mg/kg	1.0	6020	10/26/06 15:17	PER		
Lead, Fine	15.1	mg/kg	1.0	6020	10/26/06 15:40	PER		
Lead, Total Calculated	11.2	mg/kg	1.0	6020	10/26/06 16:00	PER	7439-92-1C	
Mercury	0.101	mg/kg	0.050	7471	10/26/06 15:42	JRT	7439-97-6	
Selenium	0.40	mg/kg	0.20	6020	10/26/06 15:16	SLS	7782-49-2	
Silver	Not detected	mg/kg	0.10	6020	10/26/06 15:16	SLS	7440-22-4	
Zinc	22.7	mg/kg	1.0	6020	10/26/06 15:16	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	10/27/06 14:26	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/27/06 14:26	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/27/06 14:26	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/27/06 14:26	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/27/06 14:26	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/27/06 14:26	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	10/27/06 14:26	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	10/27/06 14:26	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/27/06 14:26	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/27/06 14:26	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/27/06 14:26	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/27/06 14:26	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/27/06 14:26	JANB	11097-69-1	

Lab Sample ID: S29247.17 (continued)
Sample Tag: SS2-01

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - PCBs/Pesticides (continued)								
TCL PCB List (Column 2) (continued)								
PCB-1260	Not detected	ug/kg	330	8082	10/27/06 14:26	JANB	11096-82-5	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	83-32-9	I
Acenaphthylene	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	208-96-8	I
Acetophenone	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	98-86-2	I
Anthracene	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	120-12-7	I
Atrazine	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	1912-24-9	I
1,1'-Biphenyl	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	92-52-4	I
4-Bromophenyl phenyl ether	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	101-55-3	I
di-n-Butyl phthalate	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	84-74-2	I
Benzaldehyde	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	100-52-7	I
Benzo(a)anthracene	370	ug/kg	330	8270C	10/28/06 00:48	ARH	56-55-3	I
Benzo(a)pyrene	560	ug/kg	330	8270C	10/28/06 00:48	ARH	50-32-8	I
Benzo(b)fluoranthene	560	ug/kg	330	8270C	10/28/06 00:48	ARH	205-99-2	I
Benzo(ghi)perylene	360	ug/kg	330	8270C	10/28/06 00:48	ARH	191-24-2	I
Benzo(k)fluoranthene	420	ug/kg	330	8270C	10/28/06 00:48	ARH	207-08-9	I
Butyl benzyl phthalate	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	85-68-7	I
2-Chloronaphthalene	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	91-58-7	I
2-Chlorophenol	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	95-57-8	I
4-Chloro-3-methylphenol	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	59-50-7	I
4-Chloroaniline	Not detected	ug/kg	670	8270C	10/28/06 00:48	ARH	106-47-8	I
4-Chlorophenyl phenyl ether	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	7005-72-3	I
Caprolactam	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	105-60-2	I
Carbazole	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	86-74-8	I
bis(2-Chloroethoxy)methane	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	111-91-1	I
bis(2-Chloroethyl)ether	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	111-44-4	I
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	108-60-1	I
Chrysene	440	ug/kg	330	8270C	10/28/06 00:48	ARH	218-01-9	I
2,4-Dichlorophenol	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	120-83-2	I
2,4-Dimethylphenol	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	105-67-9	I
2,4-Dinitrophenol	Not detected	ug/kg	670	8270C	10/28/06 00:48	ARH	51-28-5	I
2,4-Dinitrotoluene	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	121-14-2	I
2,6-Dinitrotoluene	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	606-20-2	I
3,3'-Dichlorobenzidine	Not detected	ug/kg	670	8270C	10/28/06 00:48	ARH	91-94-1	I
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	670	8270C	10/28/06 00:48	ARH	534-52-1	I
Dibenzo(ah)anthracene	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	53-70-3	I
Dibenzofuran	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	132-64-9	I
Diethyl phthalate	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	84-66-2	I
Dimethyl phthalate	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	131-11-3	I
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	117-81-7	I
Fluoranthene	800	ug/kg	330	8270C	10/28/06 00:48	ARH	206-44-0	I
Fluorene	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	86-73-7	I
Hexachlorobenzene	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	118-74-1	I
Hexachlorobutadiene	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	87-68-3	I
Hexachlorocyclopentadiene	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	77-47-4	I
Hexachloroethane	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	67-72-1	I

I-Matrix interference with internal standard

Lab Sample ID: S29247.17 (continued)
Sample Tag: SS2-01

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	193-39-5	I
Isophorone	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	78-59-1	I
2-Methylnaphthalene	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	91-57-6	I
2-Methylphenol	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	95-48-7	I
3-, 4-Methylphenol	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	108-39-4	I
2-Nitroaniline	Not detected	ug/kg	670	8270C	10/28/06 00:48	ARH	88-74-4	I
2-Nitrophenol	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	88-75-5	I
3-Nitroaniline	Not detected	ug/kg	670	8270C	10/28/06 00:48	ARH	99-09-2	I
4-Nitroaniline	Not detected	ug/kg	670	8270C	10/28/06 00:48	ARH	100-01-6	I
4-Nitrophenol	Not detected	ug/kg	670	8270C	10/28/06 00:48	ARH	100-02-7	I
N-Nitrosodi-n-propylamine	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	621-64-7	I
N-Nitrosodiphenylamine	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	86-30-6	I
Naphthalene	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	91-20-3	I
Nitrobenzene	Not detected	ug/kg	200	8270C	10/28/06 00:48	ARH	98-95-3	I
di-n-Octyl phthalate	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	117-84-0	I
Pentachlorophenol	Not detected	ug/kg	670	8270C	10/28/06 00:48	ARH	87-86-5	I
Phenanthrene	390	ug/kg	330	8270C	10/28/06 00:48	ARH	85-01-8	I
Phenol	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	108-95-2	I
Pyrene	640	ug/kg	330	8270C	10/28/06 00:48	ARH	129-00-0	I
2,4,5-Trichlorophenol	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	95-95-4	I
2,4,6-Trichlorophenol	Not detected	ug/kg	330	8270C	10/28/06 00:48	ARH	88-06-2	I
TCL Semi-Volatile Organics (Replicate 01)								
Acenaphthene	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	83-32-9	I
Acenaphthylene	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	208-96-8	I
Acetophenone	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	98-86-2	I
Anthracene	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	120-12-7	I
Atrazine	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	1912-24-9	I
1,1'-Biphenyl	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	92-52-4	I
4-Bromophenyl phenyl ether	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	101-55-3	I
di-n-Butyl phthalate	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	84-74-2	I
Benzaldehyde	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	100-52-7	I
Benzo(a)anthracene	380	ug/kg	330	8270C	10/31/06 18:02	ARH	56-55-3	I
Benzo(a)pyrene	600	ug/kg	330	8270C	10/31/06 18:02	ARH	50-32-8	I
Benzo(b)fluoranthene	550	ug/kg	330	8270C	10/31/06 18:02	ARH	205-99-2	I
Benzo(ghi)perylene	410	ug/kg	330	8270C	10/31/06 18:02	ARH	191-24-2	I
Benzo(k)fluoranthene	500	ug/kg	330	8270C	10/31/06 18:02	ARH	207-08-9	I
Butyl benzyl phthalate	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	85-68-7	I
2-Chloronaphthalene	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	91-58-7	I
2-Chlorophenol	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	95-57-8	I
4-Chloro-3-methylphenol	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	59-50-7	I
4-Chloroaniline	Not detected	ug/kg	670	8270C	10/31/06 18:02	ARH	106-47-8	I
4-Chlorophenyl phenyl ether	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	7005-72-3	I
Caprolactam	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	105-60-2	I
Carbazole	370	ug/kg	330	8270C	10/31/06 18:02	ARH	86-74-8	I
bis(2-Chloroethoxy)methane	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	111-91-1	I
bis(2-Chloroethyl)ether	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	111-44-4	I
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	108-60-1	I

I-Matrix interference with internal standard

Lab Sample ID: S29247.17 (continued)
Sample Tag: SS2-01

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (Replicate 01) (continued)								
Chrysene	420	ug/kg	330	8270C	10/31/06 18:02	ARH	218-01-9	I
2,4-Dichlorophenol	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	120-83-2	I
2,4-Dimethylphenol	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	105-67-9	I
2,4-Dinitrophenol	Not detected	ug/kg	670	8270C	10/31/06 18:02	ARH	51-28-5	I
2,4-Dinitrotoluene	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	121-14-2	I
2,6-Dinitrotoluene	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	606-20-2	I
3,3'-Dichlorobenzidine	Not detected	ug/kg	670	8270C	10/31/06 18:02	ARH	91-94-1	I
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	670	8270C	10/31/06 18:02	ARH	534-52-1	I
Dibenzo(ah)anthracene	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	53-70-3	I
Dibenzofuran	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	132-64-9	I
Diethyl phthalate	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	84-66-2	I
Dimethyl phthalate	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	131-11-3	I
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	117-81-7	I
Fluoranthene	790	ug/kg	330	8270C	10/31/06 18:02	ARH	206-44-0	I
Fluorene	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	86-73-7	I
Hexachlorobenzene	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	118-74-1	I
Hexachlorobutadiene	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	87-68-3	I
Hexachlorocyclopentadiene	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	77-47-4	I
Hexachloroethane	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	67-72-1	I
Indeno(1,2,3-cd)pyrene	370	ug/kg	330	8270C	10/31/06 18:02	ARH	193-39-5	I
Isophorone	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	78-59-1	I
2-Methylnaphthalene	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	91-57-6	I
2-Methylphenol	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	95-48-7	I
3-, 4-Methylphenol	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	108-39-4	I
2-Nitroaniline	Not detected	ug/kg	670	8270C	10/31/06 18:02	ARH	88-74-4	I
2-Nitrophenol	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	88-75-5	I
3-Nitroaniline	Not detected	ug/kg	670	8270C	10/31/06 18:02	ARH	99-09-2	I
4-Nitroaniline	Not detected	ug/kg	670	8270C	10/31/06 18:02	ARH	100-01-6	I
4-Nitrophenol	Not detected	ug/kg	670	8270C	10/31/06 18:02	ARH	100-02-7	I
N-Nitrosodi-n-propylamine	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	621-64-7	I
N-Nitrosodiphenylamine	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	86-30-6	I
Naphthalene	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	91-20-3	I
Nitrobenzene	Not detected	ug/kg	200	8270C	10/31/06 18:02	ARH	98-95-3	I
di-n-Octyl phthalate	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	117-84-0	I
Pentachlorophenol	Not detected	ug/kg	670	8270C	10/31/06 18:02	ARH	87-86-5	I
Phenanthrene	380	ug/kg	330	8270C	10/31/06 18:02	ARH	85-01-8	I
Phenol	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	108-95-2	I
Pyrene	600	ug/kg	330	8270C	10/31/06 18:02	ARH	129-00-0	I
2,4,5-Trichlorophenol	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	95-95-4	I
2,4,6-Trichlorophenol	Not detected	ug/kg	330	8270C	10/31/06 18:02	ARH	88-06-2	I
Organics - Volatiles								
TCL Volatile Organics 5035/8260								
Acetone	Not detected	ug/kg	800	5035/8260B	10/26/06 19:34	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	800	5035/8260B	10/26/06 19:34	JGH	78-93-3	
Benzene	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	71-43-2	
Bromodichloromethane	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	75-27-4	
Bromoform	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	75-25-2	

I-Matrix interference with internal standard

Lab Sample ID: S29247.17 (continued)
Sample Tag: SS2-01

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 5035/8260 (continued)								
Bromomethane	Not detected	ug/kg	300	5035/8260B	10/26/06 19:34	JGH	74-83-9	
Carbon disulfide	Not detected	ug/kg	300	5035/8260B	10/26/06 19:34	JGH	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	108-90-7	
Chloroethane	Not detected	ug/kg	300	5035/8260B	10/26/06 19:34	JGH	75-00-3	
Chloroform	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	67-66-3	
Chloromethane	Not detected	ug/kg	300	5035/8260B	10/26/06 19:34	JGH	74-87-3	
Cyclohexane	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	110-82-7	
1,1-Dichloroethane	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	75-34-3	
1,1-Dichloroethene	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	106-93-4	
1,2-Dichlorobenzene	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	95-50-1	
1,2-Dichloroethane	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	107-06-2	
1,2-Dichloropropane	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	78-87-5	
1,3-Dichlorobenzene	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	106-46-7	
cis-1,2-Dichloroethene	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	10061-01-5	
Dibromochloromethane	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	124-48-1	
Dichlorodifluoromethane	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	75-71-8	
trans-1,2-Dichloroethene	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	10061-02-6	
Ethylbenzene	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	100-41-4	
2-Hexanone	Not detected	ug/kg	3,000	5035/8260B	10/26/06 19:34	JGH	591-78-6	
Isopropylbenzene	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	98-82-8	
Methyl Acetate	Not detected	ug/kg	3,000	5035/8260B	10/26/06 19:34	JGH	79-20-9	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	5035/8260B	10/26/06 19:34	JGH	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	5035/8260B	10/26/06 19:34	JGH	1634-04-4	
Methyl cyclohexane	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	108-87-2	
Methylene chloride	Not detected	ug/kg	300	5035/8260B	10/26/06 19:34	JGH	75-09-2	
Styrene	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	100-42-5	
1,1,1-Trichloroethane	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	79-34-5	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	5035/8260B	10/26/06 19:34	JGH	76-13-1	
1,1,2-Trichloroethane	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	79-00-5	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	5035/8260B	10/26/06 19:34	JGH	120-82-1	
Tetrachloroethene	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	127-18-4	
Toluene	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	108-88-3	
Trichloroethene	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	5035/8260B	10/26/06 19:34	JGH	75-69-4	
Vinyl chloride	Not detected	ug/kg	100	5035/8260B	10/26/06 19:34	JGH	75-01-4	
o-Xylene	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH	95-47-6	
p,m-Xylene	Not detected	ug/kg	50	5035/8260B	10/26/06 19:34	JGH		

Lab Sample ID: S29247.18
Sample Tag: SS2-02
Collected Date/Time: 10/24/2006 10:45
Matrix: Soil
COC Reference: 038405

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.7	IR
1	40ml Glass	MeOH	Yes	4.7	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	10/25/06 20:33	EMR		
Extraction, PCB	Completed			3550B	10/26/06 15:51	TAS		
Lead, Coarse Digestion	Completed			3050B	10/26/06 14:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	10/26/06 09:00	JRT		
Lead, Fine Digestion	Completed			3050B	10/26/06 14:00	PER		
Mercury Digestion	Completed			7471A	10/26/06 10:00	JRT		
Metal Digestion	Completed			3050B	10/26/06 12:00	SLS		
Metals								
% Coarse by Weight	80.1	%			10/26/06 09:00	JRT		
% Fine by Weight	19.9	%			10/26/06 09:00	JRT		
Total Solids	85	%	1	160.3	10/26/06 08:30	JRT		
Arsenic	2.33	mg/kg	0.10	6020	10/26/06 15:19	SLS	7440-38-2	
Barium	30.6	mg/kg	1.0	6020	10/26/06 15:19	SLS	7440-39-3	
Cadmium	1.36	mg/kg	0.20	6020	10/26/06 15:19	SLS	7440-43-9	
Chromium	9.3	mg/kg	2.0	6020	10/26/06 15:19	SLS	7440-47-3	
Copper	24.8	mg/kg	1.0	6020	10/26/06 15:19	SLS	7440-50-8	
Lead, Coarse	28.0	mg/kg	1.0	6020	10/26/06 15:18	PER		
Lead, Fine	45.1	mg/kg	1.0	6020	10/26/06 15:41	PER		
Lead, Total Calculated	31.4	mg/kg	1.0	6020	10/26/06 16:00	PER	7439-92-1C	
Mercury	Not detected	mg/kg	0.050	7471	10/26/06 15:44	JRT	7439-97-6	
Selenium	0.71	mg/kg	0.20	6020	10/26/06 15:19	SLS	7782-49-2	
Silver	Not detected	mg/kg	0.10	6020	10/26/06 15:19	SLS	7440-22-4	
Zinc	117	mg/kg	1.0	6020	10/26/06 15:19	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	10/27/06 14:14	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/27/06 14:14	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/27/06 14:14	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/27/06 14:14	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/27/06 14:14	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/27/06 14:14	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	10/27/06 14:14	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	10/27/06 14:14	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/27/06 14:14	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/27/06 14:14	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/27/06 14:14	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/27/06 14:14	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/27/06 14:14	JANB	11097-69-1	

Lab Sample ID: S29247.18 (continued)
Sample Tag: SS2-02

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - PCBs/Pesticides (continued)								
TCL PCB List (Column 2) (continued)								
PCB-1260	Not detected	ug/kg	330	8082	10/27/06 14:14	JANB	11096-82-5	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	208-96-8	
Acetophenone	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	98-86-2	
Anthracene	600	ug/kg	300	8270C	10/31/06 01:50	ARH	120-12-7	
Atrazine	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	84-74-2	
Benzaldehyde	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	100-52-7	
Benzo(a)anthracene	1,600	ug/kg	300	8270C	10/31/06 01:50	ARH	56-55-3	
Benzo(a)pyrene	2,400	ug/kg	300	8270C	10/31/06 01:50	ARH	50-32-8	
Benzo(b)fluoranthene	2,400	ug/kg	300	8270C	10/31/06 01:50	ARH	205-99-2	
Benzo(ghi)perylene	1,700	ug/kg	300	8270C	10/31/06 01:50	ARH	191-24-2	
Benzo(k)fluoranthene	1,700	ug/kg	300	8270C	10/31/06 01:50	ARH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	85-68-7	
2-Chloronaphthalene	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	91-58-7	
2-Chlorophenol	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	59-50-7	
4-Chloroaniline	Not detected	ug/kg	700	8270C	10/31/06 01:50	ARH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	7005-72-3	
Caprolactam	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	105-60-2	
Carbazole	1,000	ug/kg	300	8270C	10/31/06 01:50	ARH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	108-60-1	
Chrysene	1,900	ug/kg	300	8270C	10/31/06 01:50	ARH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/kg	700	8270C	10/31/06 01:50	ARH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	606-20-2	
3,3'-Dichlorobenzidine	Not detected	ug/kg	700	8270C	10/31/06 01:50	ARH	91-94-1	
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	700	8270C	10/31/06 01:50	ARH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	53-70-3	
Dibenzofuran	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	132-64-9	
Diethyl phthalate	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	84-66-2	
Dimethyl phthalate	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	117-81-7	
Fluoranthene	3,600	ug/kg	300	8270C	10/31/06 01:50	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	86-73-7	
Hexachlorobenzene	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	118-74-1	
Hexachlorobutadiene	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	77-47-4	
Hexachloroethane	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	67-72-1	
Indeno(1,2,3-cd)pyrene	1,500	ug/kg	300	8270C	10/31/06 01:50	ARH	193-39-5	

Lab Sample ID: S29247.18 (continued)
Sample Tag: SS2-02

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Isophorone	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	78-59-1	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	91-57-6	
2-Methylphenol	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	108-39-4	
2-Nitroaniline	Not detected	ug/kg	700	8270C	10/31/06 01:50	ARH	88-74-4	
2-Nitrophenol	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	88-75-5	
3-Nitroaniline	Not detected	ug/kg	700	8270C	10/31/06 01:50	ARH	99-09-2	
4-Nitroaniline	Not detected	ug/kg	700	8270C	10/31/06 01:50	ARH	100-01-6	
4-Nitrophenol	Not detected	ug/kg	700	8270C	10/31/06 01:50	ARH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	86-30-6	
Naphthalene	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	91-20-3	
Nitrobenzene	Not detected	ug/kg	200	8270C	10/31/06 01:50	ARH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	117-84-0	
Pentachlorophenol	Not detected	ug/kg	700	8270C	10/31/06 01:50	ARH	87-86-5	
Phenanthrene	2,000	ug/kg	300	8270C	10/31/06 01:50	ARH	85-01-8	
Phenol	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	108-95-2	
Pyrene	2,600	ug/kg	300	8270C	10/31/06 01:50	ARH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/kg	300	8270C	10/31/06 01:50	ARH	88-06-2	
Organics - Volatiles								
TCL Volatile Organics 5035/8260								
Acetone	Not detected	ug/kg	800	5035/8260B	10/26/06 19:52	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	800	5035/8260B	10/26/06 19:52	JGH	78-93-3	
Benzene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	71-43-2	
Bromodichloromethane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	75-27-4	
Bromoform	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	75-25-2	
Bromomethane	Not detected	ug/kg	300	5035/8260B	10/26/06 19:52	JGH	74-83-9	
Carbon disulfide	Not detected	ug/kg	300	5035/8260B	10/26/06 19:52	JGH	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	108-90-7	
Chloroethane	Not detected	ug/kg	300	5035/8260B	10/26/06 19:52	JGH	75-00-3	
Chloroform	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	67-66-3	
Chloromethane	Not detected	ug/kg	300	5035/8260B	10/26/06 19:52	JGH	74-87-3	
Cyclohexane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	110-82-7	
1,1-Dichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	75-34-3	
1,1-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	106-93-4	
1,2-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	95-50-1	
1,2-Dichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	107-06-2	
1,2-Dichloropropane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	78-87-5	
1,3-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	106-46-7	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	10061-01-5	
Dibromochloromethane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	124-48-1	
Dichlorodifluoromethane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	75-71-8	

Lab Sample ID: S29247.18 (continued)
Sample Tag: SS2-02

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 5035/8260 (continued)								
trans-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	10061-02-6	
Ethylbenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	100-41-4	
2-Hexanone	Not detected	ug/kg	3,000	5035/8260B	10/26/06 19:52	JGH	591-78-6	
Isopropylbenzene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	98-82-8	
Methyl Acetate	Not detected	ug/kg	3,000	5035/8260B	10/26/06 19:52	JGH	79-20-9	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	5035/8260B	10/26/06 19:52	JGH	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	5035/8260B	10/26/06 19:52	JGH	1634-04-4	
Methyl cyclohexane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	108-87-2	
Methylene chloride	Not detected	ug/kg	300	5035/8260B	10/26/06 19:52	JGH	75-09-2	
Styrene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	100-42-5	
1,1,1-Trichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	79-34-5	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	5035/8260B	10/26/06 19:52	JGH	76-13-1	
1,1,2-Trichloroethane	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	79-00-5	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	5035/8260B	10/26/06 19:52	JGH	120-82-1	
Tetrachloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	108-88-3	
Trichloroethene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	5035/8260B	10/26/06 19:52	JGH	75-69-4	
Vinyl chloride	Not detected	ug/kg	100	5035/8260B	10/26/06 19:52	JGH	75-01-4	
o-Xylene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH	95-47-6	
p,m-Xylene	Not detected	ug/kg	60	5035/8260B	10/26/06 19:52	JGH		

Lab Sample ID: S29247.19
Sample Tag: SB2-09-04
Collected Date/Time: 10/24/2006 11:25
Matrix: Soil
COC Reference: 038405

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.7	IR
1	40ml Glass	MeOH	Yes	4.7	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	10/25/06 20:33	EMR		
Extraction, PCB	Completed			3550B	10/26/06 15:51	TAS		
Lead, Coarse Digestion	Completed			3050B	10/26/06 14:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	10/26/06 09:00	JRT		
Lead, Fine Digestion	Completed			3050B	10/26/06 14:00	PER		
Mercury Digestion	Completed			7471A	10/26/06 10:00	JRT		
Metal Digestion	Completed			3050B	10/26/06 12:00	SLS		
Metals								
% Coarse by Weight	90.1	%			10/26/06 09:00	JRT		
% Fine by Weight	9.9	%			10/26/06 09:00	JRT		
Total Solids	87	%	1	160.3	10/26/06 08:30	JRT		
Arsenic	1.69	mg/kg	0.10	6020	10/26/06 15:22	SLS	7440-38-2	
Barium	38.9	mg/kg	1.0	6020	10/26/06 15:22	SLS	7440-39-3	
Cadmium	0.24	mg/kg	0.20	6020	10/26/06 15:22	SLS	7440-43-9	
Chromium	2.6	mg/kg	2.0	6020	10/26/06 15:22	SLS	7440-47-3	
Copper	4.2	mg/kg	1.0	6020	10/26/06 15:22	SLS	7440-50-8	
Lead, Coarse	5.8	mg/kg	1.0	6020	10/26/06 15:19	PER		
Lead, Fine	21.1	mg/kg	1.0	6020	10/26/06 15:42	PER		
Lead, Total Calculated	7.31	mg/kg	1.0	6020	10/26/06 16:00	PER	7439-92-1C	
Mercury	Not detected	mg/kg	0.050	7471	10/26/06 15:45	JRT	7439-97-6	
Selenium	0.47	mg/kg	0.20	6020	10/26/06 15:22	SLS	7782-49-2	
Silver	Not detected	mg/kg	0.10	6020	10/26/06 15:22	SLS	7440-22-4	
Zinc	17.9	mg/kg	1.0	6020	10/26/06 15:22	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	10/27/06 12:49	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/27/06 12:49	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/27/06 12:49	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/27/06 12:49	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/27/06 12:49	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/27/06 12:49	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	10/27/06 12:49	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	10/27/06 12:49	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/27/06 12:49	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/27/06 12:49	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/27/06 12:49	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/27/06 12:49	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/27/06 12:49	JANB	11097-69-1	

Lab Sample ID: S29247.19 (continued)
Sample Tag: SB2-09-04

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - PCBs/Pesticides (continued)								
TCL PCB List (Column 2) (continued)								
PCB-1260	Not detected	ug/kg	330	8082	10/27/06 12:49	JANB	11096-82-5	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	208-96-8	
Acetophenone	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	98-86-2	
Anthracene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	120-12-7	
Atrazine	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	84-74-2	
Benzaldehyde	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	100-52-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	85-68-7	
2-Chloronaphthalene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	91-58-7	
2-Chlorophenol	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	59-50-7	
4-Chloroaniline	Not detected	ug/kg	700	8270C	10/30/06 18:48	ARH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	7005-72-3	
Caprolactam	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	105-60-2	
Carbazole	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	108-60-1	
Chrysene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/kg	700	8270C	10/30/06 18:48	ARH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	606-20-2	
3,3'-Dichlorobenzidine	Not detected	ug/kg	700	8270C	10/30/06 18:48	ARH	91-94-1	
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	700	8270C	10/30/06 18:48	ARH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	53-70-3	
Dibenzofuran	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	132-64-9	
Diethyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	84-66-2	
Dimethyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	117-81-7	
Fluoranthene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	86-73-7	
Hexachlorobenzene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	118-74-1	
Hexachlorobutadiene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	77-47-4	
Hexachloroethane	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	193-39-5	

Lab Sample ID: S29247.19 (continued)
Sample Tag: SB2-09-04

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Isophorone	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	78-59-1	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	91-57-6	
2-Methylphenol	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	108-39-4	
2-Nitroaniline	Not detected	ug/kg	700	8270C	10/30/06 18:48	ARH	88-74-4	
2-Nitrophenol	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	88-75-5	
3-Nitroaniline	Not detected	ug/kg	700	8270C	10/30/06 18:48	ARH	99-09-2	
4-Nitroaniline	Not detected	ug/kg	700	8270C	10/30/06 18:48	ARH	100-01-6	
4-Nitrophenol	Not detected	ug/kg	700	8270C	10/30/06 18:48	ARH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	86-30-6	
Naphthalene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	91-20-3	
Nitrobenzene	Not detected	ug/kg	200	8270C	10/30/06 18:48	ARH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	117-84-0	
Pentachlorophenol	Not detected	ug/kg	700	8270C	10/30/06 18:48	ARH	87-86-5	
Phenanthrene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	85-01-8	
Phenol	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	108-95-2	
Pyrene	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/kg	300	8270C	10/30/06 18:48	ARH	88-06-2	
Organics - Volatiles								
TCL Volatile Organics 5035/8260								
Acetone	Not detected	ug/kg	800	5035/8260B	10/26/06 20:10	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	800	5035/8260B	10/26/06 20:10	JGH	78-93-3	
Benzene	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	71-43-2	
Bromodichloromethane	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	75-27-4	
Bromoform	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	75-25-2	
Bromomethane	Not detected	ug/kg	300	5035/8260B	10/26/06 20:10	JGH	74-83-9	
Carbon disulfide	Not detected	ug/kg	300	5035/8260B	10/26/06 20:10	JGH	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	108-90-7	
Chloroethane	Not detected	ug/kg	300	5035/8260B	10/26/06 20:10	JGH	75-00-3	
Chloroform	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	67-66-3	
Chloromethane	Not detected	ug/kg	300	5035/8260B	10/26/06 20:10	JGH	74-87-3	
Cyclohexane	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	110-82-7	
1,1-Dichloroethane	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	75-34-3	
1,1-Dichloroethene	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	106-93-4	
1,2-Dichlorobenzene	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	95-50-1	
1,2-Dichloroethane	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	107-06-2	
1,2-Dichloropropane	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	78-87-5	
1,3-Dichlorobenzene	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	106-46-7	
cis-1,2-Dichloroethene	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	10061-01-5	
Dibromochloromethane	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	124-48-1	
Dichlorodifluoromethane	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	75-71-8	

Lab Sample ID: S29247.19 (continued)
Sample Tag: SB2-09-04

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 5035/8260 (continued)								
trans-1,2-Dichloroethene	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	10061-02-6	
Ethylbenzene	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	100-41-4	
2-Hexanone	Not detected	ug/kg	3,000	5035/8260B	10/26/06 20:10	JGH	591-78-6	
Isopropylbenzene	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	98-82-8	
Methyl Acetate	Not detected	ug/kg	3,000	5035/8260B	10/26/06 20:10	JGH	79-20-9	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	5035/8260B	10/26/06 20:10	JGH	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	5035/8260B	10/26/06 20:10	JGH	1634-04-4	
Methyl cyclohexane	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	108-87-2	
Methylene chloride	Not detected	ug/kg	300	5035/8260B	10/26/06 20:10	JGH	75-09-2	
Styrene	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	100-42-5	
1,1,1-Trichloroethane	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	79-34-5	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	5035/8260B	10/26/06 20:10	JGH	76-13-1	
1,1,2-Trichloroethane	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	79-00-5	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	5035/8260B	10/26/06 20:10	JGH	120-82-1	
Tetrachloroethene	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	127-18-4	
Toluene	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	108-88-3	
Trichloroethene	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	5035/8260B	10/26/06 20:10	JGH	75-69-4	
Vinyl chloride	Not detected	ug/kg	100	5035/8260B	10/26/06 20:10	JGH	75-01-4	
o-Xylene	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH	95-47-6	
p,m-Xylene	Not detected	ug/kg	50	5035/8260B	10/26/06 20:10	JGH		

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 2

038404

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Clifford Yantz
COMPANY: O'Brien & Gere
ADDRESS: 33469 W 14 Mile
CITY: Farmington Hills | STATE: MI | ZIP CODE: 48331
PHONE NO.: 248-661-3745 | FAX NO. | P.O. NO.: 37404
E-MAIL ADDRESS | QUOTE NO.

INVOICE TO

CONTACT NAME | ☒ SAME
COMPANY
ADDRESS
CITY | STATE | ZIP CODE
PHONE NO. | FAX NO. | P.O. NO.

PROJECT NO./NAME: GM MFD GRAND BLANC
SAMPLER(S) - PLEASE PRINT/SIGN NAME: MIKE ROBISON

TURNAROUND TIME REQUIRED: ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED: ☐ STANDARD ☒ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER SL=SLUDGE WW=WASTEWATER O=OIL S=SOIL A=AIR L=LIQUID W=WASTE SD=SOLID M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

SPECIAL INSTRUCTIONS/NOTES: FOR LEAD ANALYSIS ANALYZE FINE & COARSE FRACTIONS FOR ALL SOIL SAMPLES

MERIT LAB NO.	2006 YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	MI 10 Metals	
29247.01	10/23	0945	SB1-01-6	S	2	1					1		X	X	X	X	8-10'
.02		10:00	SB1-02-04	S	2	1					1		X	X	X	X	2-4'
.03		10:40	SB1-03-10	S	2	1					1		X	X	X	X	8'-10'
.04		—	DUP-01	S	2	1					1		X	X	X	X	—
.05		11:20	SB2-01-04	S	2	1					1		X	X	X	X	2'-4'
.06		11:45	SB2-02-04	S	2	1					1		X	X	X	X	2-4'
.07		17:10	SB2-02-GW	GW	S	2	2	1					X	X	X	X	GW
.08		14:40	SB2-03-10	S	2	1					1		X	X	X	X	8'-10'
.09		15:05	SB2-07-10	S	2	1					1		X	X	X	X	8'-10'
.10		16:40	SB2-06-10	S	2	1					1		X	X	X	X	8-10'
.11	10/24	08:45	SB2-13-04	S	2	1					1		X	X	X	X	2-4'
.12	10/24	09:05	SB2-12-04	S	2	1					1		X	X	X	X	2'-4'

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	/Merit	10/24/06	11:50
RECEIVED BY: SIGNATURE/ORGANIZATION	/Merit	10-24-06	1150
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	/Merit	10-24-6	1575
RECEIVED BY: SIGNATURE/ORGANIZATION	Barbara Richardson	DATE 10-24-06	TIME 15:15

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 4°

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

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C.O.C. PAGE # 2 OF 2

038405

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: CLIFF YANTZ
COMPANY: OBRIEN & GERE
ADDRESS: 33469 W. 14 MILE RD SUITE 150
CITY: FARMINGTON HILLS STATE: MI ZIP CODE: 48331
PHONE NO.: 248 661 3745 FAX NO.: 248 661 4057 P.O. NO.: 37404
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: GM MFD GRAND BLANC
SAMPLER(S) - PLEASE PRINT/SIGN NAME: MIKE ROBISON

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STANDARD ☒ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

SPECIAL INSTRUCTIONS/NOTES: FOR LEAD ANALYSIS (SOIL), ANALYZE FINE & COARSE FRACTIONS FOR ALL SAMPLES

MERIT LAB NO.	2006 YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	MI '10' METALS	SPECIAL INSTRUCTIONS/NOTES
29247.13/.14	10/24	09:05	SB2-12-04 (MS/MSD)	S	2	1					1		X	X	X	X	2'-4'
.15		09:30	EB-01	L	5	2	2	1					X	X	X	X	—
.16		—	TB-01	L	1		1						X	X	X	X	—
.17		10:40	SS2-01	S	2	1					1		X	X	X	X	
.18		10:45	SS2-02	S	2	1					1		X	X	X	X	
.19		11:25	SB2-09-04	S	2	1					1		X	X	X	X	2'-4'

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Merit	DATE: 10/24/06	TIME: 11:30	
RECEIVED BY: SIGNATURE/ORGANIZATION: Merit	DATE: 10-24-06	TIME: 1130	
RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE	TIME	
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME	

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Merit	DATE: 10-24-06	TIME: 1515	
RECEIVED BY: SIGNATURE/ORGANIZATION: Barbara Richardson	DATE: 10-24-06	TIME: 15:15	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4.7
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Analytical Laboratory Report

Supplemental Report

Report ID: S29263.01(02)
Generated on 11/06/2006
Replaces report S29263.01(01) generated on 11/02/2006

Report to

Attention: Mr. Clifford Yantz
O'Brien & Gere Engineers
33469 West 14 Mile Road, Suite 150
Farmington Hills, MI 48331

Phone: 248-661-3745 FAX: 248-661-4057

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S29263.01-S29263.19
Project: GM MFD Grand Blanc
Submitted Date/Time: 10/25/2006 15:15
Sampled by: Mike Robison
P.O. #: 10610474EST

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak
Laboratory Director

Sample Summary (19 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S29263.01	SB2-11-04	Soil	10/24/2006 11:50
S29263.02	Dup-02	Soil	10/24/2006
S29263.03	SB4-26-04	Soil	10/24/2006 13:30
S29263.04	SB4-24-04	Soil	10/24/2006 13:55
S29263.05	SB4-25-04	Soil	10/24/2006 14:20
S29263.06	SB4-20-04	Soil	10/24/2006 14:55
S29263.07	SB4-22-04	Soil	10/24/2006 15:25
S29263.08	SB4-22-08	Soil	10/24/2006 15:40
S29263.09	SB4-23-03	Soil	10/24/2006 16:00
S29263.10	SB4-23-GW	Groundwater	10/24/2006 16:15
S29263.11	SB4-19-04	Soil	10/24/2006 16:55
S29263.12	SB4-18-04	Soil	10/25/2006 08:30
S29263.13	SB4-17-04	Soil	10/25/2006 09:00
S29263.14	SB4-21-13	Soil	10/25/2006 09:55
S29263.15	SB4-16-06	Soil	10/25/2006 10:45
S29263.16	SB4-13-04	Soil	10/25/2006 11:20
S29263.17	SB4-15-08	Soil	10/25/2006 11:45
S29263.18	SB4-15-GW	Groundwater	10/25/2006 12:00
S29263.19	TB-02	Liquid	10/25/2006

Lab Sample ID: S29263.01
Sample Tag: SB2-11-04
Collected Date/Time: 10/24/2006 11:50
Matrix: Soil
COC Reference: 038407

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.6	IR
1	40ml Glass	MeOH	Yes	4.6	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	10/25/06 20:33	EMR		
Extraction, PCB	Completed			3550B	10/28/06 10:50	JAC		
Lead, Coarse Digestion	Completed			3050B	10/30/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	10/26/06 16:00	JRT		
Lead, Fine Digestion	Completed			3050B	10/30/06 12:00	PER		
Mercury Digestion	Completed			7471A	10/27/06 13:00	JRT		
Metal Digestion	Completed			3050B	10/26/06 12:00	SLS		
Metals								
% Coarse by Weight	87.7	%			10/26/06 16:00	JRT		
% Fine by Weight	12.3	%			10/26/06 16:00	JRT		
Total Solids	88	%	1	160.3	10/26/06 12:00	SLS		
Arsenic	1.04	mg/kg	0.10	6020	10/27/06 13:23	SLS	7440-38-2	
Barium	47.5	mg/kg	1.0	6020	10/27/06 13:23	SLS	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	10/27/06 13:23	SLS	7440-43-9	
Chromium	3.4	mg/kg	2.0	6020	10/27/06 13:23	SLS	7440-47-3	
Copper	3.1	mg/kg	1.0	6020	10/27/06 13:23	SLS	7440-50-8	
Lead, Coarse	5.1	mg/kg	1.0	6020	10/30/06 16:31	PER		
Lead, Fine	10.6	mg/kg	1.0	6020	10/30/06 17:17	PER		
Lead, Total Calculated	5.77	mg/kg		6020	10/31/06 09:00	JRT	7439-92-1C	
Mercury	Not detected	mg/kg	0.050	7471	10/30/06 16:35	JRT	7439-97-6	
Selenium	0.59	mg/kg	0.20	6020	10/27/06 13:23	SLS	7782-49-2	
Silver	Not detected	mg/kg	0.10	6020	10/27/06 13:23	SLS	7440-22-4	
Zinc	8.4	mg/kg	1.0	6020	10/27/06 13:23	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	10/30/06 14:01	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/30/06 14:01	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/30/06 14:01	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/30/06 14:01	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/30/06 14:01	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/30/06 14:01	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	10/30/06 14:01	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	10/30/06 14:01	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/30/06 14:01	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/30/06 14:01	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/30/06 14:01	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/30/06 14:01	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/30/06 14:01	JANB	11097-69-1	

Lab Sample ID: S29263.01 (continued)
Sample Tag: SB2-11-04

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - PCBs/Pesticides (continued)								
TCL PCB List (Column 2) (continued)								
PCB-1260	Not detected	ug/kg	330	8082	10/30/06 14:01	JANB	11096-82-5	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	208-96-8	
Acetophenone	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	98-86-2	
Anthracene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	120-12-7	
Atrazine	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	84-74-2	
Benzaldehyde	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	100-52-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	85-68-7	
2-Chloronaphthalene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	91-58-7	
2-Chlorophenol	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	59-50-7	
4-Chloroaniline	Not detected	ug/kg	700	8270C	10/30/06 19:23	ARH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	7005-72-3	
Caprolactam	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	105-60-2	
Carbazole	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	108-60-1	
Chrysene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/kg	700	8270C	10/30/06 19:23	ARH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	606-20-2	
3,3'-Dichlorobenzidine	Not detected	ug/kg	700	8270C	10/30/06 19:23	ARH	91-94-1	
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	700	8270C	10/30/06 19:23	ARH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	53-70-3	
Dibenzofuran	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	132-64-9	
Diethyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	84-66-2	
Dimethyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	117-81-7	
Fluoranthene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	86-73-7	
Hexachlorobenzene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	118-74-1	
Hexachlorobutadiene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	77-47-4	
Hexachloroethane	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	193-39-5	

Lab Sample ID: S29263.01 (continued)
Sample Tag: SB2-11-04

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Isophorone	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	78-59-1	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	91-57-6	
2-Methylphenol	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	108-39-4	
2-Nitroaniline	Not detected	ug/kg	700	8270C	10/30/06 19:23	ARH	88-74-4	
2-Nitrophenol	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	88-75-5	
3-Nitroaniline	Not detected	ug/kg	700	8270C	10/30/06 19:23	ARH	99-09-2	
4-Nitroaniline	Not detected	ug/kg	700	8270C	10/30/06 19:23	ARH	100-01-6	
4-Nitrophenol	Not detected	ug/kg	700	8270C	10/30/06 19:23	ARH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	86-30-6	
Naphthalene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	91-20-3	
Nitrobenzene	Not detected	ug/kg	200	8270C	10/30/06 19:23	ARH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	117-84-0	
Pentachlorophenol	Not detected	ug/kg	700	8270C	10/30/06 19:23	ARH	87-86-5	
Phenanthrene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	85-01-8	
Phenol	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	108-95-2	
Pyrene	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/kg	300	8270C	10/30/06 19:23	ARH	88-06-2	
Organics - Volatiles								
TCL Volatile Organics 5035/8260								
Acetone	Not detected	ug/kg	800	5035/8260B	10/27/06 17:18	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	800	5035/8260B	10/27/06 17:18	JGH	78-93-3	
Benzene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	71-43-2	
Bromodichloromethane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	75-27-4	
Bromoform	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	75-25-2	
Bromomethane	Not detected	ug/kg	300	5035/8260B	10/27/06 17:18	JGH	74-83-9	
Carbon disulfide	Not detected	ug/kg	300	5035/8260B	10/27/06 17:18	JGH	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	108-90-7	
Chloroethane	Not detected	ug/kg	300	5035/8260B	10/27/06 17:18	JGH	75-00-3	
Chloroform	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	67-66-3	
Chloromethane	Not detected	ug/kg	300	5035/8260B	10/27/06 17:18	JGH	74-87-3	
Cyclohexane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	110-82-7	
1,1-Dichloroethane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	75-34-3	
1,1-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	106-93-4	
1,2-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	95-50-1	
1,2-Dichloroethane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	107-06-2	
1,2-Dichloropropane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	78-87-5	
1,3-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	106-46-7	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	10061-01-5	
Dibromochloromethane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	124-48-1	
Dichlorodifluoromethane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	75-71-8	

Lab Sample ID: S29263.01 (continued)
Sample Tag: SB2-11-04

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 5035/8260 (continued)								
trans-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	10061-02-6	
Ethylbenzene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	100-41-4	
2-Hexanone	Not detected	ug/kg	3,000	5035/8260B	10/27/06 17:18	JGH	591-78-6	
Isopropylbenzene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	98-82-8	
Methyl Acetate	Not detected	ug/kg	3,000	5035/8260B	10/27/06 17:18	JGH	79-20-9	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	5035/8260B	10/27/06 17:18	JGH	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	5035/8260B	10/27/06 17:18	JGH	1634-04-4	
Methyl cyclohexane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	108-87-2	
Methylene chloride	Not detected	ug/kg	300	5035/8260B	10/27/06 17:18	JGH	75-09-2	
Styrene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	100-42-5	
1,1,1-Trichloroethane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	79-34-5	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	5035/8260B	10/27/06 17:18	JGH	76-13-1	
1,1,2-Trichloroethane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	79-00-5	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	5035/8260B	10/27/06 17:18	JGH	120-82-1	
Tetrachloroethene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	108-88-3	
Trichloroethene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	5035/8260B	10/27/06 17:18	JGH	75-69-4	
Vinyl chloride	Not detected	ug/kg	100	5035/8260B	10/27/06 17:18	JGH	75-01-4	
o-Xylene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH	95-47-6	
p,m-Xylene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:18	JGH		

Lab Sample ID: S29263.02
Sample Tag: Dup-02
Collected Date/Time: 10/24/2006 :
Matrix: Soil
COC Reference: 038407

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.6	IR
1	40ml Glass	MeOH	Yes	4.6	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	10/25/06 20:33	EMR		
Extraction, PCB	Completed			3550B	10/28/06 10:50	JAC		
Lead, Coarse Digestion	Completed			3050B	10/30/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	10/26/06 16:00	JRT		
Lead, Fine Digestion	Completed			3050B	10/30/06 12:00	PER		
Mercury Digestion	Completed			7471A	10/27/06 13:00	JRT		
Metal Digestion	Completed			3050B	10/26/06 12:00	SLS		
Metals								
% Coarse by Weight	90.1	%			10/26/06 16:00	JRT		
% Fine by Weight	9.9	%			10/26/06 16:00	JRT		
Total Solids	87	%	1	160.3	10/26/06 12:00	SLS		
Arsenic	1.09	mg/kg	0.10	6020	10/27/06 13:26	SLS	7440-38-2	
Barium	51.2	mg/kg	1.0	6020	10/27/06 13:26	SLS	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	10/27/06 13:26	SLS	7440-43-9	
Chromium	3.7	mg/kg	2.0	6020	10/27/06 13:26	SLS	7440-47-3	
Copper	3.1	mg/kg	1.0	6020	10/27/06 13:26	SLS	7440-50-8	
Lead, Coarse	6.6	mg/kg	1.0	6020	10/30/06 16:33	PER		
Lead, Fine	14.7	mg/kg	1.0	6020	10/30/06 17:19	PER		
Lead, Total Calculated	7.40	mg/kg		6020	10/31/06 09:00	JRT	7439-92-1C	
Mercury	Not detected	mg/kg	0.050	7471	10/30/06 16:20	JRT	7439-97-6	
Selenium	0.55	mg/kg	0.20	6020	10/27/06 13:26	SLS	7782-49-2	
Silver	Not detected	mg/kg	0.10	6020	10/27/06 13:26	SLS	7440-22-4	
Zinc	9.3	mg/kg	1.0	6020	10/27/06 13:26	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	10/30/06 14:12	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/30/06 14:12	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/30/06 14:12	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/30/06 14:12	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/30/06 14:12	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/30/06 14:12	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	10/30/06 14:12	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	10/30/06 14:12	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	10/30/06 14:12	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	10/30/06 14:12	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	10/30/06 14:12	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	10/30/06 14:12	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	10/30/06 14:12	JANB	11097-69-1	

Lab Sample ID: S29263.02 (continued)
Sample Tag: Dup-02

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - PCBs/Pesticides (continued)								
TCL PCB List (Column 2) (continued)								
PCB-1260	Not detected	ug/kg	330	8082	10/30/06 14:12	JANB	11096-82-5	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	208-96-8	
Acetophenone	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	98-86-2	
Anthracene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	120-12-7	
Atrazine	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	84-74-2	
Benzaldehyde	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	100-52-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	85-68-7	
2-Chloronaphthalene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	91-58-7	
2-Chlorophenol	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	59-50-7	
4-Chloroaniline	Not detected	ug/kg	700	8270C	10/30/06 19:58	ARH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	7005-72-3	
Caprolactam	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	105-60-2	
Carbazole	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	108-60-1	
Chrysene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/kg	700	8270C	10/30/06 19:58	ARH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	606-20-2	
3,3'-Dichlorobenzidine	Not detected	ug/kg	700	8270C	10/30/06 19:58	ARH	91-94-1	
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	700	8270C	10/30/06 19:58	ARH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	53-70-3	
Dibenzofuran	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	132-64-9	
Diethyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	84-66-2	
Dimethyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	117-81-7	
Fluoranthene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	86-73-7	
Hexachlorobenzene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	118-74-1	
Hexachlorobutadiene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	77-47-4	
Hexachloroethane	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	193-39-5	

Lab Sample ID: S29263.02 (continued)
Sample Tag: Dup-02

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Isophorone	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	78-59-1	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	91-57-6	
2-Methylphenol	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	108-39-4	
2-Nitroaniline	Not detected	ug/kg	700	8270C	10/30/06 19:58	ARH	88-74-4	
2-Nitrophenol	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	88-75-5	
3-Nitroaniline	Not detected	ug/kg	700	8270C	10/30/06 19:58	ARH	99-09-2	
4-Nitroaniline	Not detected	ug/kg	700	8270C	10/30/06 19:58	ARH	100-01-6	
4-Nitrophenol	Not detected	ug/kg	700	8270C	10/30/06 19:58	ARH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	86-30-6	
Naphthalene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	91-20-3	
Nitrobenzene	Not detected	ug/kg	200	8270C	10/30/06 19:58	ARH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	117-84-0	
Pentachlorophenol	Not detected	ug/kg	700	8270C	10/30/06 19:58	ARH	87-86-5	
Phenanthrene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	85-01-8	
Phenol	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	108-95-2	
Pyrene	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/kg	300	8270C	10/30/06 19:58	ARH	88-06-2	
Organics - Volatiles								
TCL Volatile Organics 5035/8260								
Acetone	Not detected	ug/kg	900	5035/8260B	10/27/06 17:37	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	900	5035/8260B	10/27/06 17:37	JGH	78-93-3	
Benzene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	71-43-2	
Bromodichloromethane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	75-27-4	
Bromoform	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	75-25-2	
Bromomethane	Not detected	ug/kg	300	5035/8260B	10/27/06 17:37	JGH	74-83-9	
Carbon disulfide	Not detected	ug/kg	300	5035/8260B	10/27/06 17:37	JGH	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	108-90-7	
Chloroethane	Not detected	ug/kg	300	5035/8260B	10/27/06 17:37	JGH	75-00-3	
Chloroform	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	67-66-3	
Chloromethane	Not detected	ug/kg	300	5035/8260B	10/27/06 17:37	JGH	74-87-3	
Cyclohexane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	110-82-7	
1,1-Dichloroethane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	75-34-3	
1,1-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	106-93-4	
1,2-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	95-50-1	
1,2-Dichloroethane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	107-06-2	
1,2-Dichloropropane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	78-87-5	
1,3-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	106-46-7	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	10061-01-5	
Dibromochloromethane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	124-48-1	
Dichlorodifluoromethane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	75-71-8	

Lab Sample ID: S29263.02 (continued)
Sample Tag: Dup-02

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 5035/8260 (continued)								
trans-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	10061-02-6	
Ethylbenzene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	100-41-4	
2-Hexanone	Not detected	ug/kg	3,000	5035/8260B	10/27/06 17:37	JGH	591-78-6	
Isopropylbenzene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	98-82-8	
Methyl Acetate	Not detected	ug/kg	3,000	5035/8260B	10/27/06 17:37	JGH	79-20-9	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	5035/8260B	10/27/06 17:37	JGH	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	5035/8260B	10/27/06 17:37	JGH	1634-04-4	
Methyl cyclohexane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	108-87-2	
Methylene chloride	Not detected	ug/kg	300	5035/8260B	10/27/06 17:37	JGH	75-09-2	
Styrene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	100-42-5	
1,1,1-Trichloroethane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	79-34-5	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	5035/8260B	10/27/06 17:37	JGH	76-13-1	
1,1,2-Trichloroethane	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	79-00-5	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	5035/8260B	10/27/06 17:37	JGH	120-82-1	
Tetrachloroethene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	108-88-3	
Trichloroethene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	5035/8260B	10/27/06 17:37	JGH	75-69-4	
Vinyl chloride	Not detected	ug/kg	100	5035/8260B	10/27/06 17:37	JGH	75-01-4	
o-Xylene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH	95-47-6	
p,m-Xylene	Not detected	ug/kg	60	5035/8260B	10/27/06 17:37	JGH		

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 2

038407

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: CLIFF YANTZ
COMPANY: OBRIEN & GERE
ADDRESS: 33469 W. 14 MILE STE 150
CITY: FARMINGTON HILLS STATE: MI ZIP CODE: 48331
PHONE NO.: 248 661 3745 FAX NO.: 248 661 4057 P.O. NO.: 37404
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: GM MFD GRAND BLANC
SAMPLER(S) - PLEASE PRINT/SIGN NAME: MIKE ROBISON

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STANDARD ☒ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

SPECIAL INSTRUCTIONS/NOTES: * FINE + COARSE FRACTION LEAD ANALYSIS FOR SOIL SAMPLES

MERIT LAB NO.	YEAR 2006 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	MI 10 METALS	SPECIAL INSTRUCTIONS/NOTES
29263.01	10/24	11:50	SB2-11-04	S	2	1					1		X	X	X	X	2'-4'
.02		—	DUP-02	S	2	1					1		X	X	X	X	—
.03		13:30	SB4-26-04	S	2	1					1		X	X	X	X	2'-4'
.04		13:55	SB4-24-04	S	2	1					1		X	X	X	X	2'-4'
.05		14:20	SB4-25-04	S	2	1					1		X	X	X	X	2'-4'
.06		14:55	SB4-20-04	S	2	1					1		X	X	X	X	2'-4'
.07		15:25	SB4-22-04	S	2	1					1		X	X	X	X	2'-4'
.08		15:40	SB4-22-08	S	2	1					1		X	X	X	X	6'-8'
.09		16:00	SB4-23-03	S	2	1					1		X	X	X	X	2'-3'
.10		16:15	SB4-23-GW	GW	5	2	2	1					X	X	X	X	GW
.11		16:55	SB4-19-04	S	2	1					1		X	X	X	X	2'-4'
.12	10/25	08:30	SB4-18-04	S	2	1					1		X	X	X	X	2'-4'

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	/OBG	10/25/06	13:45
RECEIVED BY: SIGNATURE/ORGANIZATION	/Merit	10-25-06	1345
RELINQUISHED BY: SIGNATURE/ORGANIZATION	/Merit	10-25-06	15:15
RECEIVED BY: SIGNATURE/ORGANIZATION	/Merit	10-25-06	15:15
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 4.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

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www.meritlabs.com

C.O.C. PAGE # 2 OF 2

038408

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Clifford Yantz
COMPANY: O'Brien & Gere
ADDRESS: 33469 W 14 Mile Suite 150
CITY: Farmington Hills STATE: MI ZIP CODE: 48334
PHONE NO.: 248-661-3745 FAX NO.: 248-661-4057 P.O. NO.: 37404
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: ✓ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: GM Grand Blanc MFD
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED: ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED: ☐ STANDARD ☒ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

MERIT LAB NO.	2006 YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	ANALYSIS: VOCs	SVOCs	PCBs	MI 10 Metals	SPECIAL INSTRUCTIONS/NOTES
29263.13	10/25	09:00	SB4-17-04	S	2	1					1		X	X	X	X	2'-4'
.14		09:55	SB4-21-13	S	2	1					1		X	X	X	X	11'-13'
.15		10:45	SB4-16-06	S	2	1					1		X	X	X	X	4'-6'
.16		11:20	SB4-13-04	S	2	1					1		X	X	X	X	2'-4'
.17		11:45	SB4-15-08	S	2	1					1		X	X	X	X	6'-8'
.18	↓	12:00	SB4-15-GW	GW	5	2	2	1					X	X	X	X	GW
.19	↓	—	TB-02	L	1		1						X				

* Fine & Coarse Fraction Lead Analysis for Soil Samples

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE 10/25/06	TIME 1345	RELINQUISHED BY: SIGNATURE/ORGANIZATION
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE 10-25-06	TIME 1345	RECEIVED BY: SIGNATURE/ORGANIZATION Barbara Richardson
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME	SEAL NO. / SEAL INTACT YES ☐ NO ☐ / INITIALS / NOTES: TEMP. ON ARRIVAL 4.6
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME	SEAL NO. / SEAL INTACT YES ☐ NO ☐ / INITIALS

DATE 10-25-06 TIME 1515

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Analytical Laboratory Report

Report ID: S29432.01(01)
Generated on 11/14/2006

Report to

Attention: Mr. Clifford Yantz
O'Brien & Gere Engineers
33469 West 14 Mile Road, Suite 150
Farmington Hills, MI 48331

Phone: 248-661-3745 FAX: 248-661-4057

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S29432.01-S29432.12
Project: GM MFD Grand Blanc
Collected Date: 11/06/2006
Submitted Date/Time: 11/07/2006 15:15
Sampled by: Mike Robison
P.O. #: 10610474EST

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak
Laboratory Director

Sample Summary (12 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S29432.01	SB3-02-03	Soil	11/06/2006 09:00
S29432.02	SB3-03-03	Soil	11/06/2006 09:50
S29432.03	SB3-09-03	Soil	11/06/2006 10:40
S29432.04	SB3-09-GW	Groundwater	11/06/2006 11:00
S29432.05	SB3-07-10	Soil	11/06/2006 11:40
S29432.06	SB3-06-10	Soil	11/06/2006 12:20
S29432.07	SB3-06-GW	Groundwater	11/06/2006 12:50
S29432.08	SB3-05-03	Soil	11/06/2006 13:45
S29432.09	SB2-10-03	Soil	11/06/2006 14:50
S29432.10	SB2-08-03	Soil	11/06/2006 16:00
S29432.11	SB2-05-03	Soil	11/06/2006 16:50
S29432.12	TB-05	Liquid	11/06/2006

Analytical Laboratory Report

Lab Sample ID: S29432.09
Sample Tag: SB2-10-03
Collected Date/Time: 11/06/2006 14:50
Matrix: Soil
COC Reference: 038992

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.3	IR
1	40ml Glass	MeOH	Yes	4.3	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	11/08/06 11:46	EMR		
Extraction, PCB	Completed			3550B	11/08/06 16:40	TAS		
Lead, Coarse Digestion	Completed			3050B	11/13/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	11/10/06 09:00	SLS		
Lead, Fine Digestion	Completed			3050B	11/13/06 12:00	PER		
Mercury Digestion	Completed			7471A	11/13/06 13:00	JRT		
Metal Digestion	Completed			3050B	11/13/06 12:00	PER		
Inorganics								
Total Solids	87	%	1	160.3	11/09/06 09:00	JRT		
Metals								
% Coarse by Weight	89.7	%			11/10/06 09:00	SLS		
% Fine by Weight	10.3	%			11/10/06 09:00	SLS		
Arsenic	1.73	mg/kg	0.10	6020	11/13/06 16:15	PER	7440-38-2	
Barium	43.0	mg/kg	1.0	6020	11/13/06 16:15	PER	7440-39-3	
Cadmium	0.28	mg/kg	0.20	6020	11/13/06 16:15	PER	7440-43-9	
Chromium	4.0	mg/kg	1.0	6020	11/13/06 16:15	PER	7440-47-3	
Copper	9.9	mg/kg	1.0	6020	11/13/06 16:15	PER	7440-50-8	
Lead, Coarse	15.3	mg/kg	1.0	6020	11/13/06 17:17	PER		
Lead, Fine	65.3	mg/kg	1.0	6020	11/13/06 17:35	PER		
Lead, Total Calculated	20.4	mg/kg	1.0	6020	11/13/06 18:00	PER	7439-92-1C	
Mercury	0.096	mg/kg	0.050	7471A	11/13/06 15:24	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	11/13/06 16:15	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	11/13/06 16:15	PER	7440-22-4	
Zinc	29.8	mg/kg	1.0	6020	11/13/06 16:15	PER	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	11/09/06 13:27	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	11/09/06 13:27	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	11/09/06 13:27	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	11/09/06 13:27	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	11/09/06 13:27	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	11/09/06 13:27	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	11/09/06 13:27	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	11/09/06 13:27	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	11/09/06 13:27	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	11/09/06 13:27	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	11/09/06 13:27	JANB	11141-16-5	

Lab Sample ID: S29432.09 (continued)
Sample Tag: SB2-10-03

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - PCBs/Pesticides (continued)								
TCL PCB List (Column 2) (continued)								
PCB-1248	Not detected	ug/kg	330	8082	11/09/06 13:27	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	11/09/06 13:27	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	11/09/06 13:27	JANB	11096-82-5	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	208-96-8	
Acetophenone	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	98-86-2	
Anthracene	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	120-12-7	
Atrazine	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	84-74-2	
Benzaldehyde	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	100-52-7	
Benzo(a)anthracene	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	56-55-3	
Benzo(a)pyrene	440	ug/kg	330	8270C	11/10/06 19:04	ARH	50-32-8	
Benzo(b)fluoranthene	400	ug/kg	330	8270C	11/10/06 19:04	ARH	205-99-2	
Benzo(ghi)perylene	370	ug/kg	330	8270C	11/10/06 19:04	ARH	191-24-2	
Benzo(k)fluoranthene	380	ug/kg	330	8270C	11/10/06 19:04	ARH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	85-68-7	
2-Chloronaphthalene	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	91-58-7	
2-Chlorophenol	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	59-50-7	
4-Chloroaniline	Not detected	ug/kg	670	8270C	11/10/06 19:04	ARH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	7005-72-3	
Caprolactam	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	105-60-2	
Carbazole	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	108-60-1	
Chrysene	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/kg	670	8270C	11/10/06 19:04	ARH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	606-20-2	
3,3'-Dichlorobenzidine	Not detected	ug/kg	670	8270C	11/10/06 19:04	ARH	91-94-1	
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	670	8270C	11/10/06 19:04	ARH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	53-70-3	
Dibenzofuran	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	132-64-9	
Diethyl phthalate	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	84-66-2	
Dimethyl phthalate	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	117-81-7	
Fluoranthene	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	206-44-0	
Fluorene	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	86-73-7	
Hexachlorobenzene	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	118-74-1	
Hexachlorobutadiene	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	77-47-4	

Lab Sample ID: S29432.09 (continued)
Sample Tag: SB2-10-03

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachloroethane	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	67-72-1	
Indeno(1,2,3-cd)pyrene	330	ug/kg	330	8270C	11/10/06 19:04	ARH	193-39-5	
Isophorone	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	78-59-1	
2-Methylnaphthalene	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	91-57-6	
2-Methylphenol	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	108-39-4	
2-Nitroaniline	Not detected	ug/kg	670	8270C	11/10/06 19:04	ARH	88-74-4	
2-Nitrophenol	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	88-75-5	
3-Nitroaniline	Not detected	ug/kg	670	8270C	11/10/06 19:04	ARH	99-09-2	
4-Nitroaniline	Not detected	ug/kg	670	8270C	11/10/06 19:04	ARH	100-01-6	
4-Nitrophenol	Not detected	ug/kg	670	8270C	11/10/06 19:04	ARH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	86-30-6	
Naphthalene	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	91-20-3	
Nitrobenzene	Not detected	ug/kg	200	8270C	11/10/06 19:04	ARH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	117-84-0	
Pentachlorophenol	Not detected	ug/kg	670	8270C	11/10/06 19:04	ARH	87-86-5	
Phenanthrene	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	85-01-8	
Phenol	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	108-95-2	
Pyrene	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/kg	330	8270C	11/10/06 19:04	ARH	88-06-2	
Organics - Volatiles								
TCL Volatile Organics 5035/8260								
Acetone	Not detected	ug/kg	900	5035/8260B	11/13/06 19:43	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	900	5035/8260B	11/13/06 19:43	JGH	78-93-3	
Benzene	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	71-43-2	
Bromodichloromethane	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	75-27-4	
Bromoform	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	75-25-2	
Bromomethane	Not detected	ug/kg	300	5035/8260B	11/13/06 19:43	JGH	74-83-9	
Carbon disulfide	Not detected	ug/kg	300	5035/8260B	11/13/06 19:43	JGH	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	108-90-7	
Chloroethane	Not detected	ug/kg	300	5035/8260B	11/13/06 19:43	JGH	75-00-3	
Chloroform	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	67-66-3	
Chloromethane	Not detected	ug/kg	300	5035/8260B	11/13/06 19:43	JGH	74-87-3	
Cyclohexane	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	110-82-7	
1,1-Dichloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	75-34-3	
1,1-Dichloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	106-93-4	
1,2-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	95-50-1	
1,2-Dichloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	107-06-2	
1,2-Dichloropropane	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	78-87-5	
1,3-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	106-46-7	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	10061-01-5	

Lab Sample ID: S29432.09 (continued)
Sample Tag: SB2-10-03

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 5035/8260 (continued)								
Dibromochloromethane	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	124-48-1	
Dichlorodifluoromethane	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	75-71-8	
trans-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	10061-02-6	
Ethylbenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	100-41-4	
2-Hexanone	Not detected	ug/kg	3,000	5035/8260B	11/13/06 19:43	JGH	591-78-6	
Isopropylbenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	98-82-8	
Methyl Acetate	Not detected	ug/kg	3,000	5035/8260B	11/13/06 19:43	JGH	79-20-9	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	5035/8260B	11/13/06 19:43	JGH	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	5035/8260B	11/13/06 19:43	JGH	1634-04-4	
Methyl cyclohexane	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	108-87-2	
Methylene chloride	Not detected	ug/kg	300	5035/8260B	11/13/06 19:43	JGH	75-09-2	
Styrene	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	100-42-5	
1,1,1-Trichloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	79-34-5	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	5035/8260B	11/13/06 19:43	JGH	76-13-1	
1,1,2-Trichloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	79-00-5	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	5035/8260B	11/13/06 19:43	JGH	120-82-1	
Tetrachloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	108-88-3	
Trichloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	5035/8260B	11/13/06 19:43	JGH	75-69-4	
Vinyl chloride	Not detected	ug/kg	100	5035/8260B	11/13/06 19:43	JGH	75-01-4	
o-Xylene	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH	95-47-6	
p,m-Xylene	Not detected	ug/kg	60	5035/8260B	11/13/06 19:43	JGH		

Analytical Laboratory Report

Lab Sample ID: S29432.10
Sample Tag: SB2-08-03
Collected Date/Time: 11/06/2006 16:00
Matrix: Soil
COC Reference: 038992

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.3	IR
1	40ml Glass	MeOH	Yes	4.3	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	11/08/06 11:46	EMR		
Extraction, PCB	Completed			3550B	11/08/06 16:40	TAS		
Lead, Coarse Digestion	Completed			3050B	11/13/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	11/10/06 09:00	SLS		
Lead, Fine Digestion	Completed			3050B	11/13/06 12:00	PER		
Mercury Digestion	Completed			7471A	11/13/06 13:00	JRT		
Metal Digestion	Completed			3050B	11/13/06 12:00	PER		
Inorganics								
Total Solids	85	%	1	160.3	11/09/06 09:00	JRT		
Metals								
% Coarse by Weight	87.9	%			11/10/06 09:00	SLS		
% Fine by Weight	12.1	%			11/10/06 09:00	SLS		
Arsenic	1.69	mg/kg	0.10	6020	11/13/06 16:18	PER	7440-38-2	
Barium	49.9	mg/kg	1.0	6020	11/13/06 16:18	PER	7440-39-3	
Cadmium	0.23	mg/kg	0.20	6020	11/13/06 16:18	PER	7440-43-9	
Chromium	4.2	mg/kg	1.0	6020	11/13/06 16:18	PER	7440-47-3	
Copper	5.3	mg/kg	1.0	6020	11/13/06 16:18	PER	7440-50-8	
Lead, Coarse	16.2	mg/kg	1.0	6020	11/13/06 17:18	PER		
Lead, Fine	32.9	mg/kg	1.0	6020	11/13/06 17:36	PER		
Lead, Total Calculated	18.2	mg/kg	1.0	6020	11/13/06 18:00	PER	7439-92-1C	
Mercury	Not detected	mg/kg	0.050	7471A	11/13/06 15:26	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	11/13/06 16:18	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	11/13/06 16:18	PER	7440-22-4	
Zinc	15.0	mg/kg	1.0	6020	11/13/06 16:18	PER	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	11/13/06 16:06	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	11/13/06 16:06	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	11/13/06 16:06	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	11/13/06 16:06	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	11/13/06 16:06	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	11/13/06 16:06	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	11/13/06 16:06	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	11/13/06 16:06	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	11/13/06 16:06	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	11/13/06 16:06	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	11/13/06 16:06	JANB	11141-16-5	

Lab Sample ID: S29432.10 (continued)
Sample Tag: SB2-08-03

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - PCBs/Pesticides (continued)								
TCL PCB List (Column 2) (continued)								
PCB-1248	Not detected	ug/kg	330	8082	11/13/06 16:06	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	11/13/06 16:06	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	11/13/06 16:06	JANB	11096-82-5	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	208-96-8	
Acetophenone	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	98-86-2	
Anthracene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	120-12-7	
Atrazine	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	84-74-2	
Benzaldehyde	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	100-52-7	
Benzo(a)anthracene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	85-68-7	
2-Chloronaphthalene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	91-58-7	
2-Chlorophenol	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	59-50-7	
4-Chloroaniline	Not detected	ug/kg	670	8270C	11/10/06 18:30	ARH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	7005-72-3	
Caprolactam	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	105-60-2	
Carbazole	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	108-60-1	
Chrysene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/kg	670	8270C	11/10/06 18:30	ARH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	606-20-2	
3,3'-Dichlorobenzidine	Not detected	ug/kg	670	8270C	11/10/06 18:30	ARH	91-94-1	
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	670	8270C	11/10/06 18:30	ARH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	53-70-3	
Dibenzofuran	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	132-64-9	
Diethyl phthalate	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	84-66-2	
Dimethyl phthalate	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	117-81-7	
Fluoranthene	450	ug/kg	330	8270C	11/10/06 18:30	ARH	206-44-0	
Fluorene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	86-73-7	
Hexachlorobenzene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	118-74-1	
Hexachlorobutadiene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	77-47-4	

Lab Sample ID: S29432.10 (continued)
Sample Tag: SB2-08-03

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachloroethane	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	193-39-5	
Isophorone	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	78-59-1	
2-Methylnaphthalene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	91-57-6	
2-Methylphenol	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	108-39-4	
2-Nitroaniline	Not detected	ug/kg	670	8270C	11/10/06 18:30	ARH	88-74-4	
2-Nitrophenol	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	88-75-5	
3-Nitroaniline	Not detected	ug/kg	670	8270C	11/10/06 18:30	ARH	99-09-2	
4-Nitroaniline	Not detected	ug/kg	670	8270C	11/10/06 18:30	ARH	100-01-6	
4-Nitrophenol	Not detected	ug/kg	670	8270C	11/10/06 18:30	ARH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	86-30-6	
Naphthalene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	91-20-3	
Nitrobenzene	Not detected	ug/kg	200	8270C	11/10/06 18:30	ARH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	117-84-0	
Pentachlorophenol	Not detected	ug/kg	670	8270C	11/10/06 18:30	ARH	87-86-5	
Phenanthrene	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	85-01-8	
Phenol	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	108-95-2	
Pyrene	370	ug/kg	330	8270C	11/10/06 18:30	ARH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/kg	330	8270C	11/10/06 18:30	ARH	88-06-2	
Organics - Volatiles								
TCL Volatile Organics 5035/8260								
Acetone	Not detected	ug/kg	900	5035/8260B	11/13/06 20:01	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	900	5035/8260B	11/13/06 20:01	JGH	78-93-3	
Benzene	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	71-43-2	
Bromodichloromethane	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	75-27-4	
Bromoform	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	75-25-2	
Bromomethane	Not detected	ug/kg	300	5035/8260B	11/13/06 20:01	JGH	74-83-9	
Carbon disulfide	Not detected	ug/kg	300	5035/8260B	11/13/06 20:01	JGH	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	108-90-7	
Chloroethane	Not detected	ug/kg	300	5035/8260B	11/13/06 20:01	JGH	75-00-3	
Chloroform	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	67-66-3	
Chloromethane	Not detected	ug/kg	300	5035/8260B	11/13/06 20:01	JGH	74-87-3	
Cyclohexane	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	110-82-7	
1,1-Dichloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	75-34-3	
1,1-Dichloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	106-93-4	
1,2-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	95-50-1	
1,2-Dichloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	107-06-2	
1,2-Dichloropropane	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	78-87-5	
1,3-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	106-46-7	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	10061-01-5	

Lab Sample ID: S29432.10 (continued)
Sample Tag: SB2-08-03

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 5035/8260 (continued)								
Dibromochloromethane	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	124-48-1	
Dichlorodifluoromethane	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	75-71-8	
trans-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	10061-02-6	
Ethylbenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	100-41-4	
2-Hexanone	Not detected	ug/kg	3,000	5035/8260B	11/13/06 20:01	JGH	591-78-6	
Isopropylbenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	98-82-8	
Methyl Acetate	Not detected	ug/kg	3,000	5035/8260B	11/13/06 20:01	JGH	79-20-9	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	5035/8260B	11/13/06 20:01	JGH	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	5035/8260B	11/13/06 20:01	JGH	1634-04-4	
Methyl cyclohexane	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	108-87-2	
Methylene chloride	Not detected	ug/kg	300	5035/8260B	11/13/06 20:01	JGH	75-09-2	
Styrene	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	100-42-5	
1,1,1-Trichloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	79-34-5	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	5035/8260B	11/13/06 20:01	JGH	76-13-1	
1,1,2-Trichloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	79-00-5	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	5035/8260B	11/13/06 20:01	JGH	120-82-1	
Tetrachloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	108-88-3	
Trichloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	5035/8260B	11/13/06 20:01	JGH	75-69-4	
Vinyl chloride	Not detected	ug/kg	100	5035/8260B	11/13/06 20:01	JGH	75-01-4	
o-Xylene	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH	95-47-6	
p,m-Xylene	Not detected	ug/kg	60	5035/8260B	11/13/06 20:01	JGH		

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

038992

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: CLIFF YANTZ
COMPANY: OBRIEN & GERE
ADDRESS: 33469 W. 14 MILE RD SUITE 150
CITY: FARMINGTON HILLS STATE: MI ZIP CODE: 48331
PHONE NO.: 248 661 3745 FAX NO.: 248 661 4057
P.O. NO.: 39928
E-MAIL ADDRESS:
QUOTE NO.: (39923)

INVOICE TO

CONTACT NAME: ✓ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: GM MFD GRAND BLANC
SAMPLER(S) - PLEASE PRINT/SIGN NAME: MIKE ROBISON

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STANDARD ☒ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

SPECIAL INSTRUCTIONS/NOTES: ✱FINE & COARSE FRACTION LEAD ANALYSIS FOR SOIL SAMPLES

MERIT LAB NO.	2006 YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	MI 10 METALS	SAMPLE DEPTH
29432.01	11/6	09:00	SB3-07-03	S	2	1					1		X	X	X	X	1'-3'
.02		09:50	SB3-03-03	S	2	1					1		X	X	X	X	1'-3'
-03		10:40	SB3-09-03	S	2	1					1		X	X	X	X	1'-3'
.04		11:00	SB3-09-GW	GW	5	2	2	1					X	X	X	X✱	GW
-05		11:40	SB3-07-10	S	2	1					1		X	X	X	X	8'-10'
-06		12:20	SB3-06-10	S	2	1					1		X	X	X	X	8'-16'
.07		12:50	SB3-06-GW	GW	5	2	2	1					X	X	X	X✱	GW
.08		13:45	SB3-05-03	S	2	1					1		X	X	X	X	1'-3'
.09		14:50	SB2-10-03	S	2	1					1		X	X	X	X	1'-3'
-10		16:00	SB2-08-03	S	2	1					1		X	X	X	X	1'-3'
-11		16:50	SB2-05-03	S	2	1					1		X	X	X	X	1'-3'
-12	▼	—	TB-05	L	1								X				—

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION Barbara Richardson	DATE 11-7-06	TIME 15:15

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL 4.3
✱METALS FILTERED IN FIELD FOR GROUNDWATER SAMPLES (DISSOLVED ANALYSIS)

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Analytical Laboratory Report

Report ID: S29482.01(01)
Generated on 11/21/2006

Report to

Attention: Mr. Clifford Yantz
O'Brien & Gere Engineers
33469 West 14 Mile Road, Suite 150
Farmington Hills, MI 48331

Phone: 248-661-3745 FAX: 248-661-4057

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S29482.01-S29482.11
Project: GM MFD Grand Blanc
Collected Date: 11/08/2006
Submitted Date/Time: 11/10/2006 08:00
Sampled by: Mike Robison
P.O. #: 10610474EST

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (11 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S29482.01	SB4-11-10	Soil	11/08/2006 08:40
S29482.02	SB4-14-03	Soil	11/08/2006 09:30
S29482.03	SB5-08-13	Soil	11/08/2006 12:00
S29482.04	SB5-11-10	Soil	11/08/2006 13:40
S29482.05	EB-04	Liquid	11/08/2006 14:00
S29482.06	CORE-04-02	Soil	11/08/2006 14:40
S29482.07	SB4-27-03	Soil	11/08/2006 15:20
S29482.08	SS2-03	Soil	11/08/2006 16:00
S29482.09	SS2-04	Soil	11/08/2006 16:30
S29482.10	TB-06	Liquid	11/08/2006
S29482.11	SB3-13-09	Soil	11/08/2006 13:00

Analytical Laboratory Report

Lab Sample ID: S29482.08
Sample Tag: SS2-03
Collected Date/Time: 11/08/2006 16:00
Matrix: Soil
COC Reference: 038993

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.6	IR
1	40ml Glass	MeOH	Yes	4.6	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	11/10/06 15:30	DLR		
Extraction, PCB	Completed			3550B	11/14/06 11:00	TAS		
Lead, Coarse Digestion	Completed			3050B	11/20/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	11/14/06 10:00	JRT		
Lead, Fine Digestion	Completed			3050B	11/20/06 12:00	PER		
Mercury Digestion	Completed			7471A	11/14/06 11:00	JRT		
Metal Digestion	Completed			3050B	11/20/06 12:00	PER		
Inorganics								
Total Solids	87	%	1	160.3	11/14/06 10:00	JRT		
Metals								
% Coarse by Weight	69.6	%			11/14/06 10:00	JRT		
% Fine by Weight	30.4	%			11/14/06 10:00	JRT		
Arsenic	4.89	mg/kg	0.10	6020	11/20/06 13:37	PER	7440-38-2	
Barium	42.9	mg/kg	1.0	6020	11/20/06 13:37	PER	7440-39-3	
Cadmium	7.29	mg/kg	0.20	6020	11/20/06 13:37	PER	7440-43-9	
Chromium	19.1	mg/kg	1.0	6020	11/20/06 13:37	PER	7440-47-3	
Copper	65.3	mg/kg	1.0	6020	11/20/06 13:37	PER	7440-50-8	
Lead, Coarse	267	mg/kg	1.0	6020	11/20/06 17:06	PER		
Lead, Fine	1,690	mg/kg	1.0	6020	11/20/06 17:29	PER		
Lead, Total Calculated	699	mg/kg		6020	11/21/06 09:00	PER	7439-92-1C	
Mercury	0.076	mg/kg	0.050	7471A	11/14/06 14:35	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	11/20/06 13:37	PER	7782-49-2	
Silver	0.24	mg/kg	0.20	6020	11/20/06 13:37	PER	7440-22-4	
Zinc	645	mg/kg	1.0	6020	11/20/06 13:37	PER	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	11/15/06 11:19	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	11/15/06 11:19	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	11/15/06 11:19	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	11/15/06 11:19	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	11/15/06 11:19	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	11/15/06 11:19	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	11/15/06 11:19	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	11/15/06 11:19	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	11/15/06 11:19	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	11/15/06 11:19	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	11/15/06 11:19	JANB	11141-16-5	

Lab Sample ID: S29482.08 (continued)
Sample Tag: SS2-03

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - PCBs/Pesticides (continued)								
TCL PCB List (Column 2) (continued)								
PCB-1248	Not detected	ug/kg	330	8082	11/15/06 11:19	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	11/15/06 11:19	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	11/15/06 11:19	JANB	11096-82-5	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	208-96-8	
Acetophenone	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	98-86-2	
Anthracene	940	ug/kg	330	8270C	11/16/06 12:06	ARH	120-12-7	
Atrazine	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	84-74-2	
Benzaldehyde	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	100-52-7	
Benzo(a)anthracene	3,350	ug/kg	330	8270C	11/16/06 12:06	ARH	56-55-3	
Benzo(a)pyrene	4,140	ug/kg	330	8270C	11/16/06 12:06	ARH	50-32-8	
Benzo(b)fluoranthene	3,490	ug/kg	330	8270C	11/16/06 12:06	ARH	205-99-2	
Benzo(ghi)perylene	2,410	ug/kg	330	8270C	11/16/06 12:06	ARH	191-24-2	
Benzo(k)fluoranthene	3,040	ug/kg	330	8270C	11/16/06 12:06	ARH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	85-68-7	
2-Chloronaphthalene	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	91-58-7	
2-Chlorophenol	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	59-50-7	
4-Chloroaniline	Not detected	ug/kg	670	8270C	11/16/06 12:06	ARH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	7005-72-3	
Caprolactam	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	105-60-2	
Carbazole	410	ug/kg	330	8270C	11/16/06 12:06	ARH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	108-60-1	
Chrysene	3,540	ug/kg	330	8270C	11/16/06 12:06	ARH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/kg	670	8270C	11/16/06 12:06	ARH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	606-20-2	
3,3'-Dichlorobenzidine	Not detected	ug/kg	670	8270C	11/16/06 12:06	ARH	91-94-1	
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	670	8270C	11/16/06 12:06	ARH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	53-70-3	
Dibenzofuran	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	132-64-9	
Diethyl phthalate	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	84-66-2	
Dimethyl phthalate	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	117-81-7	
Fluoranthene	7,060	ug/kg	330	8270C	11/16/06 12:06	ARH	206-44-0	
Fluorene	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	86-73-7	
Hexachlorobenzene	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	118-74-1	
Hexachlorobutadiene	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	77-47-4	

Lab Sample ID: S29482.08 (continued)
Sample Tag: SS2-03

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachloroethane	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	67-72-1	
Indeno(1,2,3-cd)pyrene	2,170	ug/kg	330	8270C	11/16/06 12:06	ARH	193-39-5	
Isophorone	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	78-59-1	
2-Methylnaphthalene	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	91-57-6	
2-Methylphenol	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	108-39-4	
2-Nitroaniline	Not detected	ug/kg	670	8270C	11/16/06 12:06	ARH	88-74-4	
2-Nitrophenol	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	88-75-5	
3-Nitroaniline	Not detected	ug/kg	670	8270C	11/16/06 12:06	ARH	99-09-2	
4-Nitroaniline	Not detected	ug/kg	670	8270C	11/16/06 12:06	ARH	100-01-6	
4-Nitrophenol	Not detected	ug/kg	670	8270C	11/16/06 12:06	ARH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	86-30-6	
Naphthalene	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	91-20-3	
Nitrobenzene	Not detected	ug/kg	200	8270C	11/16/06 12:06	ARH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	117-84-0	
Pentachlorophenol	Not detected	ug/kg	670	8270C	11/16/06 12:06	ARH	87-86-5	
Phenanthrene	3,240	ug/kg	330	8270C	11/16/06 12:06	ARH	85-01-8	
Phenol	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	108-95-2	
Pyrene	6,600	ug/kg	330	8270C	11/16/06 12:06	ARH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/kg	330	8270C	11/16/06 12:06	ARH	88-06-2	
Organics - Volatiles								
TCL Volatile Organics 5035/8260								
Acetone	Not detected	ug/kg	900	5035/8260B	11/13/06 22:27	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	900	5035/8260B	11/13/06 22:27	JGH	78-93-3	
Benzene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	71-43-2	
Bromodichloromethane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	75-27-4	
Bromoform	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	75-25-2	
Bromomethane	Not detected	ug/kg	300	5035/8260B	11/13/06 22:27	JGH	74-83-9	
Carbon disulfide	Not detected	ug/kg	300	5035/8260B	11/13/06 22:27	JGH	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	108-90-7	
Chloroethane	Not detected	ug/kg	300	5035/8260B	11/13/06 22:27	JGH	75-00-3	
Chloroform	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	67-66-3	
Chloromethane	Not detected	ug/kg	300	5035/8260B	11/13/06 22:27	JGH	74-87-3	
Cyclohexane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	110-82-7	
1,1-Dichloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	75-34-3	
1,1-Dichloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	106-93-4	
1,2-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	95-50-1	
1,2-Dichloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	107-06-2	
1,2-Dichloropropane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	78-87-5	
1,3-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	106-46-7	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	10061-01-5	

Lab Sample ID: S29482.08 (continued)
Sample Tag: SS2-03

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 5035/8260 (continued)								
Dibromochloromethane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	124-48-1	
Dichlorodifluoromethane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	75-71-8	
trans-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	10061-02-6	
Ethylbenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	100-41-4	
2-Hexanone	Not detected	ug/kg	3,000	5035/8260B	11/13/06 22:27	JGH	591-78-6	
Isopropylbenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	98-82-8	
Methyl Acetate	Not detected	ug/kg	3,000	5035/8260B	11/13/06 22:27	JGH	79-20-9	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	5035/8260B	11/13/06 22:27	JGH	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	5035/8260B	11/13/06 22:27	JGH	1634-04-4	
Methyl cyclohexane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	108-87-2	
Methylene chloride	Not detected	ug/kg	300	5035/8260B	11/13/06 22:27	JGH	75-09-2	
Styrene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	100-42-5	
1,1,1-Trichloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	79-34-5	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	5035/8260B	11/13/06 22:27	JGH	76-13-1	
1,1,2-Trichloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	79-00-5	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	5035/8260B	11/13/06 22:27	JGH	120-82-1	
Tetrachloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	108-88-3	
Trichloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	5035/8260B	11/13/06 22:27	JGH	75-69-4	
Vinyl chloride	Not detected	ug/kg	100	5035/8260B	11/13/06 22:27	JGH	75-01-4	
o-Xylene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH	95-47-6	
p,m-Xylene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:27	JGH		

Analytical Laboratory Report

Lab Sample ID: S29482.09
Sample Tag: SS2-04
Collected Date/Time: 11/08/2006 16:30
Matrix: Soil
COC Reference: 038993

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.6	IR
1	40ml Glass	MeOH	Yes	4.6	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	11/10/06 15:30	DLR		
Extraction, PCB	Completed			3550B	11/14/06 11:00	TAS		
Lead, Coarse Digestion	Completed			3050B	11/20/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	11/14/06 10:00	JRT		
Lead, Fine Digestion	Completed			3050B	11/20/06 12:00	PER		
Mercury Digestion	Completed			7471A	11/14/06 11:00	JRT		
Metal Digestion	Completed			3050B	11/20/06 12:00	PER		
Inorganics								
Total Solids	80	%	1	160.3	11/14/06 10:00	JRT		
Metals								
% Coarse by Weight	87.9	%			11/14/06 10:00	JRT		
% Fine by Weight	12.1	%			11/14/06 10:00	JRT		
Arsenic	2.40	mg/kg	0.10	6020	11/20/06 13:40	PER	7440-38-2	
Barium	49.5	mg/kg	1.0	6020	11/20/06 13:40	PER	7440-39-3	
Cadmium	5.17	mg/kg	0.20	6020	11/20/06 13:40	PER	7440-43-9	
Chromium	38.1	mg/kg	1.0	6020	11/20/06 13:40	PER	7440-47-3	
Copper	94.1	mg/kg	1.0	6020	11/20/06 13:40	PER	7440-50-8	
Lead, Coarse	70.0	mg/kg	1.0	6020	11/20/06 17:07	PER		
Lead, Fine	180	mg/kg	1.0	6020	11/20/06 17:30	PER		
Lead, Total Calculated	83.3	mg/kg		6020	11/21/06 09:00	PER	7439-92-1C	
Mercury	Not detected	mg/kg	0.050	7471A	11/14/06 14:37	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	11/20/06 13:40	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	11/20/06 13:40	PER	7440-22-4	
Zinc	691	mg/kg	1.0	6020	11/20/06 13:40	PER	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	11/15/06 11:30	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	11/15/06 11:30	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	11/15/06 11:30	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	11/15/06 11:30	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	11/15/06 11:30	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	11/15/06 11:30	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	11/15/06 11:30	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	11/15/06 11:30	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	11/15/06 11:30	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	11/15/06 11:30	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	11/15/06 11:30	JANB	11141-16-5	

Lab Sample ID: S29482.09 (continued)
Sample Tag: SS2-04

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - PCBs/Pesticides (continued)								
TCL PCB List (Column 2) (continued)								
PCB-1248	Not detected	ug/kg	330	8082	11/15/06 11:30	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	11/15/06 11:30	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	11/15/06 11:30	JANB	11096-82-5	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	83-32-9	XY
Acenaphthylene	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	208-96-8	XY
Acetophenone	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	98-86-2	XY
Anthracene	13,900	ug/kg	630	8270C	11/16/06 23:08	ARH	120-12-7	XY
Atrazine	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	1912-24-9	XY
1,1'-Biphenyl	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	92-52-4	XY
4-Bromophenyl phenyl ether	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	101-55-3	XY
di-n-Butyl phthalate	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	84-74-2	XY
Benzaldehyde	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	100-52-7	XY
Benzo(a)anthracene	37,300	ug/kg	630	8270C	11/16/06 23:08	ARH	56-55-3	XY
Benzo(a)pyrene	37,300	ug/kg	630	8270C	11/16/06 23:08	ARH	50-32-8	XY
Benzo(b)fluoranthene	35,100	ug/kg	630	8270C	11/16/06 23:08	ARH	205-99-2	XY
Benzo(ghi)perylene	19,400	ug/kg	630	8270C	11/16/06 23:08	ARH	191-24-2	XY
Benzo(k)fluoranthene	30,400	ug/kg	630	8270C	11/16/06 23:08	ARH	207-08-9	XY
Butyl benzyl phthalate	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	85-68-7	XY
2-Chloronaphthalene	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	91-58-7	XY
2-Chlorophenol	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	95-57-8	XY
4-Chloro-3-methylphenol	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	59-50-7	XY
4-Chloroaniline	Not detected	ug/kg	670	8270C	11/16/06 23:08	ARH	106-47-8	XY
4-Chlorophenyl phenyl ether	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	7005-72-3	XY
Caprolactam	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	105-60-2	XY
Carbazole	2,030	ug/kg	630	8270C	11/16/06 23:08	ARH	86-74-8	XY
bis(2-Chloroethoxy)methane	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	111-91-1	XY
bis(2-Chloroethyl)ether	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	111-44-4	XY
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	108-60-1	XY
Chrysene	38,600	ug/kg	630	8270C	11/16/06 23:08	ARH	218-01-9	XY
2,4-Dichlorophenol	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	120-83-2	XY
2,4-Dimethylphenol	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	105-67-9	XY
2,4-Dinitrophenol	Not detected	ug/kg	670	8270C	11/16/06 23:08	ARH	51-28-5	XY
2,4-Dinitrotoluene	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	121-14-2	XY
2,6-Dinitrotoluene	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	606-20-2	XY
3,3'-Dichlorobenzidine	Not detected	ug/kg	670	8270C	11/16/06 23:08	ARH	91-94-1	XY
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	670	8270C	11/16/06 23:08	ARH	534-52-1	XY
Dibenzo(ah)anthracene	1,800	ug/kg	630	8270C	11/16/06 23:08	ARH	53-70-3	XY
Dibenzofuran	1,020	ug/kg	630	8270C	11/16/06 23:08	ARH	132-64-9	XY
Diethyl phthalate	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	84-66-2	XY
Dimethyl phthalate	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	131-11-3	XY
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	117-81-7	XY
Fluoranthene	81,600	ug/kg	630	8270C	11/16/06 23:08	ARH	206-44-0	XY
Fluorene	1,730	ug/kg	630	8270C	11/16/06 23:08	ARH	86-73-7	XY
Hexachlorobenzene	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	118-74-1	XY
Hexachlorobutadiene	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	87-68-3	XY

X-Elevated reporting limit due to matrix interference Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S29482.09 (continued)
Sample Tag: SS2-04

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	77-47-4	XY
Hexachloroethane	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	67-72-1	XY
Indeno(1,2,3-cd)pyrene	18,300	ug/kg	630	8270C	11/16/06 23:08	ARH	193-39-5	XY
Isophorone	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	78-59-1	XY
2-Methylnaphthalene	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	91-57-6	XY
2-Methylphenol	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	95-48-7	XY
3-, 4-Methylphenol	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	108-39-4	XY
2-Nitroaniline	Not detected	ug/kg	670	8270C	11/16/06 23:08	ARH	88-74-4	XY
2-Nitrophenol	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	88-75-5	XY
3-Nitroaniline	Not detected	ug/kg	670	8270C	11/16/06 23:08	ARH	99-09-2	XY
4-Nitroaniline	Not detected	ug/kg	670	8270C	11/16/06 23:08	ARH	100-01-6	XY
4-Nitrophenol	Not detected	ug/kg	670	8270C	11/16/06 23:08	ARH	100-02-7	XY
N-Nitrosodi-n-propylamine	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	621-64-7	XY
N-Nitrosodiphenylamine	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	86-30-6	XY
Naphthalene	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	91-20-3	XY
Nitrobenzene	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	98-95-3	XY
di-n-Octyl phthalate	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	117-84-0	XY
Pentachlorophenol	Not detected	ug/kg	670	8270C	11/16/06 23:08	ARH	87-86-5	XY
Phenanthrene	36,700	ug/kg	630	8270C	11/16/06 23:08	ARH	85-01-8	XY
Phenol	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	108-95-2	XY
Pyrene	80,900	ug/kg	630	8270C	11/16/06 23:08	ARH	129-00-0	XY
2,4,5-Trichlorophenol	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	95-95-4	XY
2,4,6-Trichlorophenol	Not detected	ug/kg	630	8270C	11/16/06 23:08	ARH	88-06-2	XY
Organics - Volatiles								
TCL Volatile Organics 5035/8260								
Acetone	Not detected	ug/kg	900	5035/8260B	11/13/06 22:46	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	900	5035/8260B	11/13/06 22:46	JGH	78-93-3	
Benzene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	71-43-2	
Bromodichloromethane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	75-27-4	
Bromoform	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	75-25-2	
Bromomethane	Not detected	ug/kg	300	5035/8260B	11/13/06 22:46	JGH	74-83-9	
Carbon disulfide	Not detected	ug/kg	300	5035/8260B	11/13/06 22:46	JGH	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	108-90-7	
Chloroethane	Not detected	ug/kg	300	5035/8260B	11/13/06 22:46	JGH	75-00-3	
Chloroform	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	67-66-3	
Chloromethane	Not detected	ug/kg	300	5035/8260B	11/13/06 22:46	JGH	74-87-3	
Cyclohexane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	110-82-7	
1,1-Dichloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	75-34-3	
1,1-Dichloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	106-93-4	
1,2-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	95-50-1	
1,2-Dichloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	107-06-2	
1,2-Dichloropropane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	78-87-5	
1,3-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	106-46-7	

X-Elevated reporting limit due to matrix interference Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S29482.09 (continued)
Sample Tag: SS2-04

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 5035/8260 (continued)								
cis-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	10061-01-5	
Dibromochloromethane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	124-48-1	
Dichlorodifluoromethane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	75-71-8	
trans-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	10061-02-6	
Ethylbenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	100-41-4	
2-Hexanone	Not detected	ug/kg	3,000	5035/8260B	11/13/06 22:46	JGH	591-78-6	
Isopropylbenzene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	98-82-8	
Methyl Acetate	Not detected	ug/kg	3,000	5035/8260B	11/13/06 22:46	JGH	79-20-9	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	5035/8260B	11/13/06 22:46	JGH	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	5035/8260B	11/13/06 22:46	JGH	1634-04-4	
Methyl cyclohexane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	108-87-2	
Methylene chloride	Not detected	ug/kg	300	5035/8260B	11/13/06 22:46	JGH	75-09-2	
Styrene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	100-42-5	
1,1,1-Trichloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	79-34-5	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	5035/8260B	11/13/06 22:46	JGH	76-13-1	
1,1,2-Trichloroethane	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	79-00-5	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	5035/8260B	11/13/06 22:46	JGH	120-82-1	
Tetrachloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	108-88-3	
Trichloroethene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	5035/8260B	11/13/06 22:46	JGH	75-69-4	
Vinyl chloride	Not detected	ug/kg	100	5035/8260B	11/13/06 22:46	JGH	75-01-4	
o-Xylene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH	95-47-6	
p,m-Xylene	Not detected	ug/kg	60	5035/8260B	11/13/06 22:46	JGH		

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
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C.O.C. PAGE # 1 OF 1

038993

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: CLIFF YANTZ
COMPANY: OBRIEN + GERE
ADDRESS: 33469 W. 14 MILE RD. SUITE 150
CITY: FARMINGTON HILLS STATE: MI ZIP CODE: 48331
PHONE NO. 248661 3745 FAX NO. 248661 4057 P.O. NO. 39923
E-MAIL ADDRESS: QUOTE NO.

INVOICE TO

CONTACT NAME: ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO. FAX NO. P.O. NO.

PROJECT NO./NAME: GM MFD GRAND BLANC
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STANDARD ☒ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

SPECIAL INSTRUCTIONS/NOTES: * FINE + COARSE FRACTION LEAD ANALYSIS ON SOIL SAMPLES

MERIT LAB NO.	2006 YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	M11'10' METALS	SPECIAL INSTRUCTIONS/NOTES
29482.01	11/8	08:40	SB4-11-10	S	2	1					1		X	X	X	X	8'-10'
.02		09:30	SB4-14-03	S	2	1					1		X	X	X	X	1'-3'
.03		12:00	SB5-08-13	S	2	1					1		X	X	X	X	11'-13'
.04		13:00	SB3-13-09	S	2	1					1		X	X	X	X	7'-9'
.05		14:00	EB-04	L	5	2	2	1					X	X	X	X	—
.06		14:40	CORE-04-02	S	2	1					1		X	X	X	X	6"-2'
.07		15:20	SB4-07-03	S	2	1					1		X	X	X	X	1'-3'
.08		16:00	SS2-03	S	2	1					1		X	X	X	X	0-6"
.09		16:30	SS2-04	S	2	1					1		X	X	X	X	0-6"
.10	↓	—	TB-06	L	1		1						X				

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
	11/9/06	10:00
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Mext	11-9-06	16:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Barbara Richardson	11-10-06	8:00

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4.6
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Analytical Laboratory Report

Supplemental Report

Report ID: S29884.01(02)
Generated on 12/22/2006
Replaces report S29884.01(01) generated on 12/15/2006

Report to

Attention: Mr. Clifford Yantz
O'Brien & Gere Engineers
33469 West 14 Mile Road, Suite 150
Farmington Hills, MI 48331

Phone: 248-661-3745 FAX: 248-661-4057

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S29884.01-S29884.27
Project: GM MFD Grand Blanc
Collected Date: 12/06/2006
Submitted Date/Time: 12/07/2006 14:30
Sampled by: Mike Robison
P.O. #: 10610474EST

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak
Laboratory Director

Sample Summary (27 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S29884.01	SS2-05	Soil	12/06/2006 09:00
S29884.02	SB2-14-05	Soil	12/06/2006 09:15
S29884.03	SS2-06	Soil	12/06/2006 10:00
S29884.04	SB2-15-05	Soil	12/06/2006 10:15
S29884.05	SS2-07	Soil	12/06/2006 10:40
S29884.06	SB2-16-05	Soil	12/06/2006 10:50
S29884.07	SS2-08	Soil	12/06/2006 11:10
S29884.08	SB2-17-05	Soil	12/06/2006 11:20
S29884.09	SS2-09	Soil	12/06/2006 11:40
S29884.10	SB2-18-05	Soil	12/06/2006 11:55
S29884.11	SS2-10	Soil	12/06/2006 12:10
S29884.12	SB2-19-05	Soil	12/06/2006 12:20
S29884.13	SB2-20-01	Soil	12/06/2006 12:30
S29884.14	SB2-20-05	Soil	12/06/2006 12:40
S29884.15	SS2-11	Soil	12/06/2006 12:50
S29884.16	SB2-21-05	Soil	12/06/2006 13:00
S29884.17	SS2-12	Soil	12/06/2006 13:15
S29884.18	SB2-22-05	Soil	12/06/2006 13:30
S29884.19	SS2-13	Soil	12/06/2006 13:50
S29884.20	SB2-23-05	Soil	12/06/2006 14:00
S29884.21	SS4-02	Soil	12/06/2006 14:20
S29884.22	SB4-28-05	Soil	12/06/2006 14:30
S29884.23	SS4-03	Soil	12/06/2006 15:00
S29884.24	SS4-04	Soil	12/06/2006 15:20
S29884.25	Dup-06	Soil	12/06/2006
S29884.26	SS4-05	Soil	12/06/2006 15:50
S29884.27	EB-05	Water	12/06/2006 16:00

Lab Sample ID: S29884.01
Sample Tag: SS2-05
Collected Date/Time: 12/06/2006 09:00
Matrix: Soil
COC Reference: 038912

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	12/07/06 23:07	EMR		
Lead, Coarse Digestion	Completed			3050B	12/15/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	12/13/06 10:30	JRT		
Lead, Fine Digestion	Completed			3050B	12/15/06 12:00	PER		
Mercury Digestion	Completed			7471A	12/13/06 13:30	JRT		
Metal Digestion	Completed			3050B	12/13/06 12:00	SLS		
Inorganics								
Total Solids	84	%	1	160.3	12/13/06 10:30	JRT		
Metals								
% Coarse by Weight	97.2	%			12/13/06 10:30	JRT		
% Fine by Weight	2.8	%			12/13/06 10:30	JRT		
Arsenic	1.34	mg/kg	0.10	6020	12/14/06 15:57	SLS	7440-38-2	
Barium	38.4	mg/kg	1.0	6020	12/14/06 15:57	SLS	7440-39-3	
Cadmium	0.76	mg/kg	0.20	6020	12/14/06 15:57	SLS	7440-43-9	
Chromium	7.8	mg/kg	2.0	6020	12/14/06 15:57	SLS	7440-47-3	
Copper	18.7	mg/kg	1.0	6020	12/14/06 15:57	SLS	7440-50-8	
Lead, Coarse	19.0	mg/kg	1.0	6020	12/15/06 13:04	PER		
Lead, Fine	56.3	mg/kg	1.0	6020	12/15/06 13:29	PER		
Lead, Total Calculated	20.0	mg/kg	1.0	6020	12/15/06 14:30	PER	7439-92-1C	
Mercury	Not detected	mg/kg	0.050	7471A	12/13/06 15:40	JRT	7439-97-6	
Selenium	0.43	mg/kg	0.20	6020	12/14/06 15:57	SLS	7782-49-2	
Silver	Not detected	mg/kg	0.10	6020	12/14/06 15:57	SLS	7440-22-4	
Zinc	80.0	mg/kg	1.0	6020	12/14/06 15:57	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	12/13/06 22:16	ARH	83-32-9	I
Acenaphthylene	Not detected	ug/kg	300	8270C	12/13/06 22:16	ARH	208-96-8	I
Anthracene	2,000	ug/kg	300	8270C	12/13/06 22:16	ARH	120-12-7	I
Benzo(a)anthracene	10,700	ug/kg	300	8270C	12/13/06 22:16	ARH	56-55-3	I
Benzo(a)pyrene	11,700	ug/kg	300	8270C	12/13/06 22:16	ARH	50-32-8	I
Benzo(b)fluoranthene	13,200	ug/kg	300	8270C	12/13/06 22:16	ARH	205-99-2	I
Benzo(k)fluoranthene	12,200	ug/kg	300	8270C	12/13/06 22:16	ARH	207-08-9	I
Benzo(ghi)perylene	3,200	ug/kg	300	8270C	12/13/06 22:16	ARH	191-24-2	I
Chrysene	10,900	ug/kg	300	8270C	12/13/06 22:16	ARH	218-01-9	I
Dibenzo(ah)anthracene	400	ug/kg	300	8270C	12/13/06 22:16	ARH	53-70-3	I
Fluoranthene	20,100	ug/kg	300	8270C	12/13/06 22:16	ARH	206-44-0	I
Fluorene	300	ug/kg	300	8270C	12/13/06 22:16	ARH	86-73-7	I
Indeno(1,2,3-cd)pyrene	4,000	ug/kg	300	8270C	12/13/06 22:16	ARH	193-39-5	I
Naphthalene	Not detected	ug/kg	300	8270C	12/13/06 22:16	ARH	91-20-3	I

I-Matrix interference with internal standard

Lab Sample ID: S29884.01 (continued)
Sample Tag: SS2-05

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Phenanthrene	5,500	ug/kg	300	8270C	12/13/06 22:16	ARH	85-01-8	I
Pyrene	17,400	ug/kg	300	8270C	12/13/06 22:16	ARH	129-00-0	I
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/13/06 22:16	ARH	91-57-6	I
Polynuclear Aromatics (Replicate 01)								
Acenaphthene	Not detected	ug/kg	400	8270C	12/14/06 23:50	ARH	83-32-9	XI
Acenaphthylene	Not detected	ug/kg	400	8270C	12/14/06 23:50	ARH	208-96-8	XI
Anthracene	1,800	ug/kg	400	8270C	12/14/06 23:50	ARH	120-12-7	XI
Benzo(a)anthracene	10,100	ug/kg	400	8270C	12/14/06 23:50	ARH	56-55-3	XI
Benzo(a)pyrene	10,700	ug/kg	400	8270C	12/14/06 23:50	ARH	50-32-8	XI
Benzo(b)fluoranthene	11,600	ug/kg	400	8270C	12/14/06 23:50	ARH	205-99-2	XI
Benzo(k)fluoranthene	11,600	ug/kg	400	8270C	12/14/06 23:50	ARH	207-08-9	XI
Benzo(ghi)perylene	2,400	ug/kg	400	8270C	12/14/06 23:50	ARH	191-24-2	XI
Chrysene	10,800	ug/kg	400	8270C	12/14/06 23:50	ARH	218-01-9	XI
Dibenzo(ah)anthracene	Not detected	ug/kg	400	8270C	12/14/06 23:50	ARH	53-70-3	XI
Fluoranthene	19,700	ug/kg	400	8270C	12/14/06 23:50	ARH	206-44-0	XI
Fluorene	Not detected	ug/kg	400	8270C	12/14/06 23:50	ARH	86-73-7	XI
Indeno(1,2,3-cd)pyrene	2,900	ug/kg	400	8270C	12/14/06 23:50	ARH	193-39-5	XI
Naphthalene	Not detected	ug/kg	400	8270C	12/14/06 23:50	ARH	91-20-3	XI
Phenanthrene	5,300	ug/kg	400	8270C	12/14/06 23:50	ARH	85-01-8	XI
Pyrene	17,700	ug/kg	400	8270C	12/14/06 23:50	ARH	129-00-0	XI
2-Methylnaphthalene	Not detected	ug/kg	400	8270C	12/14/06 23:50	ARH	91-57-6	XI

I-Matrix interference with internal standard
X-Elevated reporting limit due to matrix interference

Lab Sample ID: S29884.02
Sample Tag: SB2-14-05
Collected Date/Time: 12/06/2006 09:15
Matrix: Soil
COC Reference: 038912

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	12/18/06 20:49	WAR		
Inorganics								
Total Solids	87	%	1	160.3	12/16/06 5:09	LBR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	12/21/06 13:44	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	12/21/06 13:44	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	12/21/06 13:44	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	12/21/06 13:44	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	12/21/06 13:44	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	12/21/06 13:44	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	12/21/06 13:44	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	12/21/06 13:44	ARH	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	12/21/06 13:44	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	12/21/06 13:44	ARH	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	12/21/06 13:44	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	12/21/06 13:44	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	12/21/06 13:44	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	12/21/06 13:44	ARH	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	12/21/06 13:44	ARH	85-01-8	
Pyrene	Not detected	ug/kg	300	8270C	12/21/06 13:44	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/21/06 13:44	ARH	91-57-6	

Lab Sample ID: S29884.03
Sample Tag: SS2-06
Collected Date/Time: 12/06/2006 10:00
Matrix: Soil
COC Reference: 038912

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	12/07/06 23:07	EMR		
Lead, Coarse Digestion	Completed			3050B	12/15/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	12/13/06 10:30	JRT		
Lead, Fine Digestion	Completed			3050B	12/15/06 12:00	PER		
Mercury Digestion	Completed			7471A	12/13/06 13:30	JRT		
Metal Digestion	Completed			3050B	12/13/06 12:00	SLS		
Inorganics								
Total Solids	83	%	1	160.3	12/13/06 10:30	JRT		
Metals								
% Coarse by Weight	94.9	%			12/13/06 10:30	JRT		
% Fine by Weight	5.1	%			12/13/06 10:30	JRT		
Arsenic	1.22	mg/kg	0.10	6020	12/14/06 16:00	SLS	7440-38-2	
Barium	44.4	mg/kg	1.0	6020	12/14/06 16:00	SLS	7440-39-3	
Cadmium	1.21	mg/kg	0.20	6020	12/14/06 16:00	SLS	7440-43-9	
Chromium	15.8	mg/kg	2.0	6020	12/14/06 16:00	SLS	7440-47-3	
Copper	52.9	mg/kg	1.0	6020	12/14/06 16:00	SLS	7440-50-8	
Lead, Coarse	30.1	mg/kg	1.0	6020	12/15/06 13:06	PER		
Lead, Fine	49.8	mg/kg	1.0	6020	12/15/06 13:31	PER		
Lead, Total Calculated	31.1	mg/kg	1.0	6020	12/15/06 14:30	PER	7439-92-1C	
Mercury	Not detected	mg/kg	0.050	7471A	12/13/06 15:41	JRT	7439-97-6	
Selenium	0.39	mg/kg	0.20	6020	12/14/06 16:00	SLS	7782-49-2	
Silver	Not detected	mg/kg	0.10	6020	12/14/06 16:00	SLS	7440-22-4	
Zinc	191	mg/kg	1.0	6020	12/14/06 16:00	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	12/13/06 16:12	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	12/13/06 16:12	ARH	208-96-8	
Anthracene	300	ug/kg	300	8270C	12/13/06 16:12	ARH	120-12-7	
Benzo(a)anthracene	1,600	ug/kg	300	8270C	12/13/06 16:12	ARH	56-55-3	
Benzo(a)pyrene	2,000	ug/kg	300	8270C	12/13/06 16:12	ARH	50-32-8	
Benzo(b)fluoranthene	1,800	ug/kg	300	8270C	12/13/06 16:12	ARH	205-99-2	
Benzo(k)fluoranthene	1,900	ug/kg	300	8270C	12/13/06 16:12	ARH	207-08-9	
Benzo(ghi)perylene	1,000	ug/kg	300	8270C	12/13/06 16:12	ARH	191-24-2	
Chrysene	1,800	ug/kg	300	8270C	12/13/06 16:12	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	12/13/06 16:12	ARH	53-70-3	
Fluoranthene	3,500	ug/kg	300	8270C	12/13/06 16:12	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	12/13/06 16:12	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	1,100	ug/kg	300	8270C	12/13/06 16:12	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	12/13/06 16:12	ARH	91-20-3	
Phenanthrene	1,100	ug/kg	300	8270C	12/13/06 16:12	ARH	85-01-8	

Lab Sample ID: S29884.03 (continued)
Sample Tag: SS2-06

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Pyrene	2,900	ug/kg	300	8270C	12/13/06 16:12	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/13/06 16:12	ARH	91-57-6	

Lab Sample ID: S29884.05
Sample Tag: SS2-07
Collected Date/Time: 12/06/2006 10:40
Matrix: Soil
COC Reference: 038912

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	12/07/06 23:07	EMR		
Lead, Coarse Digestion	Completed			3050B	12/15/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	12/13/06 10:30	JRT		
Lead, Fine Digestion	Completed			3050B	12/15/06 12:00	PER		
Mercury Digestion	Completed			7471A	12/13/06 13:30	JRT		
Metal Digestion	Completed			3050B	12/13/06 12:00	SLS		
Inorganics								
Total Solids	84	%	1	160.3	12/13/06 10:30	JRT		
Metals								
% Coarse by Weight	91.4	%			12/13/06 10:30	JRT		
% Fine by Weight	8.6	%			12/13/06 10:30	JRT		
Arsenic	0.89	mg/kg	0.10	6020	12/14/06 16:03	SLS	7440-38-2	
Barium	47.8	mg/kg	1.0	6020	12/14/06 16:03	SLS	7440-39-3	
Cadmium	0.65	mg/kg	0.20	6020	12/14/06 16:03	SLS	7440-43-9	
Chromium	6.7	mg/kg	2.0	6020	12/14/06 16:03	SLS	7440-47-3	
Copper	11.6	mg/kg	1.0	6020	12/14/06 16:03	SLS	7440-50-8	
Lead, Coarse	22.7	mg/kg	1.0	6020	12/15/06 13:07	PER		
Lead, Fine	44.7	mg/kg	1.0	6020	12/15/06 13:32	PER		
Lead, Total Calculated	24.5	mg/kg	1.0	6020	12/15/06 14:30	PER	7439-92-1C	
Mercury	Not detected	mg/kg	0.050	7471A	12/13/06 15:43	JRT	7439-97-6	
Selenium	0.22	mg/kg	0.20	6020	12/14/06 16:03	SLS	7782-49-2	
Silver	Not detected	mg/kg	0.10	6020	12/14/06 16:03	SLS	7440-22-4	
Zinc	56.7	mg/kg	1.0	6020	12/14/06 16:03	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	12/13/06 21:30	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	12/13/06 21:30	ARH	208-96-8	
Anthracene	800	ug/kg	300	8270C	12/13/06 21:30	ARH	120-12-7	
Benzo(a)anthracene	4,400	ug/kg	300	8270C	12/13/06 21:30	ARH	56-55-3	
Benzo(a)pyrene	5,500	ug/kg	300	8270C	12/13/06 21:30	ARH	50-32-8	
Benzo(b)fluoranthene	6,200	ug/kg	300	8270C	12/13/06 21:30	ARH	205-99-2	
Benzo(k)fluoranthene	4,800	ug/kg	300	8270C	12/13/06 21:30	ARH	207-08-9	
Benzo(ghi)perylene	1,600	ug/kg	300	8270C	12/13/06 21:30	ARH	191-24-2	
Chrysene	4,800	ug/kg	300	8270C	12/13/06 21:30	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	12/13/06 21:30	ARH	53-70-3	
Fluoranthene	8,400	ug/kg	300	8270C	12/13/06 21:30	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	12/13/06 21:30	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	2,000	ug/kg	300	8270C	12/13/06 21:30	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	12/13/06 21:30	ARH	91-20-3	
Phenanthrene	2,100	ug/kg	300	8270C	12/13/06 21:30	ARH	85-01-8	

Lab Sample ID: S29884.05 (continued)
Sample Tag: SS2-07

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Pyrene	7,300	ug/kg	300	8270C	12/13/06 21:30	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/13/06 21:30	ARH	91-57-6	

Lab Sample ID: S29884.06
Sample Tag: SB2-16-05
Collected Date/Time: 12/06/2006 10:50
Matrix: Soil
COC Reference: 038912

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	12/18/06 20:49	WAR		
Inorganics								
Total Solids	87	%	1	160.3	12/16/06 5:09	LBR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	12/21/06 14:06	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	12/21/06 14:06	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	12/21/06 14:06	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	12/21/06 14:06	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	12/21/06 14:06	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	12/21/06 14:06	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	12/21/06 14:06	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	12/21/06 14:06	ARH	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	12/21/06 14:06	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	12/21/06 14:06	ARH	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	12/21/06 14:06	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	12/21/06 14:06	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	12/21/06 14:06	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	12/21/06 14:06	ARH	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	12/21/06 14:06	ARH	85-01-8	
Pyrene	Not detected	ug/kg	300	8270C	12/21/06 14:06	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/21/06 14:06	ARH	91-57-6	

Lab Sample ID: S29884.07
Sample Tag: SS2-08
Collected Date/Time: 12/06/2006 11:10
Matrix: Soil
COC Reference: 038912

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	12/07/06 23:07	EMR		
Lead, Coarse Digestion	Completed			3050B	12/15/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	12/13/06 10:30	JRT		
Lead, Fine Digestion	Completed			3050B	12/15/06 12:00	PER		
Mercury Digestion	Completed			7471A	12/13/06 13:30	JRT		
Metal Digestion	Completed			3050B	12/13/06 12:00	SLS		
Inorganics								
Total Solids	78	%	1	160.3	12/13/06 10:30	JRT		
Metals								
% Coarse by Weight	96.1	%			12/13/06 10:30	JRT		
% Fine by Weight	3.9	%			12/13/06 10:30	JRT		
Arsenic	1.14	mg/kg	0.10	6020	12/14/06 16:07	SLS	7440-38-2	
Barium	42.6	mg/kg	1.0	6020	12/14/06 16:07	SLS	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	12/14/06 16:07	SLS	7440-43-9	
Chromium	3.1	mg/kg	2.0	6020	12/14/06 16:07	SLS	7440-47-3	
Copper	4.9	mg/kg	1.0	6020	12/14/06 16:07	SLS	7440-50-8	
Lead, Coarse	11.8	mg/kg	1.0	6020	12/15/06 13:08	PER		
Lead, Fine	22.6	mg/kg	1.0	6020	12/15/06 13:33	PER		
Lead, Total Calculated	12.2	mg/kg	1.0	6020	12/15/06 14:30	PER	7439-92-1C	
Mercury	Not detected	mg/kg	0.050	7471A	12/13/06 15:45	JRT	7439-97-6	
Selenium	0.31	mg/kg	0.20	6020	12/14/06 16:07	SLS	7782-49-2	
Silver	Not detected	mg/kg	0.10	6020	12/14/06 16:07	SLS	7440-22-4	
Zinc	15.9	mg/kg	1.0	6020	12/14/06 16:07	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	12/13/06 16:34	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	12/13/06 16:34	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	12/13/06 16:34	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	12/13/06 16:34	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	12/13/06 16:34	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	12/13/06 16:34	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	12/13/06 16:34	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	12/13/06 16:34	ARH	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	12/13/06 16:34	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	12/13/06 16:34	ARH	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	12/13/06 16:34	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	12/13/06 16:34	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	12/13/06 16:34	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	12/13/06 16:34	ARH	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	12/13/06 16:34	ARH	85-01-8	

Lab Sample ID: S29884.07 (continued)
Sample Tag: SS2-08

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Pyrene	Not detected	ug/kg	300	8270C	12/13/06 16:34	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/13/06 16:34	ARH	91-57-6	

Lab Sample ID: S29884.09
Sample Tag: SS2-09
Collected Date/Time: 12/06/2006 11:40
Matrix: Soil
COC Reference: 038912

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	12/07/06 23:07	EMR		
Lead, Coarse Digestion	Completed			3050B	12/15/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	12/13/06 10:30	JRT		
Lead, Fine Digestion	Completed			3050B	12/15/06 12:00	PER		
Mercury Digestion	Completed			7471A	12/13/06 13:30	JRT		
Metal Digestion	Completed			3050B	12/13/06 12:00	SLS		
Inorganics								
Total Solids	86	%	1	160.3	12/13/06 10:30	JRT		
Metals								
% Coarse by Weight	93.5	%			12/13/06 10:30	JRT		
% Fine by Weight	6.5	%			12/13/06 10:30	JRT		
Arsenic	0.59	mg/kg	0.10	6020	12/14/06 16:10	SLS	7440-38-2	
Barium	73.7	mg/kg	1.0	6020	12/14/06 16:10	SLS	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	12/14/06 16:10	SLS	7440-43-9	
Chromium	3.8	mg/kg	2.0	6020	12/14/06 16:10	SLS	7440-47-3	
Copper	4.5	mg/kg	1.0	6020	12/14/06 16:10	SLS	7440-50-8	
Lead, Coarse	10.8	mg/kg	1.0	6020	12/15/06 13:10	PER		
Lead, Fine	24.2	mg/kg	1.0	6020	12/15/06 13:34	PER		
Lead, Total Calculated	11.6	mg/kg	1.0	6020	12/15/06 14:30	PER	7439-92-1C	
Mercury	Not detected	mg/kg	0.050	7471A	12/13/06 15:47	JRT	7439-97-6	
Selenium	0.39	mg/kg	0.20	6020	12/14/06 16:10	SLS	7782-49-2	
Silver	Not detected	mg/kg	0.10	6020	12/14/06 16:10	SLS	7440-22-4	
Zinc	13.1	mg/kg	1.0	6020	12/14/06 16:10	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	12/13/06 16:57	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	12/13/06 16:57	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	12/13/06 16:57	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	12/13/06 16:57	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	12/13/06 16:57	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	12/13/06 16:57	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	12/13/06 16:57	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	12/13/06 16:57	ARH	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	12/13/06 16:57	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	12/13/06 16:57	ARH	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	12/13/06 16:57	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	12/13/06 16:57	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	12/13/06 16:57	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	12/13/06 16:57	ARH	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	12/13/06 16:57	ARH	85-01-8	

Lab Sample ID: S29884.09 (continued)
Sample Tag: SS2-09

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Pyrene	Not detected	ug/kg	300	8270C	12/13/06 16:57	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/13/06 16:57	ARH	91-57-6	

Lab Sample ID: S29884.11
Sample Tag: SS2-10
Collected Date/Time: 12/06/2006 12:10
Matrix: Soil
COC Reference: 038912

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	12/07/06 23:07	EMR		
Lead, Coarse Digestion	Completed			3050B	12/15/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	12/13/06 10:30	JRT		
Lead, Fine Digestion	Completed			3050B	12/15/06 12:00	PER		
Mercury Digestion	Completed			7471A	12/13/06 13:30	JRT		
Metal Digestion	Completed			3050B	12/13/06 12:00	SLS		
Inorganics								
Total Solids	81	%	1	160.3	12/13/06 10:30	JRT		
Metals								
% Coarse by Weight	94.4	%			12/13/06 10:30	JRT		
% Fine by Weight	5.6	%			12/13/06 10:30	JRT		
Arsenic	3.20	mg/kg	0.10	6020	12/14/06 16:13	SLS	7440-38-2	
Barium	67.4	mg/kg	1.0	6020	12/14/06 16:13	SLS	7440-39-3	
Cadmium	2.40	mg/kg	0.20	6020	12/14/06 16:13	SLS	7440-43-9	
Chromium	34.6	mg/kg	2.0	6020	12/14/06 16:13	SLS	7440-47-3	
Copper	52.6	mg/kg	1.0	6020	12/14/06 16:13	SLS	7440-50-8	
Lead, Coarse	255	mg/kg	1.0	6020	12/15/06 13:11	PER		
Lead, Fine	224	mg/kg	1.0	6020	12/15/06 13:35	PER		
Lead, Total Calculated	253	mg/kg	1.0	6020	12/15/06 14:30	PER	7439-92-1C	
Mercury	0.087	mg/kg	0.050	7471A	12/13/06 15:49	JRT	7439-97-6	
Selenium	0.48	mg/kg	0.20	6020	12/14/06 16:13	SLS	7782-49-2	
Silver	Not detected	mg/kg	0.10	6020	12/14/06 16:13	SLS	7440-22-4	
Zinc	321	mg/kg	1.0	6020	12/14/06 16:13	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	12/13/06 21:53	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	12/13/06 21:53	ARH	208-96-8	
Anthracene	300	ug/kg	300	8270C	12/13/06 21:53	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	12/13/06 21:53	ARH	56-55-3	
Benzo(a)pyrene	1,000	ug/kg	300	8270C	12/13/06 21:53	ARH	50-32-8	
Benzo(b)fluoranthene	1,300	ug/kg	300	8270C	12/13/06 21:53	ARH	205-99-2	
Benzo(k)fluoranthene	900	ug/kg	300	8270C	12/13/06 21:53	ARH	207-08-9	
Benzo(ghi)perylene	400	ug/kg	300	8270C	12/13/06 21:53	ARH	191-24-2	
Chrysene	1,000	ug/kg	300	8270C	12/13/06 21:53	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	12/13/06 21:53	ARH	53-70-3	
Fluoranthene	1,900	ug/kg	300	8270C	12/13/06 21:53	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	12/13/06 21:53	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	400	ug/kg	300	8270C	12/13/06 21:53	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	12/13/06 21:53	ARH	91-20-3	
Phenanthrene	1,000	ug/kg	300	8270C	12/13/06 21:53	ARH	85-01-8	

Lab Sample ID: S29884.11 (continued)
Sample Tag: SS2-10

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Pyrene	1,600	ug/kg	300	8270C	12/13/06 21:53	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/13/06 21:53	ARH	91-57-6	

Lab Sample ID: S29884.13
Sample Tag: SB2-20-01
Collected Date/Time: 12/06/2006 12:30
Matrix: Soil
COC Reference: 038910

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	12/07/06 23:07	EMR		
Lead, Coarse Digestion	Completed			3050B	12/15/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	12/13/06 10:30	JRT		
Lead, Fine Digestion	Completed			3050B	12/15/06 12:00	PER		
Mercury Digestion	Completed			7471A	12/13/06 13:30	JRT		
Metal Digestion	Completed			3050B	12/13/06 12:00	SLS		
Inorganics								
Total Solids	94	%	1	160.3	12/13/06 10:30	JRT		
Metals								
% Coarse by Weight	90.2	%			12/13/06 10:30	JRT		
% Fine by Weight	9.8	%			12/13/06 10:30	JRT		
Arsenic	2.78	mg/kg	0.10	6020	12/14/06 16:33	SLS	7440-38-2	
Barium	12.6	mg/kg	1.0	6020	12/14/06 16:33	SLS	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	12/14/06 16:33	SLS	7440-43-9	
Chromium	3.0	mg/kg	2.0	6020	12/14/06 16:33	SLS	7440-47-3	
Copper	7.0	mg/kg	1.0	6020	12/14/06 16:33	SLS	7440-50-8	
Lead, Coarse	8.1	mg/kg	1.0	6020	12/15/06 13:12	PER		
Lead, Fine	39.2	mg/kg	1.0	6020	12/15/06 13:36	PER		
Lead, Total Calculated	11.1	mg/kg	1.0	6020	12/15/06 14:30	PER	7439-92-1C	
Mercury	Not detected	mg/kg	0.050	7471A	12/13/06 15:51	JRT	7439-97-6	
Selenium	0.51	mg/kg	0.20	6020	12/14/06 16:33	SLS	7782-49-2	
Silver	Not detected	mg/kg	0.10	6020	12/14/06 16:33	SLS	7440-22-4	
Zinc	21.1	mg/kg	1.0	6020	12/14/06 16:33	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	12/13/06 17:20	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	12/13/06 17:20	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	12/13/06 17:20	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	12/13/06 17:20	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	12/13/06 17:20	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	12/13/06 17:20	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	12/13/06 17:20	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	12/13/06 17:20	ARH	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	12/13/06 17:20	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	12/13/06 17:20	ARH	53-70-3	
Fluoranthene	400	ug/kg	300	8270C	12/13/06 17:20	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	12/13/06 17:20	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	12/13/06 17:20	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	12/13/06 17:20	ARH	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	12/13/06 17:20	ARH	85-01-8	

Lab Sample ID: S29884.13 (continued)
Sample Tag: SB2-20-01

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Pyrene	400	ug/kg	300	8270C	12/13/06 17:20	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/13/06 17:20	ARH	91-57-6	

Lab Sample ID: S29884.27
Sample Tag: EB-05
Collected Date/Time: 12/06/2006 16:00
Matrix: Water
COC Reference: 038999

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Amber	None	Yes	4.4	IR
1	125ml Plastic	HNO3	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7470A	12/08/06 17:30	JRT		
Metal Digestion	Completed			3015A	12/14/06 12:00	SLS		
PNA Extraction	Completed			3510C	12/12/06 22:05	EMR		
Metals								
Arsenic, Dissolved	Not detected	mg/L	0.001	200.8	12/14/06 14:17	SLS	7440-38-2	
Barium, Dissolved	Not detected	mg/L	0.01	200.8	12/14/06 14:17	SLS	7440-39-3	
Cadmium, Dissolved	Not detected	mg/L	0.0005	200.8	12/14/06 14:17	SLS	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	12/14/06 14:17	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	12/14/06 14:17	SLS	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	200.8	12/14/06 14:17	SLS	7439-92-1	
Mercury, Dissolved	Not detected	mg/L	0.0002	245.1M	12/08/06 20:14	JRT	7439-97-6	
Selenium, Dissolved	Not detected	mg/L	0.005	200.8	12/14/06 14:17	SLS	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	200.8	12/14/06 14:17	SLS	7440-22-4	
Zinc, Dissolved	Not detected	mg/L	0.005	200.8	12/14/06 14:17	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatic Hydrocarbon								
Acenaphthene	Not detected	ug/L	5	8270C	12/13/06 15:49	ARH	83-32-9	
Acenaphthylene	Not detected	ug/L	5	8270C	12/13/06 15:49	ARH	208-96-8	
Anthracene	Not detected	ug/L	5	8270C	12/13/06 15:49	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/L	5	8270C	12/13/06 15:49	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	5	8270C	12/13/06 15:49	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	5	8270C	12/13/06 15:49	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/L	5	8270C	12/13/06 15:49	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/L	5	8270C	12/13/06 15:49	ARH	191-24-2	
Chrysene	Not detected	ug/L	5	8270C	12/13/06 15:49	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/L	5	8270C	12/13/06 15:49	ARH	53-70-3	
Fluoranthene	Not detected	ug/L	5	8270C	12/13/06 15:49	ARH	206-44-0	
Fluorene	Not detected	ug/L	5	8270C	12/13/06 15:49	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	5	8270C	12/13/06 15:49	ARH	193-39-5	
Naphthalene	Not detected	ug/L	5	8270C	12/13/06 15:49	ARH	91-20-3	
Phenanthrene	Not detected	ug/L	5	8270C	12/13/06 15:49	ARH	85-01-8	
Pyrene	Not detected	ug/L	5	8270C	12/13/06 15:49	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/L	5	8270C	12/13/06 15:49	ARH	91-57-6	

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C.O.C. PAGE # 1 OF 3

038912

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: CLIFF YANTZ
COMPANY: OBRIEN & GERE
ADDRESS: 33469 W. 14 MILE RD STE 150
CITY: FARMINGTON HILLS STATE: MI ZIP CODE: 48331
PHONE NO.: 248 661 3745 FAX NO.: 248 661 4057 P.O. NO.: 39923
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: ☑ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: GM MFD GRAND BLANC
SAMPLER(S) - PLEASE PRINT/SIGN NAME: MIKE ROBISON

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STANDARD ☑ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

SPECIAL INSTRUCTIONS/NOTES: * FINE & COARSE FRACTION LEAD ANALYSIS FOR SAMPLES

MERIT LAB NO.	YEAR 2006 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	SVOCs	MI 10 METALS
29884.01	12/6	0900	SS2-05	S	1	1							X	X
.02		0915	SB2-14-05	S	1	1								
.03		1000	SS2-06	S	1	1							X	X
.04		1015	SB2-15-05	S	1	1								
.05		1040	SS2-07	S	1	1							X	X
.06		1050	SB2-16-05	S	1	1								
.07		1110	SS2-08	S	1	1							X	X
.08		1120	SB2-17-05	S	1	1								
.09		1140	SS2-09	S	1	1							X	X
.10		1155	SB2-18-05	S	1	1								
.11		1210	SS2-10	S	1	1							X	X
.12		1220	SB2-19-05	S	1	1								

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	OBG	12/7/06	10:00
RECEIVED BY: SIGNATURE/ORGANIZATION	Merit	12-7-06	1350
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	Merit	12-7-06	1435
RECEIVED BY: SIGNATURE/ORGANIZATION	Barbara Richardson	DATE 12-7-06	TIME 14:36

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 4.4

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

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C.O.C. PAGE # 2 OF 3

038910

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME
COMPANY O'BRIEN & GERE
ADDRESS SAME AS PAGE 1
CITY STATE ZIP CODE
PHONE NO. FAX NO. P.O. NO.
E-MAIL ADDRESS QUOTE NO.

INVOICE TO

CONTACT NAME ☑ SAME
COMPANY
ADDRESS
CITY STATE ZIP CODE
PHONE NO. FAX NO. P.O. NO.

PROJECT NO./NAME GM MFD GRAND BLANC
SAMPLER(S) - PLEASE PRINT/SIGN NAME MIKE ROBSON
TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER
DELIVERABLES REQUIRED ☐ STANDARD ☒ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

SPECIAL INSTRUCTIONS/NOTES
* FINE & COARSE FRACTION LEAD ANALYSIS FOR SAMPLES

MERIT LAB NO.	2006 YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	SVOCs	M'10 METALS	
29884.13	12/6	1230	SB2-20-01	S	1	1							X	X	6"-12"
.14		1240	SB2-20-05	S	1	1									4'-5' HOLD
.15		1250	SS2-11	S	1	1							X	X	0-6"
.16		1300	SB2-21-05	S	1	1									4'-5' HOLD
.17		1315	SS2-12	S	1	1							X	X	0-6"
.18		1330	SB2-22-05	S	1	1									4'-5' HOLD
.19		1350	SS2-13	S	1	1							X	X	0-6"
.20		1400	SB2-23-05	S	1	1									4'-5' HOLD
.21		1420	SS4-02	S	1	1							X	X	6"-12"
.22		1430	SB4-28-05	S	1	1									4'-5' HOLD
.23		1500	SS4-03	S	1	1							X	X	0-6"
.24		1520	SS4-04	S	1	1							X	X	6"-12"

RELINQUISHED BY: SIGNATURE/ORGANIZATION	OBG	12/7/06	10:00	RELINQUISHED BY: SIGNATURE/ORGANIZATION	Merit	12-7-06	1430
RECEIVED BY: SIGNATURE/ORGANIZATION	Merit	12-7-06	1500	RECEIVED BY: SIGNATURE/ORGANIZATION	Barbara Richardson	12-7-06	14:30
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME	SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4.4
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME	SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

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038999

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: OBRIEN & GERE
COMPANY:
ADDRESS: SAME AS PAGE 1
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: GM MFD GRAND BLANC
SAMPLER(S) - PLEASE PRINT/SIGN NAME: MIKE ROBSON

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STANDARD ☑ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

SPECIAL INSTRUCTIONS/NOTES: * FINE & COARSE FRACTION LEAD ANALYSIS FOR SAMPLES 0-6"

MERIT LAB NO.	2006 YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	SVOCs	MI '10 METALS
29884.25	12/6	—	DUP-06	S	1	1							X	X
.26		1550	SS4-05	S	1	1								
.27		1600	FB-05	L	2	1		1					X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
	12/7/06	10:00
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Merit	12-7-06	1000
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Merit	12-7-06	1430
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Barbara Richardson	12-7-06	14:30

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL 4.4

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Analytical Laboratory Report

Report ID: S29928.01(01)
Generated on 12/18/2006

Report to

Attention: Mr. Clifford Yantz
O'Brien & Gere Engineers
33469 West 14 Mile Road, Suite 150
Farmington Hills, MI 48331

Phone: 248-661-3745 FAX: 248-661-4057

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S29928.01-S29928.33
Project: GM MFD Grand Blanc
Collected Date: 12/07/2006 - 12/08/2006
Submitted Date/Time: 12/08/2006 16:15
Sampled by: Mike Robison
P.O. #: 10610474EST

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak
Laboratory Director

Sample Summary (33 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S29928.01	SS3-01	Soil	12/07/2006 09:15
S29928.02	SS3-01 MS	Soil	12/07/2006 09:15
S29928.03	SS3-01 MSD	Soil	12/07/2006 09:15
S29928.04	SS5-01	Soil	12/07/2006 09:30
S29928.05	Dup-07	Soil	12/07/2006
S29928.06	SS5-02	Soil	12/07/2006 09:50
S29928.07	SS5-03	Soil	12/07/2006 10:00
S29928.08	SS4-06	Soil	12/07/2006 10:15
S29928.09	SS4-07	Soil	12/07/2006 10:25
S29928.10	SS4-08	Soil	12/07/2006 10:40
S29928.11	SS2-14	Soil	12/07/2006 11:00
S29928.12	SS2-15	Soil	12/07/2006 11:10
S29928.13	SS2-16	Soil	12/07/2006 11:15
S29928.14	SS2-17	Soil	12/07/2006 11:25
S29928.15	SS2-18	Soil	12/07/2006 11:45
S29928.16	SS2-19	Soil	12/07/2006 12:00
S29928.17	Dup-08	Soil	12/07/2006
S29928.18	SS3-02	Soil	12/07/2006 12:20
S29928.19	SS3-03	Soil	12/07/2006 12:45
S29928.20	MW4-04	Groundwater	12/07/2006 14:30
S29928.21	MW2-03	Groundwater	12/07/2006 15:30
S29928.22	MW2-01	Groundwater	12/07/2006 16:30
S29928.23	MW2-02	Groundwater	12/08/2006 08:15
S29928.24	MW2-02 MS	Groundwater	12/08/2006 08:15
S29928.25	MW2-02 MSD	Groundwater	12/08/2006 08:15
S29928.26	MW4-03	Groundwater	12/08/2006 09:30
S29928.27	Dup-01	Groundwater	12/08/2006
S29928.28	MW4-01	Groundwater	12/08/2006 10:30
S29928.29	MW3-02	Groundwater	12/08/2006 11:30
S29928.30	MW4-02	Groundwater	12/08/2006 12:30
S29928.31	MW3-01	Groundwater	12/08/2006 13:30
S29928.32	MW3-03	Groundwater	12/08/2006 14:30
S29928.33	MW1-01	Groundwater	12/08/2006 15:30

Analytical Laboratory Report

Lab Sample ID: S29928.11
Sample Tag: SS2-14
Collected Date/Time: 12/07/2006 11:00
Matrix: Soil
COC Reference: 035105

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Lead, Coarse Digestion	Completed			3050B	12/18/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	12/13/06 10:30	SLS		
Lead, Fine Digestion	Completed			3050B	12/18/06 12:00	PER		
Mercury Digestion	Completed			7471A	12/15/06 12:00	JRT		
Metal Digestion	Completed			3050B	12/14/06 12:00	SLS		
PNA Extraction	Completed			3550B	12/12/06 22:06	EMR		
Inorganics								
Total Solids	80	%	1	160.3	12/13/06 10:30	JRT		
Metals								
% Coarse by Weight	65.4	%			12/13/06 10:30	JRT		
% Fine by Weight	34.6	%			12/13/06 10:30	JRT		
Arsenic	13.5	mg/kg	0.10	6020	12/18/06 14:00	SLS	7440-38-2	
Barium	93.2	mg/kg	1.0	6020	12/18/06 14:00	SLS	7440-39-3	
Cadmium	1.26	mg/kg	0.20	6020	12/18/06 14:00	SLS	7440-43-9	
Chromium	24.5	mg/kg	2.0	6020	12/18/06 14:00	SLS	7440-47-3	
Copper	91.2	mg/kg	1.0	6020	12/18/06 14:00	SLS	7440-50-8	
Lead, Coarse	892	mg/kg	1.0	6020	12/18/06 12:25	PER		
Lead, Fine	1,280	mg/kg	1.0	6020	12/18/06 12:59	PER		
Lead, Total Calculated	1,020	mg/kg	1.0	6020	12/18/06 13:30	PER	7439-92-1C	
Mercury	0.380	mg/kg	0.050	7471A	12/18/06 15:21	JRT	7439-97-6	
Selenium	0.48	mg/kg	0.20	6020	12/18/06 14:00	SLS	7782-49-2	
Silver	0.31	mg/kg	0.10	6020	12/18/06 14:00	SLS	7440-22-4	
Zinc	156	mg/kg	1.0	6020	12/18/06 14:00	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	12/14/06 17:46	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	12/14/06 17:46	ARH	208-96-8	
Anthracene	500	ug/kg	300	8270C	12/14/06 17:46	ARH	120-12-7	
Benzo(a)anthracene	1,500	ug/kg	300	8270C	12/14/06 17:46	ARH	56-55-3	
Benzo(a)pyrene	2,300	ug/kg	300	8270C	12/14/06 17:46	ARH	50-32-8	
Benzo(b)fluoranthene	2,100	ug/kg	300	8270C	12/14/06 17:46	ARH	205-99-2	
Benzo(k)fluoranthene	1,900	ug/kg	300	8270C	12/14/06 17:46	ARH	207-08-9	
Benzo(ghi)perylene	1,200	ug/kg	300	8270C	12/14/06 17:46	ARH	191-24-2	
Chrysene	2,000	ug/kg	300	8270C	12/14/06 17:46	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	12/14/06 17:46	ARH	53-70-3	
Fluoranthene	3,900	ug/kg	300	8270C	12/14/06 17:46	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	12/14/06 17:46	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	1,200	ug/kg	300	8270C	12/14/06 17:46	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	12/14/06 17:46	ARH	91-20-3	
Phenanthrene	1,800	ug/kg	300	8270C	12/14/06 17:46	ARH	85-01-8	

Lab Sample ID: S29928.11 (continued)
Sample Tag: SS2-14

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Pyrene	3,400	ug/kg	300	8270C	12/14/06 17:46	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/14/06 17:46	ARH	91-57-6	

Analytical Laboratory Report

Lab Sample ID: S29928.12
Sample Tag: SS2-15
Collected Date/Time: 12/07/2006 11:10
Matrix: Soil
COC Reference: 035105

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Lead, Coarse Digestion	Completed			3050B	12/18/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	12/13/06 10:30	SLS		
Lead, Fine Digestion	Completed			3050B	12/18/06 12:00	PER		
Mercury Digestion	Completed			7471A	12/15/06 12:00	JRT		
Metal Digestion	Completed			3050B	12/14/06 12:00	SLS		
PNA Extraction	Completed			3550B	12/12/06 22:06	EMR		
Inorganics								
Total Solids	87	%	1	160.3	12/13/06 10:30	JRT		
Metals								
% Coarse by Weight	88.8	%			12/13/06 10:30	JRT		
% Fine by Weight	11.2	%			12/13/06 10:30	JRT		
Arsenic	3.13	mg/kg	0.10	6020	12/18/06 13:13	SLS	7440-38-2	
Barium	66.0	mg/kg	1.0	6020	12/18/06 13:13	SLS	7440-39-3	
Cadmium	0.74	mg/kg	0.20	6020	12/18/06 13:13	SLS	7440-43-9	
Chromium	13.4	mg/kg	2.0	6020	12/18/06 13:13	SLS	7440-47-3	
Copper	27.4	mg/kg	1.0	6020	12/18/06 13:13	SLS	7440-50-8	
Lead, Coarse	83.0	mg/kg	1.0	6020	12/18/06 12:26	PER		
Lead, Fine	154	mg/kg	1.0	6020	12/18/06 13:01	PER		
Lead, Total Calculated	90.9	mg/kg	1.0	6020	12/18/06 13:30	PER	7439-92-1C	
Mercury	0.073	mg/kg	0.050	7471A	12/18/06 15:24	JRT	7439-97-6	
Selenium	0.56	mg/kg	0.20	6020	12/18/06 13:13	SLS	7782-49-2	
Silver	0.21	mg/kg	0.10	6020	12/18/06 13:13	SLS	7440-22-4	
Zinc	100	mg/kg	1.0	6020	12/18/06 13:13	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	400	ug/kg	300	8270C	12/14/06 18:09	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	12/14/06 18:09	ARH	208-96-8	
Anthracene	1,000	ug/kg	300	8270C	12/14/06 18:09	ARH	120-12-7	
Benzo(a)anthracene	2,100	ug/kg	300	8270C	12/14/06 18:09	ARH	56-55-3	
Benzo(a)pyrene	3,000	ug/kg	300	8270C	12/14/06 18:09	ARH	50-32-8	
Benzo(b)fluoranthene	3,200	ug/kg	300	8270C	12/14/06 18:09	ARH	205-99-2	
Benzo(k)fluoranthene	2,700	ug/kg	300	8270C	12/14/06 18:09	ARH	207-08-9	
Benzo(ghi)perylene	1,200	ug/kg	300	8270C	12/14/06 18:09	ARH	191-24-2	
Chrysene	3,000	ug/kg	300	8270C	12/14/06 18:09	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	12/14/06 18:09	ARH	53-70-3	
Fluoranthene	8,000	ug/kg	300	8270C	12/14/06 18:09	ARH	206-44-0	
Fluorene	400	ug/kg	300	8270C	12/14/06 18:09	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	1,400	ug/kg	300	8270C	12/14/06 18:09	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	12/14/06 18:09	ARH	91-20-3	
Phenanthrene	4,700	ug/kg	300	8270C	12/14/06 18:09	ARH	85-01-8	

Lab Sample ID: S29928.12 (continued)
Sample Tag: SS2-15

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Pyrene	6,000	ug/kg	300	8270C	12/14/06 18:09	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/14/06 18:09	ARH	91-57-6	

Analytical Laboratory Report

Lab Sample ID: S29928.14
Sample Tag: SS2-17
Collected Date/Time: 12/07/2006 11:25
Matrix: Soil
COC Reference: 038911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Lead, Coarse Digestion	Completed			3050B	12/18/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	12/13/06 10:30	SLS		
Lead, Fine Digestion	Completed			3050B	12/18/06 12:00	PER		
Mercury Digestion	Completed			7471A	12/15/06 12:00	JRT		
Metal Digestion	Completed			3050B	12/14/06 12:00	SLS		
PNA Extraction	Completed			3550B	12/12/06 22:06	EMR		
Inorganics								
Total Solids	80	%	1	160.3	12/13/06 10:30	JRT		
Metals								
% Coarse by Weight	93.9	%			12/13/06 10:30	JRT		
% Fine by Weight	6.1	%			12/13/06 10:30	JRT		
Arsenic	1.54	mg/kg	0.10	6020	12/18/06 13:20	SLS	7440-38-2	
Barium	55.6	mg/kg	1.0	6020	12/18/06 13:20	SLS	7440-39-3	
Cadmium	0.73	mg/kg	0.20	6020	12/18/06 13:20	SLS	7440-43-9	
Chromium	7.9	mg/kg	2.0	6020	12/18/06 13:20	SLS	7440-47-3	
Copper	9.8	mg/kg	1.0	6020	12/18/06 13:20	SLS	7440-50-8	
Lead, Coarse	25.8	mg/kg	1.0	6020	12/18/06 12:28	PER		
Lead, Fine	31.6	mg/kg	1.0	6020	12/18/06 13:03	PER		
Lead, Total Calculated	26.1	mg/kg	1.0	6020	12/18/06 13:30	PER	7439-92-1C	
Mercury	Not detected	mg/kg	0.050	7471A	12/18/06 15:28	JRT	7439-97-6	
Selenium	0.43	mg/kg	0.20	6020	12/18/06 13:20	SLS	7782-49-2	
Silver	Not detected	mg/kg	0.10	6020	12/18/06 13:20	SLS	7440-22-4	
Zinc	37.9	mg/kg	1.0	6020	12/18/06 13:20	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	12/14/06 18:54	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	12/14/06 18:54	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	12/14/06 18:54	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	12/14/06 18:54	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	12/14/06 18:54	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	12/14/06 18:54	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	12/14/06 18:54	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	12/14/06 18:54	ARH	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	12/14/06 18:54	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	12/14/06 18:54	ARH	53-70-3	
Fluoranthene	300	ug/kg	300	8270C	12/14/06 18:54	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	12/14/06 18:54	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	12/14/06 18:54	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	12/14/06 18:54	ARH	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	12/14/06 18:54	ARH	85-01-8	

Lab Sample ID: S29928.14 (continued)
Sample Tag: SS2-17

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Pyrene	Not detected	ug/kg	300	8270C	12/14/06 18:54	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/14/06 18:54	ARH	91-57-6	

Analytical Laboratory Report

Lab Sample ID: S29928.15
Sample Tag: SS2-18
Collected Date/Time: 12/07/2006 11:45
Matrix: Soil
COC Reference: 038911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Lead, Coarse Digestion	Completed			3050B	12/18/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	12/13/06 10:30	SLS		
Lead, Fine Digestion	Completed			3050B	12/18/06 12:00	PER		
Mercury Digestion	Completed			7471A	12/15/06 12:00	JRT		
Metal Digestion	Completed			3050B	12/14/06 12:00	SLS		
PNA Extraction	Completed			3550B	12/12/06 22:06	EMR		
Inorganics								
Total Solids	77	%	1	160.3	12/13/06 10:30	JRT		
Metals								
% Coarse by Weight	84.7	%			12/13/06 10:30	JRT		
% Fine by Weight	15.3	%			12/13/06 10:30	JRT		
Arsenic	3.08	mg/kg	0.10	6020	12/18/06 13:23	SLS	7440-38-2	
Barium	59.4	mg/kg	1.0	6020	12/18/06 13:23	SLS	7440-39-3	
Cadmium	5.74	mg/kg	0.20	6020	12/18/06 13:23	SLS	7440-43-9	
Chromium	42.8	mg/kg	2.0	6020	12/18/06 13:23	SLS	7440-47-3	
Copper	34.7	mg/kg	1.0	6020	12/18/06 13:23	SLS	7440-50-8	
Lead, Coarse	177	mg/kg	1.0	6020	12/18/06 12:29	PER		
Lead, Fine	221	mg/kg	1.0	6020	12/18/06 13:04	PER		
Lead, Total Calculated	183	mg/kg	1.0	6020	12/18/06 13:30	PER	7439-92-1C	
Mercury	0.060	mg/kg	0.050	7471A	12/18/06 15:30	JRT	7439-97-6	
Selenium	0.74	mg/kg	0.20	6020	12/18/06 13:23	SLS	7782-49-2	
Silver	0.10	mg/kg	0.10	6020	12/18/06 13:23	SLS	7440-22-4	
Zinc	300	mg/kg	1.0	6020	12/18/06 13:23	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	12/14/06 19:17	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	12/14/06 19:17	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	12/14/06 19:17	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	12/14/06 19:17	ARH	56-55-3	
Benzo(a)pyrene	500	ug/kg	300	8270C	12/14/06 19:17	ARH	50-32-8	
Benzo(b)fluoranthene	700	ug/kg	300	8270C	12/14/06 19:17	ARH	205-99-2	
Benzo(k)fluoranthene	600	ug/kg	300	8270C	12/14/06 19:17	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	12/14/06 19:17	ARH	191-24-2	
Chrysene	600	ug/kg	300	8270C	12/14/06 19:17	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	12/14/06 19:17	ARH	53-70-3	
Fluoranthene	1,300	ug/kg	300	8270C	12/14/06 19:17	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	12/14/06 19:17	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	12/14/06 19:17	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	12/14/06 19:17	ARH	91-20-3	
Phenanthrene	500	ug/kg	300	8270C	12/14/06 19:17	ARH	85-01-8	

Lab Sample ID: S29928.15 (continued)
Sample Tag: SS2-18

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Pyrene	1,100	ug/kg	300	8270C	12/14/06 19:17	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/14/06 19:17	ARH	91-57-6	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 3

035105

CHAIN OF CUSTODY RECORD

REPORT TO		INVOICE TO	
CONTACT NAME	CLIFF YANTZ	CONTACT NAME	SAME
COMPANY	OBRIEN & GERE	COMPANY	
ADDRESS	33469 W. 14 MILE RD STE 150	ADDRESS	
CITY / STATE / ZIP CODE	FARMINGTON HILLS / MI / 48331	CITY / STATE / ZIP CODE	
PHONE NO. / FAX NO. / P.O. NO.	248 661 3745 / 248 661 4057 / 39923	PHONE NO. / FAX NO. / P.O. NO.	
E-MAIL ADDRESS / QUOTE NO.			

PROJECT NO./NAME: GM MFD GRAND BLANC
SAMPLER(S) - PLEASE PRINT/SIGN NAME: MIKE ROBISON

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STANDARD ☒ LEVEL II ☐ LEVEL III ☐ OTHER

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MATRIX CODE: GW=GROUNDWATER, WW=WASTEWATER, S=SOIL, L=LIQUID, SD=SOLID, SL=SLUDGE, O=OIL, A=AIR, W=WASTE, M=MISC

MERIT LAB NO.	DATE (2006 YEAR)	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	SVOC's PNA's	MI 10 METALS	SPECIAL INSTRUCTIONS/NOTES
29928.01	12/7	0915	SS3-01	S	1	1							X	X	0-6"
.02/.03		0915	SS3-01 MS/MSD	S	1	1							X	X	0-6"
.04		0930	SS5-01	S	1	1							X	X	0-6"
.05		←	DUP-07	S	1	1							X	X	0-6"
.06		0950	SS5-02	S	1	1							X	X	0-6"
.07		1000	SS5-03	S	1	1							X	X	0-6"
.08		1015	SS4-06	S	1	1							X	X	0-6"
.09		1025	SS4-07	S	1	1							X	X	0-6"
.10		1040	SS4-08	S	1	1							X	X	0-6"
.11		1100	SS2-14	S	1	1							X	X	0-6"
.12		1110	SS2-15	S	1	1							X	X	0-6"
.13		1115	SS2-16	S	1	1							X	X	0-6"

* SPECIAL INSTRUCTIONS/NOTES: FINE + COARSE FRACTION ANALYSIS FOR LEAD SOIL SAMPLES

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION		12/7/06	1540
RECEIVED BY: SIGNATURE/ORGANIZATION	Merit	12-7-06	1545
RELINQUISHED BY: SIGNATURE/ORGANIZATION		12-7-06	1615
RECEIVED BY: SIGNATURE/ORGANIZATION	Barbara Richardson	12-8-06	16:15
RELINQUISHED BY: SIGNATURE/ORGANIZATION			
RECEIVED BY: SIGNATURE/ORGANIZATION			

SEAL NO. / SEAL INTACT YES ☐ NO ☐ / INITIALS / NOTES: / TEMP. ON ARRIVAL 4.4

SEAL NO. / SEAL INTACT YES ☐ NO ☐ / INITIALS

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

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C.O.C. PAGE # 2 OF 3

038911

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: CLIFF YANTZ
COMPANY: OBRIEN & GERE
ADDRESS: 33469 W. 14 MILE RD STE 150
CITY: FARMINGTON HILLS STATE: MI ZIP CODE: 48331
PHONE NO.: 248 661 3745 FAX NO.: P.O. NO.: 39923
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: ✓ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: GM MFD GRAND BLANC
SAMPLER(S) PLEASE PRINT/SIGN NAME: MIKE ROBITAILLE
TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ STANDARD ☐ OTHER
DELIVERABLES REQUIRED ☐ STANDARD ☑ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	2006 YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	PNAs	MI 10 METALS	SPECIAL INSTRUCTIONS/NOTES
29928.14	12/7	1125	SS2-17	S	1	1							X	X	0-6"
.15		1145	SS2-18	S	1	1							X	X	0-6"
.16		1200	SS2-19	S	1	1							X	X	0-6"
.17		—	DUP-08	S	1	1							X	X	0-6"
.18		1220	SS3-02	S	1	1							X	X	0-6"
.19		1245	SS3-03	S	1	1							X	X	0-6"
.20		1430	MW4-04	GW	2	1		X					X	X	METALS FIELD FILTERED
.21		1530	MW2-03	GW	2	1		1					X	X	" "
.22		1630	MW2-01	GW	2	1		1					X	X	" "
.23	12/8	0815	MW2-02	GW	2	1		1					X	X	" "
.24/.25		0815	MW2-02 MS/MSD	GW	4	2		2					X	X	" "
.26		0930	MW4-03	GW	2	1		1					X	X	" "

SPECIAL INSTRUCTIONS/NOTES: FINE + COARSE FRACTION LEAD ANALYSIS FOR SOILS

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	086	12/9/06	1540
RECEIVED BY: SIGNATURE/ORGANIZATION	/Merit	12/8/06	1540
RELINQUISHED BY: SIGNATURE/ORGANIZATION	/Merit	12-8-06	1615
RECEIVED BY: SIGNATURE/ORGANIZATION	Barbara Richard T.I	12-8-06	16:15
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 1.4
DISSOLVED ANALYSIS FOR METALS WATERS

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-6333
www.meritlabs.com

C.O.C. PAGE # 3 OF 3

038994

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: CLIFF YANT 2
COMPANY: OBRIEN + GERE
ADDRESS: SAME AS PG 1
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO. 39923
E-MAIL ADDRESS: QUOTE NO.

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.

PROJECT NO./NAME: GM MFD GRAND BLANC
SAMPLER(S) - PLEASE PRINT/SIGN NAME: MIKE ROBISON

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STANDARD ☒ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	2006 YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	PNA's	MI 10 METALS	SPECIAL INSTRUCTIONS/NOTES
29928.27	12/8	—	DUP-01	GW	2	1		1					X	X	METALS FIELD FILTERED
.28		1030	MW4-01	GW	2	1		1					X	X	" "
.29		1130	MW3-02	GW	2	1		1					X	X	" "
.30		1230	MW4-02	GW	2	1		1					X	X	" "
.31		1330	MW3-01	GW	2	1		1					X	X	" "
.32		1430	MW3-03	GW	2	1		1					X	X	" "
.33	↓	1530	MW1-01	GW	2	1		1					X	X	" "

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
OBG	12/8/06	15:40
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Merit	12-8-06	15:40
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Merit	12-8-06	16:15
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Barbara Richardson	12-8-06	16:15

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4.4
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Analytical Laboratory Report

Report ID: S30082.01(01)
Generated on 12/28/2006

Report to

Attention: Mr. Clifford Yantz
O'Brien & Gere Engineers
33469 West 14 Mile Road, Suite 150
Farmington Hills, MI 48331

Phone: 248-661-3745 FAX: 248-661-4057

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S30082.01-S30082.28
Project: GM MFD Grand Blanc
Collected Date: 12/20/2006
Submitted Date/Time: 12/20/2006 15:00
Sampled by: Mike Robison
P.O. #: 10610474EST

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak
Laboratory Director

Sample Summary (28 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S30082.01	SS2-20	Soil	12/20/2006 08:50
S30082.02	SS2-21	Soil	12/20/2006 09:00
S30082.03	SS2-22	Soil	12/20/2006 09:10
S30082.04	SS2-23	Soil	12/20/2006 09:20
S30082.05	SS2-24	Soil	12/20/2006 09:30
S30082.06	SS2-25	Soil	12/20/2006 09:40
S30082.07	SS2-26	Soil	12/20/2006 09:50
S30082.08	SS2-27	Soil	12/20/2006 10:10
S30082.09	SS2-28	Soil	12/20/2006 10:20
S30082.10	SS2-29	Soil	12/20/2006 10:30
S30082.11	DUP-09	Soil	12/20/2006
S30082.12	SS2-30	Soil	12/20/2006 10:45
S30082.13	SS2-31	Soil	12/20/2006 10:55
S30082.14	SS2-32	Soil	12/20/2006 11:10
S30082.15	SS2-32 MS	Soil	12/20/2006 11:10
S30082.16	SS2-32 MSD	Soil	12/20/2006 11:10
S30082.17	SS2-33	Soil	12/20/2006 11:20
S30082.18	SS2-34	Soil	12/20/2006 11:30
S30082.19	SS2-35	Soil	12/20/2006 11:40
S30082.20	EB-06	Liquid	12/20/2006 12:00
S30082.21	SS4-09	Soil	12/20/2006 12:30
S30082.22	DUP-10	Soil	12/20/2006
S30082.23	SS4-10	Soil	12/20/2006 12:40
S30082.24	SS4-11	Soil	12/20/2006 12:50
S30082.25	SS4-12	Soil	12/20/2006 13:20
S30082.26	SS4-13	Soil	12/20/2006 13:30
S30082.27	SS4-14	Soil	12/20/2006 13:40
S30082.28	EB-07	Liquid	12/20/2006 14:00

Analytical Laboratory Report

Lab Sample ID: S30082.01
Sample Tag: SS2-20
Collected Date/Time: 12/20/2006 08:50
Matrix: Soil
COC Reference: 035113

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Lead, Coarse Digestion	Completed			3050B	12/27/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	12/22/06 10:30	JRT		
Lead, Fine Digestion	Completed			3050B	12/27/06 12:00	PER		
Mercury Digestion	Completed			7471A	12/26/06 14:00	JRT		
Metal Digestion	Completed			3050B	12/27/06 12:00	SLS		
PNA Extraction	Completed			3550B	12/21/06 13:40	DLR		
Inorganics								
Total Solids	82	%	1	160.3	12/22/06 10:30	JRT		
Metals								
% Coarse by Weight	92.0	%			12/22/06 10:30	JRT		
% Fine by Weight	8.0	%			12/22/06 10:30	JRT		
Arsenic	3.36	mg/kg	0.10	6020	12/27/06 16:15	SLS	7440-38-2	
Barium	30.9	mg/kg	1.0	6020	12/27/06 16:15	SLS	7440-39-3	
Cadmium	1.51	mg/kg	0.20	6020	12/27/06 16:15	SLS	7440-43-9	
Chromium	12.8	mg/kg	2.0	6020	12/27/06 16:15	SLS	7440-47-3	
Copper	128	mg/kg	1.0	6020	12/27/06 16:15	SLS	7440-50-8	
Lead, Coarse	91.3	mg/kg	1.0	6020	12/27/06 14:05	PER		
Lead, Fine	126	mg/kg	1.0	6020	12/27/06 14:31	PER		
Lead, Total Calculated	94.0	mg/kg	1.0	6020	12/27/06 15:00	PER	7439-92-1C	
Mercury	2.760	mg/kg	0.050	7471A	12/26/06 16:08	JRT	7439-97-6	
Selenium	0.49	mg/kg	0.20	6020	12/27/06 16:15	SLS	7782-49-2	
Silver	0.15	mg/kg	0.10	6020	12/27/06 16:15	SLS	7440-22-4	
Zinc	613	mg/kg	1.0	6020	12/27/06 16:15	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	400	8270C	12/23/06 03:15	ARH	83-32-9	XI
Acenaphthylene	Not detected	ug/kg	400	8270C	12/23/06 03:15	ARH	208-96-8	XI
Anthracene	Not detected	ug/kg	400	8270C	12/23/06 03:15	ARH	120-12-7	XI
Benzo(a)anthracene	Not detected	ug/kg	400	8270C	12/23/06 03:15	ARH	56-55-3	XI
Benzo(a)pyrene	900	ug/kg	400	8270C	12/23/06 03:15	ARH	50-32-8	XI
Benzo(b)fluoranthene	1,300	ug/kg	400	8270C	12/23/06 03:15	ARH	205-99-2	XI
Benzo(k)fluoranthene	700	ug/kg	400	8270C	12/23/06 03:15	ARH	207-08-9	XI
Benzo(ghi)perylene	400	ug/kg	400	8270C	12/23/06 03:15	ARH	191-24-2	XI
Chrysene	700	ug/kg	400	8270C	12/23/06 03:15	ARH	218-01-9	XI
Dibenzo(ah)anthracene	Not detected	ug/kg	400	8270C	12/23/06 03:15	ARH	53-70-3	XI
Fluoranthene	1,000	ug/kg	400	8270C	12/23/06 03:15	ARH	206-44-0	XI
Fluorene	Not detected	ug/kg	400	8270C	12/23/06 03:15	ARH	86-73-7	XI
Indeno(1,2,3-cd)pyrene	600	ug/kg	400	8270C	12/23/06 03:15	ARH	193-39-5	XI
Naphthalene	Not detected	ug/kg	400	8270C	12/23/06 03:15	ARH	91-20-3	XI

X-Elevated reporting limit due to matrix interference I-Matrix interference with internal standard

Lab Sample ID: S30082.01 (continued)
Sample Tag: SS2-20

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Phenanthrene	500	ug/kg	400	8270C	12/23/06 03:15	ARH	85-01-8	XI
Pyrene	1,200	ug/kg	400	8270C	12/23/06 03:15	ARH	129-00-0	XI
2-Methylnaphthalene	Not detected	ug/kg	400	8270C	12/23/06 03:15	ARH	91-57-6	XI
Polynuclear Aromatics (Replicate 01)								
Acenaphthene	Not detected	ug/kg	600	8270C	12/27/06 22:45	ARH	83-32-9	X
Acenaphthylene	Not detected	ug/kg	600	8270C	12/27/06 22:45	ARH	208-96-8	X
Anthracene	Not detected	ug/kg	600	8270C	12/27/06 22:45	ARH	120-12-7	X
Benzo(a)anthracene	Not detected	ug/kg	600	8270C	12/27/06 22:45	ARH	56-55-3	X
Benzo(a)pyrene	Not detected	ug/kg	600	8270C	12/27/06 22:45	ARH	50-32-8	X
Benzo(b)fluoranthene	Not detected	ug/kg	600	8270C	12/27/06 22:45	ARH	205-99-2	X
Benzo(k)fluoranthene	Not detected	ug/kg	600	8270C	12/27/06 22:45	ARH	207-08-9	X
Benzo(ghi)perylene	Not detected	ug/kg	600	8270C	12/27/06 22:45	ARH	191-24-2	X
Chrysene	Not detected	ug/kg	600	8270C	12/27/06 22:45	ARH	218-01-9	X
Dibenzo(ah)anthracene	Not detected	ug/kg	600	8270C	12/27/06 22:45	ARH	53-70-3	X
Fluoranthene	Not detected	ug/kg	600	8270C	12/27/06 22:45	ARH	206-44-0	X
Fluorene	Not detected	ug/kg	600	8270C	12/27/06 22:45	ARH	86-73-7	X
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	600	8270C	12/27/06 22:45	ARH	193-39-5	X
Naphthalene	Not detected	ug/kg	600	8270C	12/27/06 22:45	ARH	91-20-3	X
Phenanthrene	Not detected	ug/kg	600	8270C	12/27/06 22:45	ARH	85-01-8	X
Pyrene	Not detected	ug/kg	600	8270C	12/27/06 22:45	ARH	129-00-0	X
2-Methylnaphthalene	Not detected	ug/kg	600	8270C	12/27/06 22:45	ARH	91-57-6	X

X-Elevated reporting limit due to matrix interference I-Matrix interference with internal standard

Analytical Laboratory Report

Lab Sample ID: S30082.05
Sample Tag: SS2-24
Collected Date/Time: 12/20/2006 09:30
Matrix: Soil
COC Reference: 035113

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Lead, Coarse Digestion	Completed			3050B	12/27/06 12:00	PER		
Lead, Fine and Coarse Prep	Completed			3050B	12/22/06 10:30	JRT		
Lead, Fine Digestion	Completed			3050B	12/27/06 12:00	PER		
Mercury Digestion	Completed			7471A	12/26/06 14:00	JRT		
Metal Digestion	Completed			3050B	12/27/06 12:00	SLS		
PNA Extraction	Completed			3550B	12/21/06 13:40	DLR		
Inorganics								
Total Solids	86	%	1	160.3	12/22/06 10:30	JRT		
Metals								
% Coarse by Weight	86.7	%			12/22/06 10:30	JRT		
% Fine by Weight	13.3	%			12/22/06 10:30	JRT		
Arsenic	2.49	mg/kg	0.10	6020	12/27/06 16:53	SLS	7440-38-2	
Barium	17.6	mg/kg	1.0	6020	12/27/06 16:53	SLS	7440-39-3	
Cadmium	1.55	mg/kg	0.20	6020	12/27/06 16:53	SLS	7440-43-9	
Chromium	15.0	mg/kg	2.0	6020	12/27/06 16:53	SLS	7440-47-3	
Copper	40.9	mg/kg	1.0	6020	12/27/06 16:53	SLS	7440-50-8	
Lead, Coarse	293	mg/kg	1.0	6020	12/27/06 14:11	PER		
Lead, Fine	453	mg/kg	1.0	6020	12/27/06 14:39	PER		
Lead, Total Calculated	314	mg/kg	1.0	6020	12/27/06 15:00	PER	7439-92-1C	
Mercury	0.701	mg/kg	0.050	7471A	12/26/06 16:12	JRT	7439-97-6	
Selenium	0.36	mg/kg	0.20	6020	12/27/06 16:53	SLS	7782-49-2	
Silver	0.12	mg/kg	0.10	6020	12/27/06 16:53	SLS	7440-22-4	
Zinc	1,040	mg/kg	1.0	6020	12/27/06 16:53	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	12/22/06 11:51	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	12/22/06 11:51	ARH	208-96-8	
Anthracene	700	ug/kg	300	8270C	12/22/06 11:51	ARH	120-12-7	
Benzo(a)anthracene	1,800	ug/kg	300	8270C	12/22/06 11:51	ARH	56-55-3	
Benzo(a)pyrene	2,300	ug/kg	300	8270C	12/22/06 11:51	ARH	50-32-8	
Benzo(b)fluoranthene	2,400	ug/kg	300	8270C	12/22/06 11:51	ARH	205-99-2	
Benzo(k)fluoranthene	2,000	ug/kg	300	8270C	12/22/06 11:51	ARH	207-08-9	
Benzo(ghi)perylene	1,400	ug/kg	300	8270C	12/22/06 11:51	ARH	191-24-2	
Chrysene	2,100	ug/kg	300	8270C	12/22/06 11:51	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	12/22/06 11:51	ARH	53-70-3	
Fluoranthene	4,600	ug/kg	300	8270C	12/22/06 11:51	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	12/22/06 11:51	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	1,400	ug/kg	300	8270C	12/22/06 11:51	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	12/22/06 11:51	ARH	91-20-3	
Phenanthrene	2,700	ug/kg	300	8270C	12/22/06 11:51	ARH	85-01-8	

Lab Sample ID: S30082.05 (continued)
Sample Tag: SS2-24

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Pyrene	4,100	ug/kg	300	8270C	12/22/06 11:51	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/22/06 11:51	ARH	91-57-6	

Analytical Laboratory Report

Lab Sample ID: S30082.06
Sample Tag: SS2-25
Collected Date/Time: 12/20/2006 09:40
Matrix: Soil
COC Reference: 035113

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	12/21/06 13:40	DLR		
Inorganics								
Total Solids	77	%	1	160.3	12/21/06 17:29	LBR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	12/22/06 12:13	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	12/22/06 12:13	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	12/22/06 12:13	ARH	120-12-7	
Benzo(a)anthracene	300	ug/kg	300	8270C	12/22/06 12:13	ARH	56-55-3	
Benzo(a)pyrene	1,000	ug/kg	300	8270C	12/22/06 12:13	ARH	50-32-8	
Benzo(b)fluoranthene	1,000	ug/kg	300	8270C	12/22/06 12:13	ARH	205-99-2	
Benzo(k)fluoranthene	900	ug/kg	300	8270C	12/22/06 12:13	ARH	207-08-9	
Benzo(ghi)perylene	400	ug/kg	300	8270C	12/22/06 12:13	ARH	191-24-2	
Chrysene	800	ug/kg	300	8270C	12/22/06 12:13	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	12/22/06 12:13	ARH	53-70-3	
Fluoranthene	1,500	ug/kg	300	8270C	12/22/06 12:13	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	12/22/06 12:13	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	500	ug/kg	300	8270C	12/22/06 12:13	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	12/22/06 12:13	ARH	91-20-3	
Phenanthrene	600	ug/kg	300	8270C	12/22/06 12:13	ARH	85-01-8	
Pyrene	1,400	ug/kg	300	8270C	12/22/06 12:13	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/22/06 12:13	ARH	91-57-6	

Analytical Laboratory Report

Lab Sample ID: S30082.08
Sample Tag: SS2-27
Collected Date/Time: 12/20/2006 10:10
Matrix: Soil
COC Reference: 035113

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	12/21/06 13:40	DLR		
Inorganics								
Total Solids	83	%	1	160.3	12/21/06 17:29	LBR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	800	ug/kg	300	8270C	12/22/06 13:44	ARH	83-32-9	I
Acenaphthylene	Not detected	ug/kg	300	8270C	12/22/06 13:44	ARH	208-96-8	I
Anthracene	4,100	ug/kg	300	8270C	12/22/06 13:44	ARH	120-12-7	I
Benzo(a)anthracene	26,400	ug/kg	300	8270C	12/22/06 13:44	ARH	56-55-3	I
Benzo(a)pyrene	27,100	ug/kg	300	8270C	12/22/06 13:44	ARH	50-32-8	I
Benzo(b)fluoranthene	32,800	ug/kg	300	8270C	12/22/06 13:44	ARH	205-99-2	I
Benzo(k)fluoranthene	24,600	ug/kg	300	8270C	12/22/06 13:44	ARH	207-08-9	I
Benzo(ghi)perylene	6,600	ug/kg	300	8270C	12/22/06 13:44	ARH	191-24-2	I
Chrysene	25,300	ug/kg	300	8270C	12/22/06 13:44	ARH	218-01-9	I
Dibenzo(ah)anthracene	900	ug/kg	300	8270C	12/22/06 13:44	ARH	53-70-3	I
Fluoranthene	45,000	ug/kg	300	8270C	12/22/06 13:44	ARH	206-44-0	I
Fluorene	800	ug/kg	300	8270C	12/22/06 13:44	ARH	86-73-7	I
Indeno(1,2,3-cd)pyrene	8,600	ug/kg	300	8270C	12/22/06 13:44	ARH	193-39-5	I
Naphthalene	Not detected	ug/kg	300	8270C	12/22/06 13:44	ARH	91-20-3	I
Phenanthrene	12,700	ug/kg	300	8270C	12/22/06 13:44	ARH	85-01-8	I
Pyrene	42,100	ug/kg	300	8270C	12/22/06 13:44	ARH	129-00-0	I
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/22/06 13:44	ARH	91-57-6	I
Polynuclear Aromatics (Replicate 01)								
Acenaphthene	500	ug/kg	400	8270C	12/23/06 02:53	ARH	83-32-9	XI
Acenaphthylene	Not detected	ug/kg	400	8270C	12/23/06 02:53	ARH	208-96-8	XI
Anthracene	2,900	ug/kg	400	8270C	12/23/06 02:53	ARH	120-12-7	XI
Benzo(a)anthracene	17,800	ug/kg	400	8270C	12/23/06 02:53	ARH	56-55-3	XI
Benzo(a)pyrene	19,700	ug/kg	400	8270C	12/23/06 02:53	ARH	50-32-8	XI
Benzo(b)fluoranthene	20,200	ug/kg	400	8270C	12/23/06 02:53	ARH	205-99-2	XI
Benzo(k)fluoranthene	21,500	ug/kg	400	8270C	12/23/06 02:53	ARH	207-08-9	XI
Benzo(ghi)perylene	4,600	ug/kg	400	8270C	12/23/06 02:53	ARH	191-24-2	XI
Chrysene	17,900	ug/kg	400	8270C	12/23/06 02:53	ARH	218-01-9	XI
Dibenzo(ah)anthracene	2,300	ug/kg	400	8270C	12/23/06 02:53	ARH	53-70-3	XI
Fluoranthene	31,900	ug/kg	400	8270C	12/23/06 02:53	ARH	206-44-0	XI
Fluorene	600	ug/kg	400	8270C	12/23/06 02:53	ARH	86-73-7	XI
Indeno(1,2,3-cd)pyrene	5,700	ug/kg	400	8270C	12/23/06 02:53	ARH	193-39-5	XI
Naphthalene	Not detected	ug/kg	400	8270C	12/23/06 02:53	ARH	91-20-3	XI
Phenanthrene	8,900	ug/kg	400	8270C	12/23/06 02:53	ARH	85-01-8	XI

I-Matrix interference with internal standard
X-Elevated reporting limit due to matrix interference

Lab Sample ID: S30082.08 (continued)
Sample Tag: SS2-27

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (Replicate 01) (continued)								
Pyrene	29,700	ug/kg	400	8270C	12/23/06 02:53	ARH	129-00-0	XI
2-Methylnaphthalene	Not detected	ug/kg	400	8270C	12/23/06 02:53	ARH	91-57-6	XI

X-Elevated reporting limit due to matrix interference I-Matrix interference with internal standard

Analytical Laboratory Report

Lab Sample ID: S30082.09
Sample Tag: SS2-28
Collected Date/Time: 12/20/2006 10:20
Matrix: Soil
COC Reference: 035113

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	12/21/06 13:40	DLR		
Inorganics								
Total Solids	86	%	1	160.3	12/21/06 17:29	LBR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	12/22/06 12:36	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	12/22/06 12:36	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	12/22/06 12:36	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	12/22/06 12:36	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	12/22/06 12:36	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	12/22/06 12:36	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	12/22/06 12:36	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	12/22/06 12:36	ARH	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	12/22/06 12:36	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	12/22/06 12:36	ARH	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	12/22/06 12:36	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	12/22/06 12:36	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	12/22/06 12:36	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	12/22/06 12:36	ARH	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	12/22/06 12:36	ARH	85-01-8	
Pyrene	Not detected	ug/kg	300	8270C	12/22/06 12:36	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/22/06 12:36	ARH	91-57-6	

Analytical Laboratory Report

Lab Sample ID: S30082.10
Sample Tag: SS2-29
Collected Date/Time: 12/20/2006 10:30
Matrix: Soil
COC Reference: 035113

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	12/21/06 13:40	DLR		
Inorganics								
Total Solids	81	%	1	160.3	12/21/06 17:29	LBR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	300	ug/kg	300	8270C	12/22/06 12:59	ARH	83-32-9	I
Acenaphthylene	Not detected	ug/kg	300	8270C	12/22/06 12:59	ARH	208-96-8	I
Anthracene	700	ug/kg	300	8270C	12/22/06 12:59	ARH	120-12-7	I
Benzo(a)anthracene	2,100	ug/kg	300	8270C	12/22/06 12:59	ARH	56-55-3	I
Benzo(a)pyrene	2,800	ug/kg	300	8270C	12/22/06 12:59	ARH	50-32-8	I
Benzo(b)fluoranthene	3,000	ug/kg	300	8270C	12/22/06 12:59	ARH	205-99-2	I
Benzo(k)fluoranthene	2,700	ug/kg	300	8270C	12/22/06 12:59	ARH	207-08-9	I
Benzo(ghi)perylene	900	ug/kg	300	8270C	12/22/06 12:59	ARH	191-24-2	I
Chrysene	2,600	ug/kg	300	8270C	12/22/06 12:59	ARH	218-01-9	I
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	12/22/06 12:59	ARH	53-70-3	I
Fluoranthene	5,100	ug/kg	300	8270C	12/22/06 12:59	ARH	206-44-0	I
Fluorene	Not detected	ug/kg	300	8270C	12/22/06 12:59	ARH	86-73-7	I
Indeno(1,2,3-cd)pyrene	1,000	ug/kg	300	8270C	12/22/06 12:59	ARH	193-39-5	I
Naphthalene	Not detected	ug/kg	300	8270C	12/22/06 12:59	ARH	91-20-3	I
Phenanthrene	2,900	ug/kg	300	8270C	12/22/06 12:59	ARH	85-01-8	I
Pyrene	4,700	ug/kg	300	8270C	12/22/06 12:59	ARH	129-00-0	I
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/22/06 12:59	ARH	91-57-6	I
Polynuclear Aromatics (Replicate 01)								
Acenaphthene	Not detected	ug/kg	300	8270C	12/22/06 23:28	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	12/22/06 23:28	ARH	208-96-8	
Anthracene	600	ug/kg	300	8270C	12/22/06 23:28	ARH	120-12-7	
Benzo(a)anthracene	1,800	ug/kg	300	8270C	12/22/06 23:28	ARH	56-55-3	
Benzo(a)pyrene	2,600	ug/kg	300	8270C	12/22/06 23:28	ARH	50-32-8	
Benzo(b)fluoranthene	2,600	ug/kg	300	8270C	12/22/06 23:28	ARH	205-99-2	
Benzo(k)fluoranthene	2,600	ug/kg	300	8270C	12/22/06 23:28	ARH	207-08-9	
Benzo(ghi)perylene	1,300	ug/kg	300	8270C	12/22/06 23:28	ARH	191-24-2	
Chrysene	2,600	ug/kg	300	8270C	12/22/06 23:28	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	12/22/06 23:28	ARH	53-70-3	
Fluoranthene	5,300	ug/kg	300	8270C	12/22/06 23:28	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	12/22/06 23:28	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	1,300	ug/kg	300	8270C	12/22/06 23:28	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	12/22/06 23:28	ARH	91-20-3	
Phenanthrene	3,000	ug/kg	300	8270C	12/22/06 23:28	ARH	85-01-8	
Pyrene	4,500	ug/kg	300	8270C	12/22/06 23:28	ARH	129-00-0	

I-Matrix interference with internal standard

Lab Sample ID: S30082.10 (continued)
Sample Tag: SS2-29

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (Replicate 01) (continued)								
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	12/22/06 23:28	ARH	91-57-6	

Analytical Laboratory Report

Lab Sample ID: S30082.20
Sample Tag: EB-06
Collected Date/Time: 12/20/2006 12:00
Matrix: Liquid
COC Reference: 035111

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Amber	None	Yes	4.5	IR
1	125ml Plastic	HNO3	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7470A	12/21/06 11:30	JRT		
Metal Digestion	Completed			3015A	12/27/06 12:00	SLS		
PNA Extraction	Completed			3510C	12/20/06 20:18	EMR		
Metals								
Arsenic	Not detected	mg/L	0.001	200.8	12/27/06 14:48	SLS	7440-38-2	
Barium	Not detected	mg/L	0.01	200.8	12/27/06 14:48	SLS	7440-39-3	
Cadmium	Not detected	mg/L	0.0005	200.8	12/27/06 14:48	SLS	7440-43-9	
Chromium	Not detected	mg/L	0.005	200.8	12/27/06 14:48	SLS	7440-47-3	
Copper	Not detected	mg/L	0.004	200.8	12/27/06 14:48	SLS	7440-50-8	
Lead	Not detected	mg/L	0.003	200.8	12/27/06 14:48	SLS	7439-92-1	
Mercury	Not detected	mg/L	0.0002	245.1	12/21/06 15:12	JRT	7439-97-6	
Selenium	Not detected	mg/L	0.005	200.8	12/27/06 14:48	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0002	200.8	12/27/06 14:48	SLS	7440-22-4	
Zinc	Not detected	mg/L	0.005	200.8	12/27/06 14:48	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatic Hydrocarbon								
Acenaphthene	Not detected	ug/L	5	8270C	12/21/06 22:01	ARH	83-32-9	
Acenaphthylene	Not detected	ug/L	5	8270C	12/21/06 22:01	ARH	208-96-8	
Anthracene	Not detected	ug/L	5	8270C	12/21/06 22:01	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/L	5	8270C	12/21/06 22:01	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	5	8270C	12/21/06 22:01	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	5	8270C	12/21/06 22:01	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/L	5	8270C	12/21/06 22:01	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/L	5	8270C	12/21/06 22:01	ARH	191-24-2	
Chrysene	Not detected	ug/L	5	8270C	12/21/06 22:01	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/L	5	8270C	12/21/06 22:01	ARH	53-70-3	
Fluoranthene	Not detected	ug/L	5	8270C	12/21/06 22:01	ARH	206-44-0	
Fluorene	Not detected	ug/L	5	8270C	12/21/06 22:01	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	5	8270C	12/21/06 22:01	ARH	193-39-5	
Naphthalene	Not detected	ug/L	5	8270C	12/21/06 22:01	ARH	91-20-3	
Phenanthrene	Not detected	ug/L	5	8270C	12/21/06 22:01	ARH	85-01-8	
Pyrene	Not detected	ug/L	5	8270C	12/21/06 22:01	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/L	5	8270C	12/21/06 22:01	ARH	91-57-6	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 3

035113

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: CLIFF YANTZ
COMPANY: O'BRIEN & GERE
ADDRESS: 33469 W. 14 MILE RD STE 150
CITY: FARMINGTON HILLS STATE: MI ZIP CODE: 48331
PHONE NO.: 248 661-3745 FAX NO.: 248 661 4057
P.O. NO.: 39923
E-MAIL ADDRESS:
QUOTE NO.:

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: GM MFD GRAND BLANC
SAMPLER(S) - PLEASE PRINT & SIGN NAME: MARK NORTON

TURNAROUND TIME REQUIRED: ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER 1 week

DELIVERABLES REQUIRED: ☐ STANDARD ☒ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO. 2006	DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	11 METALS	PAHs	SPECIAL INSTRUCTIONS/NOTES
															* FILT & COMPS FRACTION LEAD ANALYSIS
30082.01	12/20	0850	SS2-20	S	1	1							X	X	DEPTH
.02		0900	SS2-21	S	1	1							X	X	0-6"
.03		0910	SS2-22	S	1	1							X	X	0-6"
.04		0920	SS2-23	S	1	1							X	X	0-6"
.05		0930	SS2-24	S	1	1							X	X	0-6"
.06		0940	SS2-25	S	1	1								X	0-6"
.07		0950	SS2-26	S	1	1									0-6" HOLD SAMPLE
.08		1010	SS2-27	S	1	1								X	0-6"
.09		1020	SS2-28	S	1	1								X	0-6"
.10		1030	SS2-29	S	1	1								X	0-6"
.11		—	DUP-09	S	1	1							X	X	—
.12		1045	SS2-30	S	1	1							X	X	0-6"

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
	12/20/06	1440
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Merit	12-20-06	1440
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Merit	12-20-06	1530
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Barbara Richard TUI	12-20-06	15:00

SEAL NO.: SEAL INTACT YES ☐ NO ☐ INITIALS:
SEAL NO.: SEAL INTACT YES ☐ NO ☐ INITIALS:

NOTES: TEMP. ON ARRIVAL 4°

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Merit Laboratories, Inc.

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C.O.C. PAGE # 2 OF 3

035111

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: CLIFF YANTZ
COMPANY: OBRIEN & GERE
ADDRESS:
CITY: SEE PAGE 1 STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

☐ SAME
CONTACT NAME:
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME:
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ STANDARD ☒ OTHER 1 WEEK

DELIVERABLES REQUIRED ☐ STANDARD ☒ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

SPECIAL INSTRUCTIONS/NOTES: * FINE & COARSE FRACTION LEAD ANALYSIS

MERIT LAB NO.	2006 YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	MI 10 METALS	PNA's	DEPTH
30082.13	12/20	1055	SS2-31	S	1	1							X	X	0-6"
.14		1110	SS2-32	S	1	1							X	X	0-6"
.15/.16		1110	SS2-32 MS/MSD	S	2	2							X	X	0-6"
.17		1120	SS2-33	S	1	1									0-6" HOLD SAMPLE
.18		1130	SS2-34	S	1	1									0-6" HOLD "
.19		1140	SS2-35	S	1	1									0-6" HOLD "
.20		1200	EB-06	L	2	1		1					X	X	—
.21		1230	SS4-09	S	1	1								X	0-6"
.22		—	DUP-10	S	1	1								X	—
.23		1240	SS4-10	S	1	1									0-6" HOLD SAMPLE
.24		1250	SS4-11	S	1	1									0-6" HOLD "
.25		1320	SS4-12	S	1	1							X		0-6"

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	[signature] / Merit	12/20/06	1440
RECEIVED BY: SIGNATURE/ORGANIZATION	[signature]	12-20-06	1440
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	[signature] / Merit	12-20-06	1500
RECEIVED BY: SIGNATURE/ORGANIZATION	Barbara Richardson	12-20-06	15:00

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
NOTES: TEMP ON ARRIVAL 4.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

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C.O.C. PAGE # 3 OF 3

035110

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: CLIFF MANTZ
COMPANY:
ADDRESS: SEE PAGE 1
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO/NAME: GM MRP GRAND BLANC
SAMPLER(S) - PLEASE PRINT & SIGN NAME:
TURNAROUND TIME REQUIRED: ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ STANDARD ☒ OTHER 4 WEEK
DELIVERABLES REQUIRED: ☐ STANDARD ☒ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

MERIT LAB NO.	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO3	H2SO4	NaOH	MeOH	OTHER	ANALYSIS: MI 10 METALS	PNA's	PCB's	SPECIAL INSTRUCTIONS/NOTES
30082.26		1330	SS4-13	S	1	1							X			DEPTH 0-6"
.27		1340	SS4-14	S	1	1									X	0-6"
.28		1400	EB-07	L	2	1		1					X	X		

* FINE & COARSE FRACTION LEAD ANALYSIS

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION Barbara Richardson	DATE 12-21-06	TIME 15:00

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP ON ARRIVAL 4.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Analytical Laboratory Report

Report ID: S32878.01(01)
Generated on 07/31/2007

Report to

Attention: Mr. Clifford Yantz
O'Brien & Gere Engineers
37000 Grand River Ave.
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Report produced by

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Report Summary

Lab Sample ID(s): S32878.01-S32878.35, S32896.01-S32896.21, S32940.01-S32940.34
Project: GM MFD Grand Blanc
Collected Date: 07/19/2007 - 07/24/2007
Submitted Date/Time: 07/20/2007 12:45
Sampled by: Kevin Schneider
P.O. #: 10710409EST

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
""Not detected"" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak
Laboratory Director

Sample Summary (90 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S32878.01	SB5-12-0.5	Soil	07/19/2007 09:00
S32878.02	SB5-12-3.2	Soil	07/19/2007 09:05
S32878.03	SB5-13-0.5	Soil	07/19/2007 09:40
S32878.04	SB5-13-8.5	Soil	07/19/2007 09:45
S32878.05	SB5-14-0.5	Soil	07/19/2007 10:05
S32878.06	SB5-14-3.5	Soil	07/19/2007 10:10
S32878.07	SB5-15-0.5	Soil	07/19/2007 10:25
S32878.08	SB5-15-6	Soil	07/19/2007 10:35
S32878.09	SB5-16-0.5	Soil	07/19/2007 11:30
S32878.10	SB5-16-4.3	Soil	07/19/2007 11:35
S32878.11	SB3-14-0.5	Soil	07/19/2007 11:55
S32878.12	SB3-14-5	Soil	07/19/2007 12:00
S32878.13	SB5-17-0.5	Soil	07/19/2007 14:05
S32878.14	SB5-17-4.5	Soil	07/19/2007 14:10
S32878.15	SB5-18-0.5	Soil	07/19/2007 14:40
S32878.16	SB5-18-4.5	Soil	07/19/2007 14:45
S32878.17	SB5-19-0.5	Soil	07/19/2007 15:00
S32878.18	SB5-19-4.5	Soil	07/19/2007 15:05
S32878.19	SB5-20-0.5	Soil	07/19/2007 15:20
S32878.20	SB5-20-5	Soil	07/19/2007 15:25
S32878.21	SB5-21-0.5	Soil	07/19/2007 15:35
S32878.22	SB5-21-5	Soil	07/19/2007 15:40
S32878.23	SB5-22-0.5	Soil	07/19/2007 15:55
S32878.24	SB5-22-4.5	Soil	07/19/2007 16:00
S32878.25	SB5-23-0.5	Soil	07/19/2007 16:20
S32878.26	SB5-23-5	Soil	07/19/2007 16:25
S32878.27	SB3-15-0.5	Soil	07/19/2007 12:10
S32878.28	SB3-15-5	Soil	07/19/2007 12:15
S32878.29	SS4-15	Soil	07/20/2007 08:20
S32878.30	SS4-16	Soil	07/20/2007 08:30
S32878.31	SS4-17	Soil	07/20/2007 09:05
S32878.32	SS4-18	Soil	07/20/2007 09:50
S32878.33	SS4-19	Soil	07/20/2007 10:00
S32878.34	SB3-16-0.5	Soil	07/20/2007 11:05
S32878.35	SB3-16-4	Soil	07/20/2007 11:10
S32896.01	SB3-17-0.5	Soil	07/20/2007 11:25
S32896.02	Dup-01	Soil	07/20/2007
S32896.03	SB3-17-4	Soil	07/20/2007 11:30
S32896.04	Dup-02	Soil	07/20/2007
S32896.05	SS2-22N	Soil	07/20/2007 13:55
S32896.06	SS2-22W	Soil	07/20/2007 14:05
S32896.07	SS2-22D-1.2	Soil	07/20/2007 14:10
S32896.08	SS2-22E	Soil	07/20/2007 14:15
S32896.09	SS2-22S	Soil	07/20/2007 14:30
S32896.10	SS2-21W	Soil	07/20/2007 14:55
S32896.11	SS2-21D-4.8	Soil	07/20/2007 15:15
S32896.12	SS2-21S	Soil	07/20/2007 15:30
S32896.13	SS2-21N	Soil	07/20/2007 15:40
S32896.14	SS2-21E	Soil	07/20/2007 15:50
S32896.15	Dup-03	Soil	07/20/2007
S32896.16	SS2-40	Soil	07/20/2007 16:05
S32896.17	SS2-39	Soil	07/20/2007 16:15
S32896.18	SS2-36	Soil	07/20/2007 16:30
S32896.19	SS2-37	Soil	07/20/2007 16:40

Sample Summary (continued)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S32896.20	Dup-04	Soil	07/20/2007
S32896.21	SS2-38	Soil	07/20/2007 16:50
S32940.01	SS2-20D-8	Soil	07/24/2007 08:55
S32940.02	SS2-20N	Soil	07/24/2007 09:05
S32940.03	SS2-20W	Soil	07/24/2007 09:15
S32940.04	SS2-20S	Soil	07/24/2007 09:20
S32940.05	SS2-20E	Soil	07/24/2007 09:25
S32940.06	SS2-14-D-8	Soil	07/24/2007 09:45
S32940.07	SS2-14N	Soil	07/24/2007 09:55
S32940.08	Dup-05	Soil	07/24/2007
S32940.09	SS2-14E	Soil	07/24/2007 10:05
S32940.10	SS2-14S	Soil	07/24/2007 10:20
S32940.11	SS2-14W	Soil	07/24/2007 10:25
S32940.12	SS2-15D-7	Soil	07/24/2007 10:45
S32940.13	SS2-15W	Soil	07/24/2007 10:55
S32940.14	SS2-15N	Soil	07/24/2007 11:05
S32940.15	SS2-15E	Soil	07/24/2007 11:10
S32940.16	SS2-24D-8.5	Soil	07/24/2007 11:30
S32940.17	SS2-24S	Soil	07/24/2007 11:40
S32940.18	Dup-06	Soil	07/24/2007
S32940.19	SS2-24E	Soil	07/24/2007 11:55
S32940.20	SS2-24W	Soil	07/24/2007 12:00
S32940.21	SS2-24N	Soil	07/24/2007 12:05
S32940.22	SS2-19D-3	Soil	07/24/2007 13:15
S32940.23	SS2-19W	Soil	07/24/2007 13:25
S32940.24	SS2-19S	Soil	07/24/2007 13:35
S32940.25	SS2-19E	Soil	07/24/2007 13:45
S32940.26	SS2-19N	Soil	07/24/2007 13:50
S32940.27	SS2-23D-2.5	Soil	07/24/2007 14:35
S32940.28	SS2-23W	Soil	07/24/2007 14:45
S32940.29	SS2-23S	Soil	07/24/2007 14:58
S32940.30	SS2-23E	Soil	07/24/2007 14:55
S32940.31	SS2-23N	Soil	07/24/2007 15:05
S32940.32	Dup-07	Soil	07/24/2007
S32940.33	SS2-27D-2.5	Soil	07/24/2007 15:15
S32940.34	SS4-07D-2	Soil	07/24/2007 15:50

Analytical Laboratory Report

Lab Sample ID: S32896.16
Sample Tag: SS2-40
Collected Date/Time: 07/20/2007 16:05
Matrix: Soil
COC Reference: 041703

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	07/25/07 22:24	EMR		
Inorganics								
Total Solids	88	%	1	160.3	07/23/07 13:20	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	07/27/07 16:01	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/27/07 16:01	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	07/27/07 16:01	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	07/27/07 16:01	ARH	56-55-3	
Benzo(a)pyrene	700	ug/kg	300	8270C	07/27/07 16:01	ARH	50-32-8	
Benzo(b)fluoranthene	700	ug/kg	300	8270C	07/27/07 16:01	ARH	205-99-2	
Benzo(k)fluoranthene	400	ug/kg	300	8270C	07/27/07 16:01	ARH	207-08-9	
Benzo(ghi)perylene	700	ug/kg	300	8270C	07/27/07 16:01	ARH	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	07/27/07 16:01	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/27/07 16:01	ARH	53-70-3	
Fluoranthene	900	ug/kg	300	8270C	07/27/07 16:01	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	07/27/07 16:01	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	600	ug/kg	300	8270C	07/27/07 16:01	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/27/07 16:01	ARH	91-20-3	
Phenanthrene	400	ug/kg	300	8270C	07/27/07 16:01	ARH	85-01-8	
Pyrene	1,000	ug/kg	300	8270C	07/27/07 16:01	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/27/07 16:01	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/27/07 16:01	ARH		

Analytical Laboratory Report

Lab Sample ID: S32896.17
Sample Tag: SS2-39
Collected Date/Time: 07/20/2007 16:15
Matrix: Soil
COC Reference: 041703

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	07/25/07 22:24	EMR		
Inorganics								
Total Solids	82	%	1	160.3	07/23/07 13:20	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	1,100	ug/kg	300	8270C	07/27/07 19:26	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/27/07 19:26	ARH	208-96-8	
Anthracene	5,100	ug/kg	300	8270C	07/27/07 19:26	ARH	120-12-7	
Benzo(a)anthracene	12,800	ug/kg	300	8270C	07/27/07 19:26	ARH	56-55-3	
Benzo(a)pyrene	10,400	ug/kg	300	8270C	07/27/07 19:26	ARH	50-32-8	
Benzo(b)fluoranthene	9,600	ug/kg	300	8270C	07/27/07 19:26	ARH	205-99-2	
Benzo(k)fluoranthene	9,700	ug/kg	300	8270C	07/27/07 19:26	ARH	207-08-9	
Benzo(ghi)perylene	6,000	ug/kg	300	8270C	07/27/07 19:26	ARH	191-24-2	
Chrysene	12,900	ug/kg	300	8270C	07/27/07 19:26	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/27/07 19:26	ARH	53-70-3	
Fluoranthene	26,500	ug/kg	300	8270C	07/27/07 19:26	ARH	206-44-0	
Fluorene	1,900	ug/kg	300	8270C	07/27/07 19:26	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	6,200	ug/kg	300	8270C	07/27/07 19:26	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/27/07 19:26	ARH	91-20-3	
Phenanthrene	18,200	ug/kg	300	8270C	07/27/07 19:26	ARH	85-01-8	
Pyrene	28,000	ug/kg	300	8270C	07/27/07 19:26	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/27/07 19:26	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/27/07 19:26	ARH		

Analytical Laboratory Report

Lab Sample ID: S32896.18
Sample Tag: SS2-36
Collected Date/Time: 07/20/2007 16:30
Matrix: Soil
COC Reference: 041703

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	07/25/07 22:24	EMR		
Inorganics								
Total Solids	78	%	1	160.3	07/23/07 13:20	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	07/27/07 16:24	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/27/07 16:24	ARH	208-96-8	
Anthracene	800	ug/kg	300	8270C	07/27/07 16:24	ARH	120-12-7	
Benzo(a)anthracene	3,900	ug/kg	300	8270C	07/27/07 16:24	ARH	56-55-3	
Benzo(a)pyrene	3,600	ug/kg	300	8270C	07/27/07 16:24	ARH	50-32-8	
Benzo(b)fluoranthene	3,300	ug/kg	300	8270C	07/27/07 16:24	ARH	205-99-2	
Benzo(k)fluoranthene	3,300	ug/kg	300	8270C	07/27/07 16:24	ARH	207-08-9	
Benzo(ghi)perylene	2,200	ug/kg	300	8270C	07/27/07 16:24	ARH	191-24-2	
Chrysene	4,200	ug/kg	300	8270C	07/27/07 16:24	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/27/07 16:24	ARH	53-70-3	
Fluoranthene	6,800	ug/kg	300	8270C	07/27/07 16:24	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	07/27/07 16:24	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	2,200	ug/kg	300	8270C	07/27/07 16:24	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/27/07 16:24	ARH	91-20-3	
Phenanthrene	3,200	ug/kg	300	8270C	07/27/07 16:24	ARH	85-01-8	
Pyrene	8,100	ug/kg	300	8270C	07/27/07 16:24	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/27/07 16:24	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/27/07 16:24	ARH		

Analytical Laboratory Report

Lab Sample ID: S32896.19
Sample Tag: SS2-37
Collected Date/Time: 07/20/2007 16:40
Matrix: Soil
COC Reference: 041703

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	07/25/07 22:24	EMR		
Inorganics								
Total Solids	85	%	1	160.3	07/23/07 13:20	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	07/27/07 16:46	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/27/07 16:46	ARH	208-96-8	
Anthracene	400	ug/kg	300	8270C	07/27/07 16:46	ARH	120-12-7	
Benzo(a)anthracene	1,900	ug/kg	300	8270C	07/27/07 16:46	ARH	56-55-3	
Benzo(a)pyrene	1,800	ug/kg	300	8270C	07/27/07 16:46	ARH	50-32-8	
Benzo(b)fluoranthene	1,900	ug/kg	300	8270C	07/27/07 16:46	ARH	205-99-2	
Benzo(k)fluoranthene	1,300	ug/kg	300	8270C	07/27/07 16:46	ARH	207-08-9	
Benzo(ghi)perylene	1,100	ug/kg	300	8270C	07/27/07 16:46	ARH	191-24-2	
Chrysene	1,800	ug/kg	300	8270C	07/27/07 16:46	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/27/07 16:46	ARH	53-70-3	
Fluoranthene	3,400	ug/kg	300	8270C	07/27/07 16:46	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	07/27/07 16:46	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	1,100	ug/kg	300	8270C	07/27/07 16:46	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/27/07 16:46	ARH	91-20-3	
Phenanthrene	1,400	ug/kg	300	8270C	07/27/07 16:46	ARH	85-01-8	
Pyrene	3,700	ug/kg	300	8270C	07/27/07 16:46	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/27/07 16:46	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/27/07 16:46	ARH		

Analytical Laboratory Report

Lab Sample ID: S32896.20
Sample Tag: Dup-04
Collected Date/Time: 07/20/2007 :
Matrix: Soil
COC Reference: 041703

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	07/25/07 22:24	EMR		
Inorganics								
Total Solids	87	%	1	160.3	07/23/07 13:20	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	07/27/07 17:09	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/27/07 17:09	ARH	208-96-8	
Anthracene	300	ug/kg	300	8270C	07/27/07 17:09	ARH	120-12-7	
Benzo(a)anthracene	1,600	ug/kg	300	8270C	07/27/07 17:09	ARH	56-55-3	
Benzo(a)pyrene	1,500	ug/kg	300	8270C	07/27/07 17:09	ARH	50-32-8	
Benzo(b)fluoranthene	1,400	ug/kg	300	8270C	07/27/07 17:09	ARH	205-99-2	
Benzo(k)fluoranthene	1,300	ug/kg	300	8270C	07/27/07 17:09	ARH	207-08-9	
Benzo(ghi)perylene	900	ug/kg	300	8270C	07/27/07 17:09	ARH	191-24-2	
Chrysene	1,800	ug/kg	300	8270C	07/27/07 17:09	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/27/07 17:09	ARH	53-70-3	
Fluoranthene	2,800	ug/kg	300	8270C	07/27/07 17:09	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	07/27/07 17:09	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	1,000	ug/kg	300	8270C	07/27/07 17:09	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/27/07 17:09	ARH	91-20-3	
Phenanthrene	1,200	ug/kg	300	8270C	07/27/07 17:09	ARH	85-01-8	
Pyrene	3,200	ug/kg	300	8270C	07/27/07 17:09	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/27/07 17:09	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/27/07 17:09	ARH		

Analytical Laboratory Report

Lab Sample ID: S32896.21
Sample Tag: SS2-38
Collected Date/Time: 07/20/2007 16:50
Matrix: Soil
COC Reference: 041703

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	07/25/07 22:24	EMR		
Inorganics								
Total Solids	88	%	1	160.3	07/23/07 13:20	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	3,000	ug/kg	600	8270C	07/27/07 20:12	ARH	83-32-9	X
Acenaphthylene	Not detected	ug/kg	600	8270C	07/27/07 20:12	ARH	208-96-8	X
Anthracene	11,100	ug/kg	600	8270C	07/27/07 20:12	ARH	120-12-7	X
Benzo(a)anthracene	46,500	ug/kg	600	8270C	07/27/07 20:12	ARH	56-55-3	X
Benzo(a)pyrene	38,700	ug/kg	600	8270C	07/27/07 20:12	ARH	50-32-8	X
Benzo(b)fluoranthene	34,600	ug/kg	600	8270C	07/27/07 20:12	ARH	205-99-2	X
Benzo(k)fluoranthene	38,000	ug/kg	600	8270C	07/27/07 20:12	ARH	207-08-9	X
Benzo(ghi)perylene	22,400	ug/kg	600	8270C	07/27/07 20:12	ARH	191-24-2	X
Chrysene	45,000	ug/kg	600	8270C	07/27/07 20:12	ARH	218-01-9	X
Dibenzo(ah)anthracene	Not detected	ug/kg	600	8270C	07/27/07 20:12	ARH	53-70-3	X
Fluoranthene	78,400	ug/kg	600	8270C	07/27/07 20:12	ARH	206-44-0	X
Fluorene	3,400	ug/kg	600	8270C	07/27/07 20:12	ARH	86-73-7	X
Indeno(1,2,3-cd)pyrene	24,000	ug/kg	600	8270C	07/27/07 20:12	ARH	193-39-5	X
Naphthalene	Not detected	ug/kg	600	8270C	07/27/07 20:12	ARH	91-20-3	X
Phenanthrene	39,100	ug/kg	600	8270C	07/27/07 20:12	ARH	85-01-8	X
Pyrene	88,900	ug/kg	600	8270C	07/27/07 20:12	ARH	129-00-0	X
2-Methylnaphthalene	Not detected	ug/kg	600	8270C	07/27/07 20:12	ARH	91-57-6	X
1-Methylnaphthalene	Not detected	ug/kg	600	8270C	07/27/07 20:12	ARH		X

X-Elevated reporting limit due to matrix interference

Analytical Laboratory Report

Lab Sample ID: S32940.01
Sample Tag: SS2-20D-8
Collected Date/Time: 07/24/2007 08:55
Matrix: Soil
COC Reference: 041704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	07/27/07 13:00	JRT		
Inorganics								
Total Solids	83	%	1	160.3	07/26/07 14:22	WAR		
Metals								
Mercury	Not detected	mg/kg	0.050	7471A	07/30/07 15:00	JRT	7439-97-6	

Analytical Laboratory Report

Lab Sample ID: S32940.02
Sample Tag: SS2-20N
Collected Date/Time: 07/24/2007 09:05
Matrix: Soil
COC Reference: 041704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	07/27/07 13:00	JRT		
Inorganics								
Total Solids	95	%	1	160.3	07/26/07 14:22	WAR		
Metals								
Mercury	2.761	mg/kg	0.050	7471A	07/30/07 15:11	JRT	7439-97-6	

Analytical Laboratory Report

Lab Sample ID: S32940.03
Sample Tag: SS2-20W
Collected Date/Time: 07/24/2007 09:15
Matrix: Soil
COC Reference: 041704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	07/27/07 13:00	JRT		
Inorganics								
Total Solids	94	%	1	160.3	07/26/07 14:22	WAR		
Metals								
Mercury	2.242	mg/kg	0.050	7471A	07/30/07 15:13	JRT	7439-97-6	

Analytical Laboratory Report

Lab Sample ID: S32940.04
Sample Tag: SS2-20S
Collected Date/Time: 07/24/2007 09:20
Matrix: Soil
COC Reference: 041704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	07/27/07 13:00	JRT		
Inorganics								
Total Solids	98	%	1	160.3	07/26/07 14:22	WAR		
Metals								
Mercury	5.976	mg/kg	0.050	7471A	07/30/07 15:14	JRT	7439-97-6	

Analytical Laboratory Report

Lab Sample ID: S32940.05
Sample Tag: SS2-20E
Collected Date/Time: 07/24/2007 09:25
Matrix: Soil
COC Reference: 041704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	07/27/07 13:00	JRT		
Inorganics								
Total Solids	95	%	1	160.3	07/26/07 14:22	WAR		
Metals								
Mercury	2.736	mg/kg	0.050	7471A	07/30/07 15:18	JRT	7439-97-6	

Analytical Laboratory Report

Lab Sample ID: S32940.06
Sample Tag: SS2-14-D-8
Collected Date/Time: 07/24/2007 09:45
Matrix: Soil
COC Reference: 041704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	07/30/07 12:00	SLS		
PNA Extraction	Completed			3550B	07/25/07 22:24	EMR		
Inorganics								
Total Solids	77	%	1	160.3	07/26/07 14:22	WAR		
Metals								
Arsenic	1.08	mg/kg	0.10	6020	07/30/07 16:28	SLS	7440-38-2	
Lead	9.2	mg/kg	1.0	6020	07/30/07 16:28	SLS	7439-92-1	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	07/27/07 17:55	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/27/07 17:55	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	07/27/07 17:55	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	07/27/07 17:55	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	07/27/07 17:55	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	07/27/07 17:55	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	07/27/07 17:55	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	07/27/07 17:55	ARH	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	07/27/07 17:55	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/27/07 17:55	ARH	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	07/27/07 17:55	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	07/27/07 17:55	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	07/27/07 17:55	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/27/07 17:55	ARH	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	07/27/07 17:55	ARH	85-01-8	
Pyrene	Not detected	ug/kg	300	8270C	07/27/07 17:55	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/27/07 17:55	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/27/07 17:55	ARH		

Analytical Laboratory Report

Lab Sample ID: S32940.07
Sample Tag: SS2-14N
Collected Date/Time: 07/24/2007 09:55
Matrix: Soil
COC Reference: 041704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	07/30/07 12:00	SLS		
PNA Extraction	Completed			3550B	07/25/07 22:24	EMR		
Inorganics								
Total Solids	95	%	1	160.3	07/26/07 14:22	WAR		
Metals								
Arsenic	12.1	mg/kg	0.10	6020	07/30/07 16:16	SLS	7440-38-2	
Lead	154	mg/kg	1.0	6020	07/30/07 16:16	SLS	7439-92-1	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	07/27/07 19:49	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/27/07 19:49	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	07/27/07 19:49	ARH	120-12-7	
Benzo(a)anthracene	700	ug/kg	300	8270C	07/27/07 19:49	ARH	56-55-3	
Benzo(a)pyrene	1,200	ug/kg	300	8270C	07/27/07 19:49	ARH	50-32-8	
Benzo(b)fluoranthene	700	ug/kg	300	8270C	07/27/07 19:49	ARH	205-99-2	
Benzo(k)fluoranthene	900	ug/kg	300	8270C	07/27/07 19:49	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	07/27/07 19:49	ARH	191-24-2	
Chrysene	900	ug/kg	300	8270C	07/27/07 19:49	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/27/07 19:49	ARH	53-70-3	
Fluoranthene	1,400	ug/kg	300	8270C	07/27/07 19:49	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	07/27/07 19:49	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	07/27/07 19:49	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/27/07 19:49	ARH	91-20-3	
Phenanthrene	700	ug/kg	300	8270C	07/27/07 19:49	ARH	85-01-8	
Pyrene	1,800	ug/kg	300	8270C	07/27/07 19:49	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/27/07 19:49	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/27/07 19:49	ARH		

Analytical Laboratory Report

Lab Sample ID: S32940.08
Sample Tag: Dup-05
Collected Date/Time: 07/24/2007 :
Matrix: Soil
COC Reference: 041704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	07/30/07 12:00	SLS		
PNA Extraction	Completed			3550B	07/26/07 23:22	EMR		
Inorganics								
Total Solids	96	%	1	160.3	07/26/07 14:22	WAR		
Metals								
Arsenic	11.0	mg/kg	0.10	6020	07/30/07 16:18	SLS	7440-38-2	
Lead	204	mg/kg	1.0	6020	07/30/07 16:18	SLS	7439-92-1	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	07/30/07 19:17	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/30/07 19:17	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	07/30/07 19:17	ARH	120-12-7	
Benzo(a)anthracene	1,200	ug/kg	300	8270C	07/30/07 19:17	ARH	56-55-3	
Benzo(a)pyrene	1,600	ug/kg	300	8270C	07/30/07 19:17	ARH	50-32-8	
Benzo(b)fluoranthene	1,600	ug/kg	300	8270C	07/30/07 19:17	ARH	205-99-2	
Benzo(k)fluoranthene	1,300	ug/kg	300	8270C	07/30/07 19:17	ARH	207-08-9	
Benzo(ghi)perylene	1,500	ug/kg	300	8270C	07/30/07 19:17	ARH	191-24-2	
Chrysene	1,500	ug/kg	300	8270C	07/30/07 19:17	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/30/07 19:17	ARH	53-70-3	
Fluoranthene	2,200	ug/kg	300	8270C	07/30/07 19:17	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	07/30/07 19:17	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	1,400	ug/kg	300	8270C	07/30/07 19:17	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/30/07 19:17	ARH	91-20-3	
Phenanthrene	1,200	ug/kg	300	8270C	07/30/07 19:17	ARH	85-01-8	
Pyrene	2,900	ug/kg	300	8270C	07/30/07 19:17	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 19:17	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 19:17	ARH		

Analytical Laboratory Report

Lab Sample ID: S32940.09
Sample Tag: SS2-14E
Collected Date/Time: 07/24/2007 10:05
Matrix: Soil
COC Reference: 041704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	07/30/07 12:00	SLS		
PNA Extraction	Completed			3550B	07/26/07 23:22	EMR		
Inorganics								
Total Solids	97	%	1	160.3	07/26/07 14:22	WAR		
Metals								
Arsenic	8.53	mg/kg	0.10	6020	07/30/07 16:21	SLS	7440-38-2	
Lead	160	mg/kg	1.0	6020	07/30/07 16:21	SLS	7439-92-1	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	500	ug/kg	300	8270C	07/30/07 19:39	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/30/07 19:39	ARH	208-96-8	
Anthracene	1,300	ug/kg	300	8270C	07/30/07 19:39	ARH	120-12-7	
Benzo(a)anthracene	4,600	ug/kg	300	8270C	07/30/07 19:39	ARH	56-55-3	
Benzo(a)pyrene	6,000	ug/kg	300	8270C	07/30/07 19:39	ARH	50-32-8	
Benzo(b)fluoranthene	6,500	ug/kg	300	8270C	07/30/07 19:39	ARH	205-99-2	
Benzo(k)fluoranthene	4,400	ug/kg	300	8270C	07/30/07 19:39	ARH	207-08-9	
Benzo(ghi)perylene	5,000	ug/kg	300	8270C	07/30/07 19:39	ARH	191-24-2	
Chrysene	5,000	ug/kg	300	8270C	07/30/07 19:39	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/30/07 19:39	ARH	53-70-3	
Fluoranthene	8,600	ug/kg	300	8270C	07/30/07 19:39	ARH	206-44-0	
Fluorene	400	ug/kg	300	8270C	07/30/07 19:39	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	4,400	ug/kg	300	8270C	07/30/07 19:39	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/30/07 19:39	ARH	91-20-3	
Phenanthrene	4,900	ug/kg	300	8270C	07/30/07 19:39	ARH	85-01-8	
Pyrene	10,500	ug/kg	300	8270C	07/30/07 19:39	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 19:39	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 19:39	ARH		

Analytical Laboratory Report

Lab Sample ID: S32940.10
Sample Tag: SS2-14S
Collected Date/Time: 07/24/2007 10:20
Matrix: Soil
COC Reference: 041704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	07/30/07 12:00	SLS		
PNA Extraction	Completed			3550B	07/26/07 23:22	EMR		
Inorganics								
Total Solids	94	%	1	160.3	07/26/07 14:22	WAR		
Metals								
Arsenic	8.62	mg/kg	0.10	6020	07/30/07 16:23	SLS	7440-38-2	
Lead	51.9	mg/kg	1.0	6020	07/30/07 16:23	SLS	7439-92-1	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	07/30/07 20:48	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/30/07 20:48	ARH	208-96-8	
Anthracene	500	ug/kg	300	8270C	07/30/07 20:48	ARH	120-12-7	
Benzo(a)anthracene	3,700	ug/kg	300	8270C	07/30/07 20:48	ARH	56-55-3	
Benzo(a)pyrene	4,800	ug/kg	300	8270C	07/30/07 20:48	ARH	50-32-8	
Benzo(b)fluoranthene	4,400	ug/kg	300	8270C	07/30/07 20:48	ARH	205-99-2	
Benzo(k)fluoranthene	3,900	ug/kg	300	8270C	07/30/07 20:48	ARH	207-08-9	
Benzo(ghi)perylene	3,200	ug/kg	300	8270C	07/30/07 20:48	ARH	191-24-2	
Chrysene	3,900	ug/kg	300	8270C	07/30/07 20:48	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/30/07 20:48	ARH	53-70-3	
Fluoranthene	6,300	ug/kg	300	8270C	07/30/07 20:48	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	07/30/07 20:48	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	3,200	ug/kg	300	8270C	07/30/07 20:48	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/30/07 20:48	ARH	91-20-3	
Phenanthrene	2,200	ug/kg	300	8270C	07/30/07 20:48	ARH	85-01-8	
Pyrene	6,600	ug/kg	300	8270C	07/30/07 20:48	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 20:48	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 20:48	ARH		

Analytical Laboratory Report

Lab Sample ID: S32940.11
Sample Tag: SS2-14W
Collected Date/Time: 07/24/2007 10:25
Matrix: Soil
COC Reference: 041704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	07/30/07 12:00	SLS		
PNA Extraction	Completed			3550B	07/26/07 23:22	EMR		
Inorganics								
Total Solids	94	%	1	160.3	07/26/07 14:22	WAR		
Metals								
Arsenic	7.20	mg/kg	0.10	6020	07/30/07 16:25	SLS	7440-38-2	
Lead	109	mg/kg	1.0	6020	07/30/07 16:25	SLS	7439-92-1	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	07/30/07 21:10	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/30/07 21:10	ARH	208-96-8	
Anthracene	500	ug/kg	300	8270C	07/30/07 21:10	ARH	120-12-7	
Benzo(a)anthracene	1,900	ug/kg	300	8270C	07/30/07 21:10	ARH	56-55-3	
Benzo(a)pyrene	2,800	ug/kg	300	8270C	07/30/07 21:10	ARH	50-32-8	
Benzo(b)fluoranthene	2,200	ug/kg	300	8270C	07/30/07 21:10	ARH	205-99-2	
Benzo(k)fluoranthene	2,400	ug/kg	300	8270C	07/30/07 21:10	ARH	207-08-9	
Benzo(ghi)perylene	2,100	ug/kg	300	8270C	07/30/07 21:10	ARH	191-24-2	
Chrysene	2,100	ug/kg	300	8270C	07/30/07 21:10	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/30/07 21:10	ARH	53-70-3	
Fluoranthene	3,500	ug/kg	300	8270C	07/30/07 21:10	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	07/30/07 21:10	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	1,900	ug/kg	300	8270C	07/30/07 21:10	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/30/07 21:10	ARH	91-20-3	
Phenanthrene	2,200	ug/kg	300	8270C	07/30/07 21:10	ARH	85-01-8	
Pyrene	3,900	ug/kg	300	8270C	07/30/07 21:10	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 21:10	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 21:10	ARH		

Analytical Laboratory Report

Lab Sample ID: S32940.12
Sample Tag: SS2-15D-7
Collected Date/Time: 07/24/2007 10:45
Matrix: Soil
COC Reference: 041704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	07/26/07 23:22	EMR		
Inorganics								
Total Solids	87	%	1	160.3	07/26/07 14:22	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	07/27/07 18:18	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/27/07 18:18	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	07/27/07 18:18	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	07/27/07 18:18	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	07/27/07 18:18	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	07/27/07 18:18	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	07/27/07 18:18	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	07/27/07 18:18	ARH	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	07/27/07 18:18	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/27/07 18:18	ARH	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	07/27/07 18:18	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	07/27/07 18:18	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	07/27/07 18:18	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/27/07 18:18	ARH	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	07/27/07 18:18	ARH	85-01-8	
Pyrene	Not detected	ug/kg	300	8270C	07/27/07 18:18	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/27/07 18:18	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/27/07 18:18	ARH		

Analytical Laboratory Report

Lab Sample ID: S32940.13
Sample Tag: SS2-15W
Collected Date/Time: 07/24/2007 10:55
Matrix: Soil
COC Reference: 041705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	07/26/07 23:22	EMR		
Inorganics								
Total Solids	94	%	1	160.3	07/26/07 14:22	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	07/30/07 21:33	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/30/07 21:33	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	07/30/07 21:33	ARH	120-12-7	
Benzo(a)anthracene	1,300	ug/kg	300	8270C	07/30/07 21:33	ARH	56-55-3	
Benzo(a)pyrene	1,900	ug/kg	300	8270C	07/30/07 21:33	ARH	50-32-8	
Benzo(b)fluoranthene	1,500	ug/kg	300	8270C	07/30/07 21:33	ARH	205-99-2	
Benzo(k)fluoranthene	1,300	ug/kg	300	8270C	07/30/07 21:33	ARH	207-08-9	
Benzo(ghi)perylene	1,300	ug/kg	300	8270C	07/30/07 21:33	ARH	191-24-2	
Chrysene	1,300	ug/kg	300	8270C	07/30/07 21:33	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/30/07 21:33	ARH	53-70-3	
Fluoranthene	2,700	ug/kg	300	8270C	07/30/07 21:33	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	07/30/07 21:33	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	1,300	ug/kg	300	8270C	07/30/07 21:33	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/30/07 21:33	ARH	91-20-3	
Phenanthrene	1,300	ug/kg	300	8270C	07/30/07 21:33	ARH	85-01-8	
Pyrene	2,700	ug/kg	300	8270C	07/30/07 21:33	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 21:33	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 21:33	ARH		

Analytical Laboratory Report

Lab Sample ID: S32940.14
Sample Tag: SS2-15N
Collected Date/Time: 07/24/2007 11:05
Matrix: Soil
COC Reference: 041705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	07/26/07 23:22	EMR		
Inorganics								
Total Solids	91	%	1	160.3	07/26/07 14:22	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	1,600	ug/kg	600	8270C	07/30/07 23:04	ARH	83-32-9	X
Acenaphthylene	Not detected	ug/kg	600	8270C	07/30/07 23:04	ARH	208-96-8	X
Anthracene	3,800	ug/kg	600	8270C	07/30/07 23:04	ARH	120-12-7	X
Benzo(a)anthracene	13,000	ug/kg	600	8270C	07/30/07 23:04	ARH	56-55-3	X
Benzo(a)pyrene	15,600	ug/kg	600	8270C	07/30/07 23:04	ARH	50-32-8	X
Benzo(b)fluoranthene	17,400	ug/kg	600	8270C	07/30/07 23:04	ARH	205-99-2	X
Benzo(k)fluoranthene	12,300	ug/kg	600	8270C	07/30/07 23:04	ARH	207-08-9	X
Benzo(ghi)perylene	9,900	ug/kg	600	8270C	07/30/07 23:04	ARH	191-24-2	X
Chrysene	14,800	ug/kg	600	8270C	07/30/07 23:04	ARH	218-01-9	X
Dibenzo(ah)anthracene	Not detected	ug/kg	600	8270C	07/30/07 23:04	ARH	53-70-3	X
Fluoranthene	25,600	ug/kg	600	8270C	07/30/07 23:04	ARH	206-44-0	X
Fluorene	1,300	ug/kg	600	8270C	07/30/07 23:04	ARH	86-73-7	X
Indeno(1,2,3-cd)pyrene	10,200	ug/kg	600	8270C	07/30/07 23:04	ARH	193-39-5	X
Naphthalene	Not detected	ug/kg	600	8270C	07/30/07 23:04	ARH	91-20-3	X
Phenanthrene	15,300	ug/kg	600	8270C	07/30/07 23:04	ARH	85-01-8	X
Pyrene	34,700	ug/kg	600	8270C	07/30/07 23:04	ARH	129-00-0	X
2-Methylnaphthalene	Not detected	ug/kg	600	8270C	07/30/07 23:04	ARH	91-57-6	X
1-Methylnaphthalene	Not detected	ug/kg	600	8270C	07/30/07 23:04	ARH		X

X-Elevated reporting limit due to matrix interference

Analytical Laboratory Report

Lab Sample ID: S32940.15
Sample Tag: SS2-15E
Collected Date/Time: 07/24/2007 11:10
Matrix: Soil
COC Reference: 041705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	07/26/07 23:22	EMR		
Inorganics								
Total Solids	96	%	1	160.3	07/26/07 14:22	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	07/30/07 21:56	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/30/07 21:56	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	07/30/07 21:56	ARH	120-12-7	
Benzo(a)anthracene	600	ug/kg	300	8270C	07/30/07 21:56	ARH	56-55-3	
Benzo(a)pyrene	1,100	ug/kg	300	8270C	07/30/07 21:56	ARH	50-32-8	
Benzo(b)fluoranthene	800	ug/kg	300	8270C	07/30/07 21:56	ARH	205-99-2	
Benzo(k)fluoranthene	700	ug/kg	300	8270C	07/30/07 21:56	ARH	207-08-9	
Benzo(ghi)perylene	900	ug/kg	300	8270C	07/30/07 21:56	ARH	191-24-2	
Chrysene	600	ug/kg	300	8270C	07/30/07 21:56	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/30/07 21:56	ARH	53-70-3	
Fluoranthene	1,200	ug/kg	300	8270C	07/30/07 21:56	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	07/30/07 21:56	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	800	ug/kg	300	8270C	07/30/07 21:56	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/30/07 21:56	ARH	91-20-3	
Phenanthrene	600	ug/kg	300	8270C	07/30/07 21:56	ARH	85-01-8	
Pyrene	1,400	ug/kg	300	8270C	07/30/07 21:56	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 21:56	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 21:56	ARH		

Analytical Laboratory Report

Lab Sample ID: S32940.16
Sample Tag: SS2-24D-8.5
Collected Date/Time: 07/24/2007 11:30
Matrix: Soil
COC Reference: 041705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	07/26/07 23:22	EMR		
Inorganics								
Total Solids	82	%	1	160.3	07/26/07 14:22	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	07/27/07 18:41	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/27/07 18:41	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	07/27/07 18:41	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	07/27/07 18:41	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	07/27/07 18:41	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	07/27/07 18:41	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	07/27/07 18:41	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	07/27/07 18:41	ARH	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	07/27/07 18:41	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/27/07 18:41	ARH	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	07/27/07 18:41	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	07/27/07 18:41	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	07/27/07 18:41	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/27/07 18:41	ARH	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	07/27/07 18:41	ARH	85-01-8	
Pyrene	Not detected	ug/kg	300	8270C	07/27/07 18:41	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/27/07 18:41	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/27/07 18:41	ARH		

Analytical Laboratory Report

Lab Sample ID: S32940.17
Sample Tag: SS2-24S
Collected Date/Time: 07/24/2007 11:40
Matrix: Soil
COC Reference: 041705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	07/26/07 23:22	EMR		
Inorganics								
Total Solids	92	%	1	160.3	07/26/07 14:22	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	07/30/07 16:14	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/30/07 16:14	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	07/30/07 16:14	ARH	120-12-7	
Benzo(a)anthracene	600	ug/kg	300	8270C	07/30/07 16:14	ARH	56-55-3	
Benzo(a)pyrene	900	ug/kg	300	8270C	07/30/07 16:14	ARH	50-32-8	
Benzo(b)fluoranthene	800	ug/kg	300	8270C	07/30/07 16:14	ARH	205-99-2	
Benzo(k)fluoranthene	600	ug/kg	300	8270C	07/30/07 16:14	ARH	207-08-9	
Benzo(ghi)perylene	700	ug/kg	300	8270C	07/30/07 16:14	ARH	191-24-2	
Chrysene	700	ug/kg	300	8270C	07/30/07 16:14	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/30/07 16:14	ARH	53-70-3	
Fluoranthene	1,400	ug/kg	300	8270C	07/30/07 16:14	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	07/30/07 16:14	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	600	ug/kg	300	8270C	07/30/07 16:14	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/30/07 16:14	ARH	91-20-3	
Phenanthrene	700	ug/kg	300	8270C	07/30/07 16:14	ARH	85-01-8	
Pyrene	1,600	ug/kg	300	8270C	07/30/07 16:14	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 16:14	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 16:14	ARH		

Analytical Laboratory Report

Lab Sample ID: S32940.18
Sample Tag: Dup-06
Collected Date/Time: 07/24/2007 :
Matrix: Soil
COC Reference: 041705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	07/26/07 23:22	EMR		
Inorganics								
Total Solids	91	%	1	160.3	07/26/07 14:22	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	07/30/07 22:19	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/30/07 22:19	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	07/30/07 22:19	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	07/30/07 22:19	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	07/30/07 22:19	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	07/30/07 22:19	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	07/30/07 22:19	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	07/30/07 22:19	ARH	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	07/30/07 22:19	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/30/07 22:19	ARH	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	07/30/07 22:19	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	07/30/07 22:19	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	07/30/07 22:19	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/30/07 22:19	ARH	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	07/30/07 22:19	ARH	85-01-8	
Pyrene	Not detected	ug/kg	300	8270C	07/30/07 22:19	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 22:19	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 22:19	ARH		

Analytical Laboratory Report

Lab Sample ID: S32940.19
Sample Tag: SS2-24E
Collected Date/Time: 07/24/2007 11:55
Matrix: Soil
COC Reference: 041705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	07/26/07 23:22	EMR		
Inorganics								
Total Solids	90	%	1	160.3	07/26/07 14:22	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	07/30/07 22:41	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/30/07 22:41	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	07/30/07 22:41	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	07/30/07 22:41	ARH	56-55-3	
Benzo(a)pyrene	600	ug/kg	300	8270C	07/30/07 22:41	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	07/30/07 22:41	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	07/30/07 22:41	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	07/30/07 22:41	ARH	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	07/30/07 22:41	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/30/07 22:41	ARH	53-70-3	
Fluoranthene	500	ug/kg	300	8270C	07/30/07 22:41	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	07/30/07 22:41	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	07/30/07 22:41	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/30/07 22:41	ARH	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	07/30/07 22:41	ARH	85-01-8	
Pyrene	600	ug/kg	300	8270C	07/30/07 22:41	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 22:41	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 22:41	ARH		

Analytical Laboratory Report

Lab Sample ID: S32940.20
Sample Tag: SS2-24W
Collected Date/Time: 07/24/2007 12:00
Matrix: Soil
COC Reference: 041705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	07/26/07 23:22	EMR		
Inorganics								
Total Solids	92	%	1	160.3	07/26/07 14:22	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	400	ug/kg	300	8270C	07/30/07 18:31	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/30/07 18:31	ARH	208-96-8	
Anthracene	900	ug/kg	300	8270C	07/30/07 18:31	ARH	120-12-7	
Benzo(a)anthracene	3,000	ug/kg	300	8270C	07/30/07 18:31	ARH	56-55-3	
Benzo(a)pyrene	3,200	ug/kg	300	8270C	07/30/07 18:31	ARH	50-32-8	
Benzo(b)fluoranthene	2,500	ug/kg	300	8270C	07/30/07 18:31	ARH	205-99-2	
Benzo(k)fluoranthene	3,200	ug/kg	300	8270C	07/30/07 18:31	ARH	207-08-9	
Benzo(ghi)perylene	2,300	ug/kg	300	8270C	07/30/07 18:31	ARH	191-24-2	
Chrysene	3,200	ug/kg	300	8270C	07/30/07 18:31	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/30/07 18:31	ARH	53-70-3	
Fluoranthene	5,400	ug/kg	300	8270C	07/30/07 18:31	ARH	206-44-0	
Fluorene	400	ug/kg	300	8270C	07/30/07 18:31	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	2,300	ug/kg	300	8270C	07/30/07 18:31	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/30/07 18:31	ARH	91-20-3	
Phenanthrene	3,900	ug/kg	300	8270C	07/30/07 18:31	ARH	85-01-8	
Pyrene	6,300	ug/kg	300	8270C	07/30/07 18:31	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 18:31	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 18:31	ARH		

Analytical Laboratory Report

Lab Sample ID: S32940.21
Sample Tag: SS2-24N
Collected Date/Time: 07/24/2007 12:05
Matrix: Soil
COC Reference: 041705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	07/26/07 23:22	EMR		
Inorganics								
Total Solids	89	%	1	160.3	07/26/07 14:22	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	400	ug/kg	300	8270C	07/30/07 18:54	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/30/07 18:54	ARH	208-96-8	
Anthracene	800	ug/kg	300	8270C	07/30/07 18:54	ARH	120-12-7	
Benzo(a)anthracene	2,700	ug/kg	300	8270C	07/30/07 18:54	ARH	56-55-3	
Benzo(a)pyrene	3,000	ug/kg	300	8270C	07/30/07 18:54	ARH	50-32-8	
Benzo(b)fluoranthene	2,900	ug/kg	300	8270C	07/30/07 18:54	ARH	205-99-2	
Benzo(k)fluoranthene	2,900	ug/kg	300	8270C	07/30/07 18:54	ARH	207-08-9	
Benzo(ghi)perylene	2,300	ug/kg	300	8270C	07/30/07 18:54	ARH	191-24-2	
Chrysene	3,000	ug/kg	300	8270C	07/30/07 18:54	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/30/07 18:54	ARH	53-70-3	
Fluoranthene	4,700	ug/kg	300	8270C	07/30/07 18:54	ARH	206-44-0	
Fluorene	300	ug/kg	300	8270C	07/30/07 18:54	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	2,100	ug/kg	300	8270C	07/30/07 18:54	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/30/07 18:54	ARH	91-20-3	
Phenanthrene	3,100	ug/kg	300	8270C	07/30/07 18:54	ARH	85-01-8	
Pyrene	5,200	ug/kg	300	8270C	07/30/07 18:54	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 18:54	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 18:54	ARH		

Analytical Laboratory Report

Lab Sample ID: S32940.33
Sample Tag: SS2-27D-2.5
Collected Date/Time: 07/24/2007 15:15
Matrix: Soil
COC Reference: 041706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	07/26/07 23:22	EMR		
Inorganics								
Total Solids	92	%	1	160.3	07/26/07 14:22	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	07/30/07 18:08	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	07/30/07 18:08	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	07/30/07 18:08	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	07/30/07 18:08	ARH	56-55-3	
Benzo(a)pyrene	400	ug/kg	300	8270C	07/30/07 18:08	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	07/30/07 18:08	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	07/30/07 18:08	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	07/30/07 18:08	ARH	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	07/30/07 18:08	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	07/30/07 18:08	ARH	53-70-3	
Fluoranthene	400	ug/kg	300	8270C	07/30/07 18:08	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	07/30/07 18:08	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	07/30/07 18:08	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	07/30/07 18:08	ARH	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	07/30/07 18:08	ARH	85-01-8	
Pyrene	500	ug/kg	300	8270C	07/30/07 18:08	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 18:08	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	07/30/07 18:08	ARH		

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C.O.C. PAGE # 1 OF 2

041702

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Cliff Yantz
COMPANY: OBrien & Gere
ADDRESS: 37000 Grand River
CITY: Farmington Hills | STATE: MI | ZIP CODE: 48335
PHONE NO.: 248-477-5701 | FAX NO. | P.O. NO.
E-MAIL ADDRESS | QUOTE NO.

INVOICE TO

CONTACT NAME | ☐ SAME
COMPANY
ADDRESS
CITY | STATE | ZIP CODE
PHONE NO. | FAX NO. | P.O. NO.

PROJECT NO./NAME: GM MFD Grand Blanc
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Snowden

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☒ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

SPECIAL INSTRUCTIONS/NOTES: Report with Previous set

MERIT LAB NO.	YEAR 2007 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VAHS	MT 15 Arsenic	Arsenic
	7/20	11:25	SB3-17-0.5	S	1	X							X	X	
			DUP-01	S	1	X							X	X	
		11:30	SB3-17-4	S	1	X							X	X	
			DUP-02	S	1	X							X	X	
		1:55	SS2-22N	S	1	X									X
		2:05	SS2-22W	S	1	X									X
		2:10	SS2 22D-1.2	S	1	X									X
		2:15	SS2-22E	S	1	X									X
		2:30	SS2-22S	S	1	X									X
		2:55	SS2-21W	S	1	X							X		X
		3:15	SS2-21D-4.8	S	1	X							X		X
	↓	[illegible]	[illegible]	S	1	X							X		X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL _____

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041703

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Cliff Yantz
COMPANY	O'Brien & Gere
ADDRESS	37000 Grand River
CITY	Farmington Hills
STATE	MI
ZIP CODE	48335
PHONE NO.	248-477-5701
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
FAX NO.	
P.O. NO.	

PROJECT NO./NAME	GM MFD Grand Blanc
SAMPLER(S) - PLEASE PRINT/SIGN NAME	Kevin Schneider

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☒ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	YEAR 2007 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	PAHs	MI 10 Metals	Arsenic	SPECIAL INSTRUCTIONS/NOTES
	7/20	340	SS2-21N	S	1	X							X		X	
		350	SS2-21E	S	1	X							X		X	
			DUP-03 ✓	S	1	X							X		X	
		4:05	SS2-40	S	1	X							X			
		4:15	SS2-39	S	1	X							X			
		4:20	SS2-36	S	1	X							X			
		440	SS2-37	S	1	X							X			
			DUP-04	S	1	X							X			
	↓	450	SS2-38	S	1	X							X			

RELINQUISHED BY: SIGNATURE/ORGANIZATION	O'Brien & Gere	DATE 7/20/07	TIME 12:45
RECEIVED BY: SIGNATURE/ORGANIZATION	Mgl	DATE 7/23/07	TIME 12:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL _____
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

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041704

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Cliff Yantz
COMPANY: O'Brien + Gere
ADDRESS: 37000 Grand River
CITY: Farmington Hills STATE: MI ZIP CODE: 48335
PHONE NO.: 248-477-5201 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: GM MFD Grand Blanc
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Ken Sinclair

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☑ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	YEAR 2007 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	PAHs	Arsenic	Mercury	Lead	SPECIAL INSTRUCTIONS/NOTES
	7/24	8:55	SS2-20-D-8	S	1	X									X		
		9:05	SS2-20 N	S	1	X									X		
		9:15	SS2-20 W	S	1	X									X		
		9:20	SS2-20 S	S	1	X									X		
		9:25	SS2-20 E	S	1	X									X		
		9:45	SS2-14-D-5	S	1	X							X	X		X	
		9:55	SS2-14 N	S	1	X							X	X		X	
			DUP-05 1	S	1	X							X	X		X	
		10:05	SS2-14 E	S	1	X							X	X		X	
		10:20	SS2-14 S	S	1	X							X	X		X	
		10:25	SS2-14 W	S	1	X							X	X		X	
	V	10:45	SS2-15 D-7	S	1	X							X				

RELINQUISHED BY: SIGNATURE/ORGANIZATION: O'Brien + Gere	DATE: 7/25	TIME: 1145
RECEIVED BY: SIGNATURE/ORGANIZATION:	DATE: 7-25-07	TIME: 1345
RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL _____
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

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041705

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Cliff Yuntz
COMPANY: O'Brien & Gere
ADDRESS: 37000 Grand River
CITY: Farmington Hills STATE: MI ZIP CODE: 48335
PHONE NO.: 248-477-5701 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: GM MFD Grand Blanc
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Brian Schneider

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☒ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	YEAR 2007 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	PAHs	Arsenic	Mercury	Lead	SPECIAL INSTRUCTIONS/NOTES
	7/24	10:55	SS2-15W	S	1	X							X				
		11:05	SS2-15N	S	1	X							X				
		11:10	SS2-15E	S	1	X							X				
		11:30	SS2-24D-8.5	S	1	X							X				
		11:40	SS2-24S	S	1	X							X				
			DUP-040	S	1	X							X				
		11:55	SS2-24E	S	1	X							X				
		12:00	SS2-24W	S	1	X							X				
		12:05	SS2-24N	S	1	X							X				
		1:15	SS2-19D-3	S	1	X							X				
		1:25	SS2-19W	S	1	X							X				
	V	1:35	SS2-19S	S	1	X							X				

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	O'Brien	7/24	5:45
RECEIVED BY: SIGNATURE/ORGANIZATION	Merit	7-25-07	1245
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL _____
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

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041706

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Cliff Yantz
COMPANY: O'Brien & Gere
ADDRESS: 37000 Grand River
CITY: Farmington Hills STATE: MI ZIP CODE: 48335
PHONE NO.: 248 477-5701 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: GM MFD Grand Blanc
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☑ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	YEAR 2007 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	PAHs	Arsenic	Mercury	SPECIAL INSTRUCTIONS/NOTES
	7/24	1145	SB2-19E	S	1	X							X			
		1150	SB2-19N	S	1	X							X			
		1235	SB2-23D-2.5	S	1	X							X	X		
		1245	SB2-23W	S	1	X							X	X		
		1250	SB2-23S	S	1	X								X		
		1255	SB2-23E	S	1	X								X		
		1305	SB2-23N	S	1	X								X		
			DUP-07	S	1	X								X		
		1315	SB3-27D-2.5	S	1	X							X			
	↓	1350	SB4-07D-2	S	1	X								X		

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	O'Brien & Gere	7/25	1015
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	Merit	7/25/07	1325
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL _____

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Analytical Laboratory Report

Revised Report

Report ID: S33160.01(02)
Generated on 08/21/2007
Replaces report S33160.01(01) generated on 08/17/2007

Report to

Attention: Mr. Clifford Yantz
O'Brien & Gere Engineers
37000 Grand River Ave.
Suite 260
Farmington, MI 48335

Phone: 248-477-5701 FAX: 248-477-5962
Email: YantzCS@obg.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S33160.01-S33160.21
Project: GM MFD Grand Blanc
Collected Date: 08/09/2007
Submitted Date/Time: 08/09/2007 16:20
Sampled by: Kevin Schneider
P.O. #: 10710409EST

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak
Laboratory Director

Sample Summary (21 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S33160.01	SS4-17W	Soil	08/09/2007 09:00
S33160.02	SS4-17NW	Soil	08/09/2007 09:10
S33160.03	SS4-17N	Soil	08/09/2007 09:20
S33160.04	SS2-15NN	Soil	08/09/2007 10:20
S33160.05	SS2-14EE	Soil	08/09/2007 10:30
S33160.06	SS2-14SS	Soil	08/09/2007 10:45
S33160.07	SS2-14WW	Soil	08/09/2007 11:15
S33160.08	SS2-24NN	Soil	08/09/2007 11:25
S33160.09	SS2-24NW	Soil	08/09/2007 11:35
S33160.10	SS2-24WW	Soil	08/09/2007 11:45
S33160.11	SS2-22SW	Soil	08/09/2007 12:20
S33160.12	SS2-22WW	Soil	08/09/2007 12:25
S33160.13	SS2-21SS	Soil	08/09/2007 12:35
S33160.14	Dup-08	Soil	08/09/2007
S33160.15	SS2-21EE	Soil	08/09/2007 12:40
S33160.16	SS2-21WW	Soil	08/09/2007 12:45
S33160.17	SS2-21NN	Soil	08/09/2007 12:50
S33160.18	SS2-16E	Soil	08/09/2007 13:00
S33160.19	SS2-16W	Soil	08/09/2007 13:05
S33160.20	Dup-09	Soil	08/09/2007
S33160.21	SS2-41	Soil	08/09/2007 13:15

Lab Sample ID: S33160.04
Sample Tag: SS2-15NN
Collected Date/Time: 08/09/2007 10:20
Matrix: Soil
COC Reference: 04134

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.0	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	08/09/07 23:09	EMR		
Inorganics								
Total Solids	97	%	1	160.3	08/10/07 13:22	LBR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	08/15/07 17:02	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/15/07 17:02	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	08/15/07 17:02	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	08/15/07 17:02	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	08/15/07 17:02	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	08/15/07 17:02	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	08/15/07 17:02	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	08/15/07 17:02	ARH	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	08/15/07 17:02	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/15/07 17:02	ARH	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	08/15/07 17:02	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	08/15/07 17:02	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	08/15/07 17:02	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/15/07 17:02	ARH	91-20-3	
Phenanthrene	400	ug/kg	300	8270C	08/15/07 17:02	ARH	85-01-8	
Pyrene	Not detected	ug/kg	300	8270C	08/15/07 17:02	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/15/07 17:02	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/15/07 17:02	ARH		

Lab Sample ID: S33160.05
Sample Tag: SS2-14EE
Collected Date/Time: 08/09/2007 10:30
Matrix: Soil
COC Reference: 04134

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.0	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	08/14/07 12:00	PER		
PNA Extraction	Completed			3550B	08/09/07 23:09	EMR		
Inorganics								
Total Solids	94	%	1	160.3	08/10/07 13:22	LBR		
Metals								
Arsenic	4.43	mg/kg	0.10	6020	08/14/07 11:58	PER	7440-38-2	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	08/15/07 17:24	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/15/07 17:24	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	08/15/07 17:24	ARH	120-12-7	
Benzo(a)anthracene	900	ug/kg	300	8270C	08/15/07 17:24	ARH	56-55-3	
Benzo(a)pyrene	1,400	ug/kg	300	8270C	08/15/07 17:24	ARH	50-32-8	
Benzo(b)fluoranthene	1,200	ug/kg	300	8270C	08/15/07 17:24	ARH	205-99-2	
Benzo(k)fluoranthene	1,000	ug/kg	300	8270C	08/15/07 17:24	ARH	207-08-9	
Benzo(ghi)perylene	1,100	ug/kg	300	8270C	08/15/07 17:24	ARH	191-24-2	
Chrysene	900	ug/kg	300	8270C	08/15/07 17:24	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/15/07 17:24	ARH	53-70-3	
Fluoranthene	1,400	ug/kg	300	8270C	08/15/07 17:24	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	08/15/07 17:24	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	900	ug/kg	300	8270C	08/15/07 17:24	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/15/07 17:24	ARH	91-20-3	
Phenanthrene	600	ug/kg	300	8270C	08/15/07 17:24	ARH	85-01-8	
Pyrene	1,500	ug/kg	300	8270C	08/15/07 17:24	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/15/07 17:24	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/15/07 17:24	ARH		

Lab Sample ID: S33160.06
Sample Tag: SS2-14SS
Collected Date/Time: 08/09/2007 10:45
Matrix: Soil
COC Reference: 04134

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.0	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	08/14/07 12:00	PER		
PNA Extraction	Completed			3550B	08/09/07 23:09	EMR		
Inorganics								
Total Solids	87	%	1	160.3	08/10/07 13:22	LBR		
Metals								
Arsenic	10.8	mg/kg	0.10	6020	08/14/07 12:01	PER	7440-38-2	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	08/15/07 17:47	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/15/07 17:47	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	08/15/07 17:47	ARH	120-12-7	
Benzo(a)anthracene	1,300	ug/kg	300	8270C	08/15/07 17:47	ARH	56-55-3	
Benzo(a)pyrene	1,900	ug/kg	300	8270C	08/15/07 17:47	ARH	50-32-8	
Benzo(b)fluoranthene	1,800	ug/kg	300	8270C	08/15/07 17:47	ARH	205-99-2	
Benzo(k)fluoranthene	1,500	ug/kg	300	8270C	08/15/07 17:47	ARH	207-08-9	
Benzo(ghi)perylene	1,300	ug/kg	300	8270C	08/15/07 17:47	ARH	191-24-2	
Chrysene	1,500	ug/kg	300	8270C	08/15/07 17:47	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/15/07 17:47	ARH	53-70-3	
Fluoranthene	2,400	ug/kg	300	8270C	08/15/07 17:47	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	08/15/07 17:47	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	1,200	ug/kg	300	8270C	08/15/07 17:47	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/15/07 17:47	ARH	91-20-3	
Phenanthrene	1,100	ug/kg	300	8270C	08/15/07 17:47	ARH	85-01-8	
Pyrene	2,400	ug/kg	300	8270C	08/15/07 17:47	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/15/07 17:47	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/15/07 17:47	ARH		

Lab Sample ID: S33160.07
Sample Tag: SS2-14WW
Collected Date/Time: 08/09/2007 11:15
Matrix: Soil
COC Reference: 04134

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.0	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	08/14/07 12:00	PER		
PNA Extraction	Completed			3550B	08/09/07 23:09	EMR		
Inorganics								
Total Solids	81	%	1	160.3	08/10/07 13:22	LBR		
Metals								
Arsenic	14.3	mg/kg	0.10	6020	08/14/07 12:03	PER	7440-38-2	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	08/15/07 18:10	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/15/07 18:10	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	08/15/07 18:10	ARH	120-12-7	
Benzo(a)anthracene	1,000	ug/kg	300	8270C	08/15/07 18:10	ARH	56-55-3	
Benzo(a)pyrene	1,500	ug/kg	300	8270C	08/15/07 18:10	ARH	50-32-8	
Benzo(b)fluoranthene	1,400	ug/kg	300	8270C	08/15/07 18:10	ARH	205-99-2	
Benzo(k)fluoranthene	1,200	ug/kg	300	8270C	08/15/07 18:10	ARH	207-08-9	
Benzo(ghi)perylene	900	ug/kg	300	8270C	08/15/07 18:10	ARH	191-24-2	
Chrysene	1,200	ug/kg	300	8270C	08/15/07 18:10	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/15/07 18:10	ARH	53-70-3	
Fluoranthene	2,300	ug/kg	300	8270C	08/15/07 18:10	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	08/15/07 18:10	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	900	ug/kg	300	8270C	08/15/07 18:10	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/15/07 18:10	ARH	91-20-3	
Phenanthrene	1,200	ug/kg	300	8270C	08/15/07 18:10	ARH	85-01-8	
Pyrene	2,200	ug/kg	300	8270C	08/15/07 18:10	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/15/07 18:10	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/15/07 18:10	ARH		

Lab Sample ID: S33160.08
Sample Tag: SS2-24NN
Collected Date/Time: 08/09/2007 11:25
Matrix: Soil
COC Reference: 04134

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.0	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	08/09/07 23:09	EMR		
Inorganics								
Total Solids	96	%	1	160.3	08/10/07 13:22	LBR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	400	8270C	08/15/07 20:49	ARH	83-32-9	X
Acenaphthylene	Not detected	ug/kg	400	8270C	08/15/07 20:49	ARH	208-96-8	X
Anthracene	Not detected	ug/kg	400	8270C	08/15/07 20:49	ARH	120-12-7	X
Benzo(a)anthracene	700	ug/kg	400	8270C	08/15/07 20:49	ARH	56-55-3	X
Benzo(a)pyrene	1,000	ug/kg	400	8270C	08/15/07 20:49	ARH	50-32-8	X
Benzo(b)fluoranthene	1,000	ug/kg	400	8270C	08/15/07 20:49	ARH	205-99-2	X
Benzo(k)fluoranthene	1,000	ug/kg	400	8270C	08/15/07 20:49	ARH	207-08-9	X
Benzo(ghi)perylene	700	ug/kg	400	8270C	08/15/07 20:49	ARH	191-24-2	X
Chrysene	1,000	ug/kg	400	8270C	08/15/07 20:49	ARH	218-01-9	X
Dibenzo(ah)anthracene	Not detected	ug/kg	400	8270C	08/15/07 20:49	ARH	53-70-3	X
Fluoranthene	1,300	ug/kg	400	8270C	08/15/07 20:49	ARH	206-44-0	X
Fluorene	Not detected	ug/kg	400	8270C	08/15/07 20:49	ARH	86-73-7	X
Indeno(1,2,3-cd)pyrene	700	ug/kg	400	8270C	08/15/07 20:49	ARH	193-39-5	X
Naphthalene	Not detected	ug/kg	400	8270C	08/15/07 20:49	ARH	91-20-3	X
Phenanthrene	700	ug/kg	400	8270C	08/15/07 20:49	ARH	85-01-8	X
Pyrene	1,400	ug/kg	400	8270C	08/15/07 20:49	ARH	129-00-0	X
2-Methylnaphthalene	Not detected	ug/kg	400	8270C	08/15/07 20:49	ARH	91-57-6	X
1-Methylnaphthalene	Not detected	ug/kg	400	8270C	08/15/07 20:49	ARH		X

X-Elevated reporting limit due to matrix interference

Lab Sample ID: S33160.09
Sample Tag: SS2-24NW
Collected Date/Time: 08/09/2007 11:35
Matrix: Soil
COC Reference: 04134

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.0	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	08/10/07 18:39	EMR		
Inorganics								
Total Solids	96	%	1	160.3	08/10/07 13:22	LBR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	400	8270C	08/15/07 21:12	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	400	8270C	08/15/07 21:12	ARH	208-96-8	
Anthracene	Not detected	ug/kg	400	8270C	08/15/07 21:12	ARH	120-12-7	
Benzo(a)anthracene	1,100	ug/kg	400	8270C	08/15/07 21:12	ARH	56-55-3	
Benzo(a)pyrene	1,400	ug/kg	400	8270C	08/15/07 21:12	ARH	50-32-8	
Benzo(b)fluoranthene	1,500	ug/kg	400	8270C	08/15/07 21:12	ARH	205-99-2	
Benzo(k)fluoranthene	800	ug/kg	400	8270C	08/15/07 21:12	ARH	207-08-9	
Benzo(ghi)perylene	800	ug/kg	400	8270C	08/15/07 21:12	ARH	191-24-2	
Chrysene	1,100	ug/kg	400	8270C	08/15/07 21:12	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	400	8270C	08/15/07 21:12	ARH	53-70-3	
Fluoranthene	1,900	ug/kg	400	8270C	08/15/07 21:12	ARH	206-44-0	
Fluorene	Not detected	ug/kg	400	8270C	08/15/07 21:12	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	800	ug/kg	400	8270C	08/15/07 21:12	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	400	8270C	08/15/07 21:12	ARH	91-20-3	
Phenanthrene	1,200	ug/kg	400	8270C	08/15/07 21:12	ARH	85-01-8	
Pyrene	2,000	ug/kg	400	8270C	08/15/07 21:12	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	400	8270C	08/15/07 21:12	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	400	8270C	08/15/07 21:12	ARH		

Lab Sample ID: S33160.10
Sample Tag: SS2-24WW
Collected Date/Time: 08/09/2007 11:45
Matrix: Soil
COC Reference: 04134

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.0	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	08/10/07 18:39	EMR		
Inorganics								
Total Solids	92	%	1	160.3	08/10/07 13:22	LBR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	08/15/07 18:33	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/15/07 18:33	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	08/15/07 18:33	ARH	120-12-7	
Benzo(a)anthracene	700	ug/kg	300	8270C	08/15/07 18:33	ARH	56-55-3	
Benzo(a)pyrene	1,100	ug/kg	300	8270C	08/15/07 18:33	ARH	50-32-8	
Benzo(b)fluoranthene	1,100	ug/kg	300	8270C	08/15/07 18:33	ARH	205-99-2	
Benzo(k)fluoranthene	900	ug/kg	300	8270C	08/15/07 18:33	ARH	207-08-9	
Benzo(ghi)perylene	1,100	ug/kg	300	8270C	08/15/07 18:33	ARH	191-24-2	
Chrysene	800	ug/kg	300	8270C	08/15/07 18:33	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/15/07 18:33	ARH	53-70-3	
Fluoranthene	1,200	ug/kg	300	8270C	08/15/07 18:33	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	08/15/07 18:33	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	900	ug/kg	300	8270C	08/15/07 18:33	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/15/07 18:33	ARH	91-20-3	
Phenanthrene	500	ug/kg	300	8270C	08/15/07 18:33	ARH	85-01-8	
Pyrene	1,300	ug/kg	300	8270C	08/15/07 18:33	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/15/07 18:33	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/15/07 18:33	ARH		

Lab Sample ID: S33160.21
Sample Tag: SS2-41
Collected Date/Time: 08/09/2007 13:15
Matrix: Soil
COC Reference: 04137

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.0	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	08/10/07 18:39	EMR		
Inorganics								
Total Solids	71	%	1	160.3	08/10/07 13:22	LBR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	08/15/07 20:04	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/15/07 20:04	ARH	208-96-8	
Anthracene	600	ug/kg	300	8270C	08/15/07 20:04	ARH	120-12-7	
Benzo(a)anthracene	3,300	ug/kg	300	8270C	08/15/07 20:04	ARH	56-55-3	
Benzo(a)pyrene	4,100	ug/kg	300	8270C	08/15/07 20:04	ARH	50-32-8	
Benzo(b)fluoranthene	3,800	ug/kg	300	8270C	08/15/07 20:04	ARH	205-99-2	
Benzo(k)fluoranthene	3,400	ug/kg	300	8270C	08/15/07 20:04	ARH	207-08-9	
Benzo(ghi)perylene	2,100	ug/kg	300	8270C	08/15/07 20:04	ARH	191-24-2	
Chrysene	3,500	ug/kg	300	8270C	08/15/07 20:04	ARH	218-01-9	
Dibenzo(ah)anthracene	800	ug/kg	300	8270C	08/15/07 20:04	ARH	53-70-3	
Fluoranthene	6,100	ug/kg	300	8270C	08/15/07 20:04	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	08/15/07 20:04	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	2,200	ug/kg	300	8270C	08/15/07 20:04	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/15/07 20:04	ARH	91-20-3	
Phenanthrene	2,200	ug/kg	300	8270C	08/15/07 20:04	ARH	85-01-8	
Pyrene	6,000	ug/kg	300	8270C	08/15/07 20:04	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/15/07 20:04	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/15/07 20:04	ARH		

GM REALM ENCORE

CHAIN-OF-CUSTODY / Analytical Request Document

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

PAGE 1 OF 2

ID # Nº 04134

SSOW Ref. Code:

Required Client Information:

Company: O'Brien & Gere	Report To: Cliff Yantz
Address: 37000 Grand River	Copy To:
Farmington Hills	Invoice To:
MI 48335	P.O.:
Phone: 248-477-5701	Project Name: GM MFD Grand Blanc
Fax:	Project Number:
E-mail:	

Laboratory:	Merit Labs
Laboratory Location:	East Lansing, MI
Laboratory Contact:	
Requested Due Date:	TAT: Standard
QA/QC Requirements:	

Valid Matrix Codes: WG Groundwater; WB Borehole Water; WS Surface Water; SO Soil; SE Sediment; See Back for Additional Codes

	Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other:	Analysis and Method: PAHs	Arsenic	Remarks/Lab ID
33160 .01	1. SS4-17W	SO	8/9/07	900	1	X						X		
.02	2. SS4-17 NW	SO		910	1	X						X		
.03	3. SS4-17 N	SO		920	1	X						X		
.04	4. SS2-15 NN	SO		1030	1	X						X		
.05	5. SS2-14 EE	SO		1030	1	X						X	X	
.06	6. SS2-14 SS	SO		1045	1	X						X	X	
.07	7. SS2-14WW	SO		1115	1	X						X	X	
.08	8. SS2-24 NN	SO		1125	1	X						X		
.09	9. SS2-24 NW	SO		1135	1	X						X		
.10	10. SS2-24 WW	SO		1145	1	X						X		
.11	11. SS2-22 SW	SO		1220	1	X							X	
.12	12. SS2-22 WW	SO		1225	1	X						X	X	
.13	13. SS2-21 SS	SO		1235	1	X						X	X	
.14	14. DUP-08	SO			1	X						X	X	
.15	15. SS2-21 EE	SO	↓	1240	1	X						X		
	TOTAL NUMBER OF CONTAINERS													

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
	1	O'Brien + Gere	8/9/07	14:40	Merit Labs	8/9/07	1440
AIRBILL NO.		Fedex OBG	8-9-07	1620		8-9-07	1620

Sample Condition

Temp in °C	4.0
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name: Kevin Schneider

Sampler Signature: [signature] Date: 8/9/07

Distribution: WHITE - Fully Executed Copy YELLOW - Receiving Laboratory Copy PINK - Sampler Copy

REV. 0 (6/04)

GM REALM ENCORE

CHAIN-OF-CUSTODY / Analytical Request Document

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

PAGE 2 OF 2

ID # Nº 04137

SSOW Ref. Code:

Required Client Information:

Company: O'Brien & Gere	Report To: Cliff Yantz
Address: 37000 Grand River	Copy To:
Farmington Hills	Invoice To:
MI 48335	P.O.:
Phone: 248-477-5701	Project Name: GM MFD Grand Blanc
Fax:	Project Number:
E-mail:	

Laboratory:	Merit Labs
Laboratory Location:	East Lansing
Laboratory Contact:	
Requested Due Date:	TAT: Standard
QA/QC Requirements:	

Valid Matrix Codes: WG Groundwater; WB Borehole Water; WS Surface Water; SO Soil; SE Sediment; See Back for Additional Codes

	Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other:	Analysis and Method: PAHs	Arsenic										Remarks/Lab ID
33160																							
.16	1. SS2-21 WW	SO	8/9/07	1245	1	X							X										
.17	2. SS2-21 NN	SO		1250	1	X						X											
.18	3. SS2-16 E	SO		1300	1	X						X											
.19	4. SS2-16 W	SO		1305	1	X						X											
.20	5. DUP-09	SO			1	X						X											
.21	6. SS2-41	SO		1315	1	X						X											
	7.																						
	8.																						
	9.																						
	10.																						
	11.																						
	12.																						
	13.																						
	14.																						
	15.																						
	TOTAL NUMBER OF CONTAINERS																						

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
		O'Brien & Gere	8/9/07	1440	OBG	8/9/07	1440
AIRBILL NO.		OBG	8/9/07	1620		8-9-07	1620

Sample Condition

Temp in °C	4.1
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name: Kevin Schneider

Sampler Signature: Date: 8/9/07

Distribution: WHITE - Fully Executed Copy YELLOW - Receiving Laboratory Copy PINK - Sampler Copy

REV. 0 (6/04)

Analytical Laboratory Report

Report ID: S33330.01(01)
Generated on 08/31/2007

Report to

Attention: Mr. Clifford Yantz
O'Brien & Gere Engineers
37000 Grand River Ave.
Suite 260
Farmington, MI 48335

Phone: 248-477-5701 FAX: 248-477-5962
Email: YantzCS@obg.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S33330.01-S33330.03
Project: GM MFD Grand Blanc
Collected Date: 08/23/2007
Submitted Date/Time: 08/23/2007 16:20
Sampled by: Kevin Schneider
P.O. #: 10710409EST

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
""Not detected"" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S33330.01	SS2-42	Soil	08/23/2007 12:40
S33330.02	SS2-21SW	Soil	08/23/2007 12:50
S33330.03	SS2-14WWW	Soil	08/23/2007 13:00

Analytical Laboratory Report

Lab Sample ID: S33330.01
Sample Tag: SS2-42
Collected Date/Time: 08/23/2007 12:40
Matrix: Soil
COC Reference: 036243

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.0	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	08/27/07 21:49	EMR		
Inorganics								
Total Solids	81	%	1	160.3	08/27/07 14:20	JRT		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	08/29/07 18:41	ARH	83-32-9	I
Acenaphthylene	Not detected	ug/kg	300	8270C	08/29/07 18:41	ARH	208-96-8	I
Anthracene	700	ug/kg	300	8270C	08/29/07 18:41	ARH	120-12-7	I
Benzo(a)anthracene	4,500	ug/kg	300	8270C	08/29/07 18:41	ARH	56-55-3	I
Benzo(a)pyrene	5,100	ug/kg	300	8270C	08/29/07 18:41	ARH	50-32-8	I
Benzo(b)fluoranthene	4,400	ug/kg	300	8270C	08/29/07 18:41	ARH	205-99-2	I
Benzo(k)fluoranthene	4,800	ug/kg	300	8270C	08/29/07 18:41	ARH	207-08-9	I
Benzo(ghi)perylene	2,600	ug/kg	300	8270C	08/29/07 18:41	ARH	191-24-2	I
Chrysene	5,000	ug/kg	300	8270C	08/29/07 18:41	ARH	218-01-9	I
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/29/07 18:41	ARH	53-70-3	I
Fluoranthene	8,800	ug/kg	300	8270C	08/29/07 18:41	ARH	206-44-0	I
Fluorene	Not detected	ug/kg	300	8270C	08/29/07 18:41	ARH	86-73-7	I
Indeno(1,2,3-cd)pyrene	2,600	ug/kg	300	8270C	08/29/07 18:41	ARH	193-39-5	I
Naphthalene	Not detected	ug/kg	300	8270C	08/29/07 18:41	ARH	91-20-3	I
Phenanthrene	3,500	ug/kg	300	8270C	08/29/07 18:41	ARH	85-01-8	I
Pyrene	8,300	ug/kg	300	8270C	08/29/07 18:41	ARH	129-00-0	I
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/29/07 18:41	ARH	91-57-6	I
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/29/07 18:41	ARH		I
Polynuclear Aromatics (Replicate 01)								
Acenaphthene	Not detected	ug/kg	500	8270C	08/30/07 17:16	ARH	83-32-9	X
Acenaphthylene	Not detected	ug/kg	500	8270C	08/30/07 17:16	ARH	208-96-8	X
Anthracene	800	ug/kg	500	8270C	08/30/07 17:16	ARH	120-12-7	X
Benzo(a)anthracene	4,200	ug/kg	500	8270C	08/30/07 17:16	ARH	56-55-3	X
Benzo(a)pyrene	4,500	ug/kg	500	8270C	08/30/07 17:16	ARH	50-32-8	X
Benzo(b)fluoranthene	4,000	ug/kg	500	8270C	08/30/07 17:16	ARH	205-99-2	X
Benzo(k)fluoranthene	4,400	ug/kg	500	8270C	08/30/07 17:16	ARH	207-08-9	X
Benzo(ghi)perylene	2,100	ug/kg	500	8270C	08/30/07 17:16	ARH	191-24-2	X
Chrysene	4,500	ug/kg	500	8270C	08/30/07 17:16	ARH	218-01-9	X
Dibenzo(ah)anthracene	Not detected	ug/kg	500	8270C	08/30/07 17:16	ARH	53-70-3	X
Fluoranthene	7,700	ug/kg	500	8270C	08/30/07 17:16	ARH	206-44-0	X
Fluorene	Not detected	ug/kg	500	8270C	08/30/07 17:16	ARH	86-73-7	X
Indeno(1,2,3-cd)pyrene	2,200	ug/kg	500	8270C	08/30/07 17:16	ARH	193-39-5	X
Naphthalene	Not detected	ug/kg	500	8270C	08/30/07 17:16	ARH	91-20-3	X

I-Matrix interference with internal standard
X-Elevated reporting limit due to matrix interference

Lab Sample ID: S33330.01 (continued)
Sample Tag: SS2-42

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (Replicate 01) (continued)								
Phenanthrene	3,200	ug/kg	500	8270C	08/30/07 17:16	ARH	85-01-8	X
Pyrene	7,200	ug/kg	500	8270C	08/30/07 17:16	ARH	129-00-0	X
2-Methylnaphthalene	Not detected	ug/kg	500	8270C	08/30/07 17:16	ARH	91-57-6	X
1-Methylnaphthalene	Not detected	ug/kg	500	8270C	08/30/07 17:16	ARH		X

X-Elevated reporting limit due to matrix interference

Analytical Laboratory Report

Lab Sample ID: S33330.03
Sample Tag: SS2-14WWW
Collected Date/Time: 08/23/2007 13:00
Matrix: Soil
COC Reference: 036243

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.0	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	08/27/07 12:00	PER		
Inorganics								
Total Solids	86	%	1	160.3	08/27/07 14:20	JRT		
Metals								
Arsenic	39.5	mg/kg	0.10	6020	08/27/07 15:19	PER	7440-38-2	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-6333
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

J36243

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Cliff Yantz
COMPANY	O'Brien & Gere
ADDRESS	27000 Grand River
CITY	Farmington Hills
STATE	MI
ZIP CODE	48335
PHONE NO.	248-477-5701
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
FAX NO.	
P.O. NO.	

PROJECT NO./NAME	GM (Grand) Plant MFD
SAMPLER(S) - PLEASE PRINT/SIGN NAME	Louis Swinkels

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☒ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	PAHs	Arsenic	SPECIAL INSTRUCTIONS/NOTES
	8/23	13:40	SS2-42	S	1	X							X		
	8/23	13:50	SS2-21SW	S	1	X								X	
	8/23	13:00	SS2-14WWW	S	1	X								X	

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL _____
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Analytical Laboratory Report

Report ID: S33395.01(01)
Generated on 09/05/2007

Report to

Attention: Mr. Clifford Yantz
O'Brien & Gere Engineers
37000 Grand River Ave.
Suite 260
Farmington, MI 48335

Phone: 248-477-5701 FAX: 248-477-5962
Email: YantzCS@obg.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S33395.01-S33395.03
Project: GM MFD Grand Blanc
Collected Date: 08/29/2007
Submitted Date/Time: 08/29/2007 16:30
Sampled by: Kevin Schneider
P.O. #: 10710409EST

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
""Not detected"" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S33395.01	SS2-20D-3	Soil	08/29/2007 10:00
S33395.02	SS2-24D-2	Soil	08/29/2007 10:40
S33395.03	SS2-14D-2	Soil	08/29/2007 11:30

Analytical Laboratory Report

Lab Sample ID: S33395.01
Sample Tag: SS2-20D-3
Collected Date/Time: 08/29/2007 10:00
Matrix: Soil
COC Reference: 043932

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.0	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	08/30/07 12:00	JRT		
Inorganics								
Total Solids	88	%	1	160.3	08/31/07 15:38	WAR		
Metals								
Mercury	Not detected	mg/kg	0.050	7471A	08/30/07 16:20	JRT	7439-97-6	

Analytical Laboratory Report

Lab Sample ID: S33395.02
Sample Tag: SS2-24D-2
Collected Date/Time: 08/29/2007 10:40
Matrix: Soil
COC Reference: 043932

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.0	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	08/30/07 13:59	DLR		
Inorganics								
Total Solids	89	%	1	160.3	08/31/07 15:38	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	500	ug/kg	300	8270C	08/31/07 16:40	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/31/07 16:40	ARH	208-96-8	
Anthracene	1,000	ug/kg	300	8270C	08/31/07 16:40	ARH	120-12-7	
Benzo(a)anthracene	3,000	ug/kg	300	8270C	08/31/07 16:40	ARH	56-55-3	
Benzo(a)pyrene	3,400	ug/kg	300	8270C	08/31/07 16:40	ARH	50-32-8	
Benzo(b)fluoranthene	3,000	ug/kg	300	8270C	08/31/07 16:40	ARH	205-99-2	
Benzo(k)fluoranthene	3,200	ug/kg	300	8270C	08/31/07 16:40	ARH	207-08-9	
Benzo(ghi)perylene	1,900	ug/kg	300	8270C	08/31/07 16:40	ARH	191-24-2	
Chrysene	3,300	ug/kg	300	8270C	08/31/07 16:40	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/31/07 16:40	ARH	53-70-3	
Fluoranthene	6,600	ug/kg	300	8270C	08/31/07 16:40	ARH	206-44-0	
Fluorene	500	ug/kg	300	8270C	08/31/07 16:40	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	1,800	ug/kg	300	8270C	08/31/07 16:40	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/31/07 16:40	ARH	91-20-3	
Phenanthrene	4,400	ug/kg	300	8270C	08/31/07 16:40	ARH	85-01-8	
Pyrene	6,200	ug/kg	300	8270C	08/31/07 16:40	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/31/07 16:40	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/31/07 16:40	ARH		

Analytical Laboratory Report

Lab Sample ID: S33395.03
Sample Tag: SS2-14D-2
Collected Date/Time: 08/29/2007 11:30
Matrix: Soil
COC Reference: 043932

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.0	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	09/05/07 12:00	SLS		
PNA Extraction	Completed			3550B	08/30/07 13:59	DLR		
Inorganics								
Total Solids	90	%	1	160.3	08/31/07 15:38	WAR		
Metals								
Arsenic	5.09	mg/kg	0.10	6020	09/05/07 15:02	SLS	7440-38-2	
Lead	35.2	mg/kg	1.0	6020	09/05/07 15:02	SLS	7439-92-1	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	08/31/07 16:17	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/31/07 16:17	ARH	208-96-8	
Anthracene	600	ug/kg	300	8270C	08/31/07 16:17	ARH	120-12-7	
Benzo(a)anthracene	1,800	ug/kg	300	8270C	08/31/07 16:17	ARH	56-55-3	
Benzo(a)pyrene	2,100	ug/kg	300	8270C	08/31/07 16:17	ARH	50-32-8	
Benzo(b)fluoranthene	2,000	ug/kg	300	8270C	08/31/07 16:17	ARH	205-99-2	
Benzo(k)fluoranthene	1,600	ug/kg	300	8270C	08/31/07 16:17	ARH	207-08-9	
Benzo(ghi)perylene	1,200	ug/kg	300	8270C	08/31/07 16:17	ARH	191-24-2	
Chrysene	1,900	ug/kg	300	8270C	08/31/07 16:17	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/31/07 16:17	ARH	53-70-3	
Fluoranthene	3,800	ug/kg	300	8270C	08/31/07 16:17	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	08/31/07 16:17	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	1,100	ug/kg	300	8270C	08/31/07 16:17	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/31/07 16:17	ARH	91-20-3	
Phenanthrene	2,300	ug/kg	300	8270C	08/31/07 16:17	ARH	85-01-8	
Pyrene	3,500	ug/kg	300	8270C	08/31/07 16:17	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/31/07 16:17	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/31/07 16:17	ARH		

Merit Laboratories, Inc.

3560 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-8333
www.meritlabs.com

C.O.C. PAGE # ____ OF ____

043932

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT PERSON: Cliff Yantz
COMPANY: O'Brien + Gere
ADDRESS: 32000 Grand River
CITY: Farmington Hills
STATE: MI ZIP CODE: 48335
PHONE NO: 248-477-5701 FAX NO:
E-MAIL ADDRESS:

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
P.O. NO: PHONE NO: FAX NO: SITE NO:
QUOTE NO:

PROJECT NO/ NAME: GM Grand Blanc MFD
SAMPLER(S) - PLEASE PRINT OR SIGN NAME: Kevin Sandusky

TURNAROUND TIME REQUIRED: 24 HR | 48 HR | 72 HR | X STANDARD | OTHER

DELIVERABLES REQUIRED: X STANDARD | LEVEL II | LEVEL III | OTHER

MATRIX CODE: GW=GROUNDWATER, WW=WASTEWATER, S=SOIL, L=LIQUID, SD=SOLID, SL=SLUDGE, O=OIL, A=AIR, W=WASTE, M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

SPECIAL INSTRUCTIONS/NOTES

MERIT LAB NO	YEAR 2007 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO3	H2SO4	NaOH	MeOH	OTHER	Mercury	Arsenic	Lead	PAHs
33395.01	8/29	10:00	SS2-20D-3	S	1	X							X			
-02	8/29	10:40	SS2-24D-2	S	1	X										X
.03	8/29	11:50	SS2-14D-2	S	1	X								X	X	X

RELINQUISHED BY / SIGNATURE/ORGANIZATION: O'Brien + Gere — DATE: 8/30/07 TIME: 13:30
RECEIVED BY / SIGNATURE/ORGANIZATION: — DATE: 8/30/07 TIME: 1530
RELINQUISHED BY / SIGNATURE/ORGANIZATION: — DATE: TIME:
RECEIVED BY / SIGNATURE/ORGANIZATION: — DATE: TIME:

SEAL INTACT? YES NO N/A — SEAL NO:

RECEIVED BY / SIGNATURE/ORGANIZATION: Richard Reichardt — DATE: 8/30/07 TIME: 1530
SEAL INTACT? YES NO N/A — SEAL NO:

NOTES: TEMP ON ARRIVAL 4.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Analytical Laboratory Report

Supplemental Report

Report ID: S33772.01(03)
Generated on 10/12/2007
Replaces report S33772.01(02) generated on 10/10/2007

Report to

Attention: Mr. Clifford Yantz
O'Brien & Gere Engineers
37000 Grand River Ave.
Suite 260
Farmington, MI 48335

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Report Summary

Lab Sample ID(s): S33772.01-S33772.24
Project: GM MFD Grand Blanc
Collected Date: 09/28/2007
Submitted Date/Time: 09/28/2007 15:15
Sampled by: Kevin Schneider
P.O. #: 10710409EST

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak
Laboratory Director

Sample Summary (24 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S33772.01	SS2-15D-3	Soil	09/28/2007 09:40
S33772.02	SS2-15D-5	Soil	09/28/2007 09:45
S33772.03	SS2-14D-3	Soil	09/28/2007 10:00
S33772.04	SS2-14D-4	Soil	09/28/2007 10:05
S33772.05	SS2-14D-5	Soil	09/28/2007 10:10
S33772.06	SS2-14SSS	Soil	09/28/2007 10:20
S33772.07	SS2-03S	Soil	09/28/2007 10:30
S33772.08	SS2-03SS	Soil	09/28/2007 10:40
S33772.09	SS2-03E	Soil	09/28/2007 10:50
S33772.10	SS2-03EE	Soil	09/28/2007 11:05
S33772.11	SS2-24D-3	Soil	09/28/2007 11:50
S33772.12	Dup-10	Soil	09/28/2007
S33772.13	SS2-24D-5	Soil	09/28/2007 11:55
S33772.14	SS2-24D-6	Soil	09/28/2007 12:00
S33772.15	SS2-46	Soil	09/28/2007 12:05
S33772.16	SS2-46S	Soil	09/28/2007 12:10
S33772.17	SS2-46N	Soil	09/28/2007 12:15
S33772.18	SS2-46W	Soil	09/28/2007 12:20
S33772.19	SS2-43	Soil	09/28/2007 12:30
S33772.20	Dup-11	Soil	09/28/2007
S33772.21	SS2-44	Soil	09/28/2007 12:40
S33772.22	SS2-45	Soil	09/28/2007 12:50
S33772.23	SS2-21WWW	Soil	09/28/2007 13:00
S33772.24	SS2-21NW	Soil	09/28/2007 13:05

Lab Sample ID: S33772.01
Sample Tag: SS2-15D-3
Collected Date/Time: 09/28/2007 09:40
Matrix: Soil
COC Reference: 043931

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	10/01/07 23:56	EMR		
Inorganics								
Total Solids	96	%	1	160.3	10/01/07 11:00	DJS		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	10/03/07 18:21	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	10/03/07 18:21	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	10/03/07 18:21	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	10/03/07 18:21	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	10/03/07 18:21	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	10/03/07 18:21	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	10/03/07 18:21	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	10/03/07 18:21	ARH	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	10/03/07 18:21	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	10/03/07 18:21	ARH	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	10/03/07 18:21	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	10/03/07 18:21	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	10/03/07 18:21	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	10/03/07 18:21	ARH	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	10/03/07 18:21	ARH	85-01-8	
Pyrene	Not detected	ug/kg	300	8270C	10/03/07 18:21	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	10/03/07 18:21	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	10/03/07 18:21	ARH		

Lab Sample ID: S33772.03
Sample Tag: SS2-14D-3
Collected Date/Time: 09/28/2007 10:00
Matrix: Soil
COC Reference: 043931

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	10/01/07 23:56	EMR		
Inorganics								
Total Solids	90	%	1	160.3	10/01/07 11:00	DJS		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	10/03/07 18:44	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	10/03/07 18:44	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	10/03/07 18:44	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	10/03/07 18:44	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	10/03/07 18:44	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	10/03/07 18:44	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	10/03/07 18:44	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	10/03/07 18:44	ARH	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	10/03/07 18:44	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	10/03/07 18:44	ARH	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	10/03/07 18:44	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	10/03/07 18:44	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	10/03/07 18:44	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	10/03/07 18:44	ARH	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	10/03/07 18:44	ARH	85-01-8	
Pyrene	Not detected	ug/kg	300	8270C	10/03/07 18:44	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	10/03/07 18:44	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	10/03/07 18:44	ARH		

Lab Sample ID: S33772.06
Sample Tag: SS2-14SSS
Collected Date/Time: 09/28/2007 10:20
Matrix: Soil
COC Reference: 043931

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	10/03/07 12:00	PER		
Inorganics								
Total Solids	94	%	1	160.3	10/01/07 11:00	DJS		
Metals								
Arsenic	2.26	mg/kg	0.10	6020	10/03/07 14:11	PER	7440-38-2	

Lab Sample ID: S33772.07
Sample Tag: SS2-03S
Collected Date/Time: 09/28/2007 10:30
Matrix: Soil
COC Reference: 043931

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	10/03/07 12:00	PER		
Inorganics								
Total Solids	91	%	1	160.3	10/01/07 11:00	DJS		
Metals								
Lead	164	mg/kg	1.0	6020	10/03/07 14:12	PER	7439-92-1	

Lab Sample ID: S33772.09
Sample Tag: SS2-03E
Collected Date/Time: 09/28/2007 10:50
Matrix: Soil
COC Reference: 043931

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	10/03/07 12:00	PER		
Inorganics								
Total Solids	94	%	1	160.3	10/01/07 11:00	DJS		
Metals								
Lead	142	mg/kg	1.0	6020	10/03/07 14:13	PER	7439-92-1	

Lab Sample ID: S33772.11
Sample Tag: SS2-24D-3
Collected Date/Time: 09/28/2007 11:50
Matrix: Soil
COC Reference: 043931

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	10/01/07 23:56	EMR		
Inorganics								
Total Solids	89	%	1	160.3	10/01/07 11:00	DJS		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	4,400	ug/kg	500	8270C	10/03/07 23:01	ARH	83-32-9	X
Acenaphthylene	Not detected	ug/kg	500	8270C	10/03/07 23:01	ARH	208-96-8	X
Anthracene	6,600	ug/kg	500	8270C	10/03/07 23:01	ARH	120-12-7	X
Benzo(a)anthracene	14,700	ug/kg	500	8270C	10/03/07 23:01	ARH	56-55-3	X
Benzo(a)pyrene	15,000	ug/kg	500	8270C	10/03/07 23:01	ARH	50-32-8	X
Benzo(b)fluoranthene	16,900	ug/kg	500	8270C	10/03/07 23:01	ARH	205-99-2	X
Benzo(k)fluoranthene	13,200	ug/kg	500	8270C	10/03/07 23:01	ARH	207-08-9	X
Benzo(ghi)perylene	4,500	ug/kg	500	8270C	10/03/07 23:01	ARH	191-24-2	X
Chrysene	15,400	ug/kg	500	8270C	10/03/07 23:01	ARH	218-01-9	X
Dibenzo(ah)anthracene	2,100	ug/kg	500	8270C	10/03/07 23:01	ARH	53-70-3	X
Fluoranthene	37,400	ug/kg	500	8270C	10/03/07 23:01	ARH	206-44-0	X
Fluorene	4,300	ug/kg	500	8270C	10/03/07 23:01	ARH	86-73-7	X
Indeno(1,2,3-cd)pyrene	5,000	ug/kg	500	8270C	10/03/07 23:01	ARH	193-39-5	X
Naphthalene	1,800	ug/kg	500	8270C	10/03/07 23:01	ARH	91-20-3	X
Phenanthrene	31,800	ug/kg	500	8270C	10/03/07 23:01	ARH	85-01-8	X
Pyrene	35,100	ug/kg	500	8270C	10/03/07 23:01	ARH	129-00-0	X
2-Methylnaphthalene	1,400	ug/kg	500	8270C	10/03/07 23:01	ARH	91-57-6	X
1-Methylnaphthalene	900	ug/kg	500	8270C	10/03/07 23:01	ARH		X

X-Elevated reporting limit due to matrix interference

Lab Sample ID: S33772.12
Sample Tag: Dup-10
Collected Date/Time: 09/28/2007 :
Matrix: Soil
COC Reference: 043931

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	10/01/07 23:56	EMR		
Inorganics								
Total Solids	85	%	1	160.3	10/01/07 11:00	DJS		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	400	8270C	10/03/07 22:38	ARH	83-32-9	XI
Acenaphthylene	Not detected	ug/kg	400	8270C	10/03/07 22:38	ARH	208-96-8	XI
Anthracene	Not detected	ug/kg	400	8270C	10/03/07 22:38	ARH	120-12-7	XI
Benzo(a)anthracene	800	ug/kg	400	8270C	10/03/07 22:38	ARH	56-55-3	XI
Benzo(a)pyrene	700	ug/kg	400	8270C	10/03/07 22:38	ARH	50-32-8	XI
Benzo(b)fluoranthene	1,000	ug/kg	400	8270C	10/03/07 22:38	ARH	205-99-2	XI
Benzo(k)fluoranthene	800	ug/kg	400	8270C	10/03/07 22:38	ARH	207-08-9	XI
Benzo(ghi)perylene	Not detected	ug/kg	400	8270C	10/03/07 22:38	ARH	191-24-2	XI
Chrysene	1,100	ug/kg	400	8270C	10/03/07 22:38	ARH	218-01-9	XI
Dibenzo(ah)anthracene	Not detected	ug/kg	400	8270C	10/03/07 22:38	ARH	53-70-3	XI
Fluoranthene	1,400	ug/kg	400	8270C	10/03/07 22:38	ARH	206-44-0	XI
Fluorene	Not detected	ug/kg	400	8270C	10/03/07 22:38	ARH	86-73-7	XI
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	400	8270C	10/03/07 22:38	ARH	193-39-5	XI
Naphthalene	Not detected	ug/kg	400	8270C	10/03/07 22:38	ARH	91-20-3	XI
Phenanthrene	500	ug/kg	400	8270C	10/03/07 22:38	ARH	85-01-8	XI
Pyrene	1,200	ug/kg	400	8270C	10/03/07 22:38	ARH	129-00-0	XI
2-Methylnaphthalene	500	ug/kg	400	8270C	10/03/07 22:38	ARH	91-57-6	XI
1-Methylnaphthalene	400	ug/kg	400	8270C	10/03/07 22:38	ARH		XI

X-Elevated reporting limit due to matrix interference I-Matrix interference with internal standard

Lab Sample ID: S33772.13
Sample Tag: SS2-24D-5
Collected Date/Time: 09/28/2007 11:55
Matrix: Soil
COC Reference: 043930

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	10/05/07 12:43	DLR		
Inorganics								
Total Solids	91	%	1	160.3	10/05/07 13:56	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	4,800	ug/kg	500	8270C	10/08/07 19:13	ARH	83-32-9	XI
Acenaphthylene	Not detected	ug/kg	500	8270C	10/08/07 19:13	ARH	208-96-8	XI
Anthracene	8,900	ug/kg	500	8270C	10/08/07 19:13	ARH	120-12-7	XI
Benzo(a)anthracene	19,200	ug/kg	500	8270C	10/08/07 19:13	ARH	56-55-3	XI
Benzo(a)pyrene	20,400	ug/kg	500	8270C	10/08/07 19:13	ARH	50-32-8	XI
Benzo(b)fluoranthene	26,000	ug/kg	500	8270C	10/08/07 19:13	ARH	205-99-2	XI
Benzo(k)fluoranthene	20,800	ug/kg	500	8270C	10/08/07 19:13	ARH	207-08-9	XI
Benzo(ghi)perylene	4,400	ug/kg	500	8270C	10/08/07 19:13	ARH	191-24-2	XI
Chrysene	19,000	ug/kg	500	8270C	10/08/07 19:13	ARH	218-01-9	XI
Dibenzo(ah)anthracene	Not detected	ug/kg	500	8270C	10/08/07 19:13	ARH	53-70-3	XI
Fluoranthene	58,300	ug/kg	500	8270C	10/08/07 19:13	ARH	206-44-0	XI
Fluorene	6,000	ug/kg	500	8270C	10/08/07 19:13	ARH	86-73-7	XI
Indeno(1,2,3-cd)pyrene	5,200	ug/kg	500	8270C	10/08/07 19:13	ARH	193-39-5	XI
Naphthalene	13,700	ug/kg	500	8270C	10/08/07 19:13	ARH	91-20-3	XI
Phenanthrene	51,100	ug/kg	500	8270C	10/08/07 19:13	ARH	85-01-8	XI
Pyrene	54,700	ug/kg	500	8270C	10/08/07 19:13	ARH	129-00-0	XI
2-Methylnaphthalene	3,600	ug/kg	500	8270C	10/08/07 19:13	ARH	91-57-6	XI
1-Methylnaphthalene	2,400	ug/kg	500	8270C	10/08/07 19:13	ARH		XI

X-Elevated reporting limit due to matrix interference I-Matrix interference with internal standard

Lab Sample ID: S33772.14
Sample Tag: SS2-24D-6
Collected Date/Time: 09/28/2007 12:00
Matrix: Soil
COC Reference: 043930

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	10/10/07 11:57	DLR		
Inorganics								
Total Solids	84	%	1	160.3	10/11/07 12:12	WAR		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	10/11/07 14:13	ARH	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	10/11/07 14:13	ARH	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	10/11/07 14:13	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	10/11/07 14:13	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	10/11/07 14:13	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	10/11/07 14:13	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	10/11/07 14:13	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	10/11/07 14:13	ARH	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	10/11/07 14:13	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	10/11/07 14:13	ARH	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	10/11/07 14:13	ARH	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	10/11/07 14:13	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	10/11/07 14:13	ARH	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	10/11/07 14:13	ARH	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	10/11/07 14:13	ARH	85-01-8	
Pyrene	Not detected	ug/kg	300	8270C	10/11/07 14:13	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	10/11/07 14:13	ARH	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	10/11/07 14:13	ARH		

Lab Sample ID: S33772.15
Sample Tag: SS2-46
Collected Date/Time: 09/28/2007 12:05
Matrix: Soil
COC Reference: 043930

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	10/03/07 12:00	PER		
Inorganics								
Total Solids	81	%	1	160.3	10/01/07 11:00	DJS		
Metals								
Arsenic	91.8	mg/kg	0.10	6020	10/03/07 14:15	PER	7440-38-2	

Lab Sample ID: S33772.16
Sample Tag: SS2-46S
Collected Date/Time: 09/28/2007 12:10
Matrix: Soil
COC Reference: 043930

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	10/03/07 12:00	PER		
Inorganics								
Total Solids	82	%	1	160.3	10/01/07 11:00	DJS		
Metals								
Arsenic	59.4	mg/kg	0.10	6020	10/03/07 14:16	PER	7440-38-2	

Lab Sample ID: S33772.17
Sample Tag: SS2-46N
Collected Date/Time: 09/28/2007 12:15
Matrix: Soil
COC Reference: 043930

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	10/03/07 12:00	PER		
Inorganics								
Total Solids	87	%	1	160.3	10/01/07 11:00	DJS		
Metals								
Arsenic	45.2	mg/kg	0.10	6020	10/03/07 14:20	PER	7440-38-2	

Lab Sample ID: S33772.18
Sample Tag: SS2-46W
Collected Date/Time: 09/28/2007 12:20
Matrix: Soil
COC Reference: 043930

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	10/09/07 12:00	PER		
Inorganics								
Total Solids	80	%	1	160.3	10/05/07 13:56	WAR		
Metals								
Arsenic	48.1	mg/kg	0.10	6020	10/09/07 16:22	PER	7440-38-2	

Lab Sample ID: S33772.19
Sample Tag: SS2-43
Collected Date/Time: 09/28/2007 12:30
Matrix: Soil
COC Reference: 043930

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.5	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	10/01/07 23:56	EMR		
Inorganics								
Total Solids	84	%	1	160.3	10/01/07 11:00	DJS		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	500	8270C	10/03/07 23:24	ARH	83-32-9	XI
Acenaphthylene	Not detected	ug/kg	500	8270C	10/03/07 23:24	ARH	208-96-8	XI
Anthracene	Not detected	ug/kg	500	8270C	10/03/07 23:24	ARH	120-12-7	XI
Benzo(a)anthracene	1,300	ug/kg	500	8270C	10/03/07 23:24	ARH	56-55-3	XI
Benzo(a)pyrene	1,100	ug/kg	500	8270C	10/03/07 23:24	ARH	50-32-8	XI
Benzo(b)fluoranthene	1,600	ug/kg	500	8270C	10/03/07 23:24	ARH	205-99-2	XI
Benzo(k)fluoranthene	1,200	ug/kg	500	8270C	10/03/07 23:24	ARH	207-08-9	XI
Benzo(ghi)perylene	Not detected	ug/kg	500	8270C	10/03/07 23:24	ARH	191-24-2	XI
Chrysene	1,700	ug/kg	500	8270C	10/03/07 23:24	ARH	218-01-9	XI
Dibenzo(ah)anthracene	Not detected	ug/kg	500	8270C	10/03/07 23:24	ARH	53-70-3	XI
Fluoranthene	2,300	ug/kg	500	8270C	10/03/07 23:24	ARH	206-44-0	XI
Fluorene	Not detected	ug/kg	500	8270C	10/03/07 23:24	ARH	86-73-7	XI
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	500	8270C	10/03/07 23:24	ARH	193-39-5	XI
Naphthalene	Not detected	ug/kg	500	8270C	10/03/07 23:24	ARH	91-20-3	XI
Phenanthrene	800	ug/kg	500	8270C	10/03/07 23:24	ARH	85-01-8	XI
Pyrene	2,000	ug/kg	500	8270C	10/03/07 23:24	ARH	129-00-0	XI
2-Methylnaphthalene	700	ug/kg	500	8270C	10/03/07 23:24	ARH	91-57-6	XI
1-Methylnaphthalene	500	ug/kg	500	8270C	10/03/07 23:24	ARH		XI

X-Elevated reporting limit due to matrix interference I-Matrix interference with internal standard

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C.O.C. PAGE # 1 OF 2

043931

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Cliff Yuntz
COMPANY: O'Brien & Gere
ADDRESS: 37000 Grand River
CITY: Farmington Hills STATE: MI ZIP CODE: 48335
PHONE NO.: 248-477-5201 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: GM MFD Grand Blanc
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Schneider

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☒ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	YEAR 2007 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	PAHs	Arsenic	Lead	SPECIAL INSTRUCTIONS/NOTES
337720	9/28	9:40	SS2-15D-3	S	1	X							X			
.02		9:45	SS2-15D-5	S	1	X							X			hold sample
.03		1000	SS2-14D-3	S	1	X							X			
.04		1005	SS2-14D-4	S	1	X							X			hold
.05		1010	SS2-14D-5	S	1	X							X			hold
.06		1020	SS2-14 SSS	S	1	X								X		
.07		1030	SS2-03 S	S	1	X									X	
.08		1040	SS2-03 SS	S	1	X									X	hold
.09		10:50	SS2-03E	S	1	X									X	
.10		1105	SS2-03 EE	S	1	X									X	hold
.11		1150	SS2-24D-3	S	1								X			
.12	↓		DUP-10	S	1								X			

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
O'Brien & Gere	9/28	14:10
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
CMR	9/28	1410
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
	9/28/07	1515
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
	9/28/07	1515

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS | NOTES | TEMP. ON ARRIVAL 4.5

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

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C.O.C. PAGE # 2 OF 2

043930

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Cliff Yantz
COMPANY: O'Brien & Gere
ADDRESS: 37000 Grand River
CITY: Farmington Hills STATE: MI ZIP CODE: 48335
PHONE NO.: 248-477-5901 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: GM MFD Grand Blanc
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kwin Schneider

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☒ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	DATE (YEAR 2007)	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	PAHs	Arsenic	Lead	SPECIAL INSTRUCTIONS/NOTES
33712.13	9/28	1155	SS2-24D-5	S	1	X							XX			hold
.14		1200	SS2-24D-6	S	1	X							XX			hold
.15		12:05	SS2-46	S	1	X								X		
.16		1210	SS2-46 S	S	1	X								XX		
.17		1215	SS2-46 N	S	1	X								XX		
.18		1220	SS2-46 W	S	1	X								XX		hold
.19		1230	SS2-43	S	1	X							X			
.20			Dup-11	S	1	X								X		
.21		1240	SS2-44	S	1	X							X			hold
.22		1250	SS2-45	S	1	X							X			hold
.23		1300	SS2-21 WWW	S	1	X								X		
.24	↓	1305	SS2-21 NW	S	1	X								X		

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
O'Brien + Gere	9/28	14:10
RECEIVED BY: SIGNATURE/ORGANIZATION	9/28	1410
RELINQUISHED BY: SIGNATURE/ORGANIZATION		
RECEIVED BY: SIGNATURE/ORGANIZATION		

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
	9/28/07	1515
RECEIVED BY: SIGNATURE/ORGANIZATION	9-28-07	1515

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES:	TEMP. ON ARRIVAL
				4.5
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS		

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Analytical Laboratory Report

Supplemental Report

Report ID: S33863.01(02)
Generated on 10/15/2007
Replaces report S33863.01(01) generated on 10/10/2007

Report to

Attention: Mr. Clifford Yantz
O'Brien & Gere Engineers
37000 Grand River Ave.
Suite 260
Farmington, MI 48335

Phone: 248-477-5701 FAX: 248-477-5962
Email: YantzCS@obg.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S33863.01-S33863.06
Project: GM MFD Grand Blanc
Collected Date: 10/05/2007
Submitted Date/Time: 10/05/2007 13:30
Sampled by: Kevin Schneider
P.O. #: 10710409EST

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak
Laboratory Director

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S33863.01	SS2-46SS	Soil	10/05/2007 08:30
S33863.02	SS2-46SSS	Soil	10/05/2007 08:40
S33863.03	SS2-46NN	Soil	10/05/2007 08:50
S33863.04	SS2-46WW	Soil	10/05/2007 09:00
S33863.05	SS2-47	Soil	10/05/2007 09:10
S33863.06	SS2-47NW	Soil	10/05/2007 09:20

Lab Sample ID: S33863.01
Sample Tag: SS2-46SS
Collected Date/Time: 10/05/2007 08:30
Matrix: Soil
COC Reference: 040431

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.7	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	10/09/07 12:00	PER		
Inorganics								
Total Solids	71	%	1	160.3	10/08/07 13:00	DJS		
Metals								
Arsenic	26.7	mg/kg	0.10	6020	10/09/07 16:23	PER	7440-38-2	

Lab Sample ID: S33863.02
Sample Tag: SS2-46SSS
Collected Date/Time: 10/05/2007 08:40
Matrix: Soil
COC Reference: 040431

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.7	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	10/15/07 12:00	PER		
Inorganics								
Total Solids	84	%	1	160.3	10/11/07 12:12	WAR		
Metals								
Arsenic	21.0	mg/kg	0.10	6020	10/15/07 15:20	PER	7440-38-2	

Lab Sample ID: S33863.03
Sample Tag: SS2-46NN
Collected Date/Time: 10/05/2007 08:50
Matrix: Soil
COC Reference: 040431

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.7	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	10/09/07 12:00	PER		
Inorganics								
Total Solids	77	%	1	160.3	10/08/07 13:00	DJS		
Metals								
Arsenic	22.4	mg/kg	0.10	6020	10/09/07 16:24	PER	7440-38-2	

Lab Sample ID: S33863.04
Sample Tag: SS2-46WW
Collected Date/Time: 10/05/2007 09:00
Matrix: Soil
COC Reference: 040431

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.7	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	10/15/07 12:00	PER		
Inorganics								
Total Solids	81	%	1	160.3	10/11/07 12:12	WAR		
Metals								
Arsenic	29.7	mg/kg	0.10	6020	10/15/07 15:22	PER	7440-38-2	

Lab Sample ID: S33863.05
Sample Tag: SS2-47
Collected Date/Time: 10/05/2007 09:10
Matrix: Soil
COC Reference: 040431

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.7	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	10/09/07 12:00	PER		
Inorganics								
Total Solids	58	%	1	160.3	10/08/07 13:00	DJS		
Metals								
Arsenic	32.8	mg/kg	0.10	6020	10/09/07 16:26	PER	7440-38-2	

Lab Sample ID: S33863.06
Sample Tag: SS2-47NW
Collected Date/Time: 10/05/2007 09:20
Matrix: Soil
COC Reference: 040431

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.7	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	10/15/07 12:00	PER		
Inorganics								
Total Solids	79	%	1	160.3	10/11/07 12:12	WAR		
Metals								
Arsenic	24.1	mg/kg	0.10	6020	10/15/07 15:23	PER	7440-38-2	

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040431

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Cliff Yantz
COMPANY: O'Brien & Gere
ADDRESS: 37000 Grand River
CITY: Farmington Hills STATE: MI ZIP CODE: 48335
PHONE NO.: 248-477-5701 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Kevin Schneider SAME: X
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: GM MFD Grand Blanc
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Schneider

TURNAROUND TIME REQUIRED: ☐ 24 HR ☐ 48 HR ☐ 72 HR X STANDARD ☐ OTHER

DELIVERABLES REQUIRED: X STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	DATE (2007)	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Arsenic	SPECIAL INSTRUCTIONS/NOTES
33863.01	10/5	8:30	SS2-46 SS	S	1	X							X	
.02		8:40	SS2-46 SSS	S	1	X							X	hold sample
.03		8:50	SS2-46 NN	S	1	X							X	
.04		9:00	SS2-46 WW	S	1	X							X	hold sample
.05		9:10	SS2-47	S	1	X							X	
.06	↓	9:20	SS2-47 NW	S	1	X							X	hold sample

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
X [signature] O'Brien & Gere	10/05	10:30
RECEIVED BY: SIGNATURE/ORGANIZATION [signature] /Merit	10-5-07	1030
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
[signature] /Merit	10-5-07	1330
RECEIVED BY: SIGNATURE/ORGANIZATION Barbara Burbadon	DATE 10-5-07	TIME 13:30

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4.7
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Analytical Laboratory Report

Report ID: S34011.01(01)
Generated on 10/18/2007

Report to

Attention: Clifford Yantz/ Kevin Schneider
O'Brien & Gere Engineers
37000 Grand River Ave.
Suite 260
Farmington, MI 48335

Phone: 248-477-5701 FAX: 248-477-5962
Email: YantzCS@obg.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S34011.01-S34011.04
Project: GM MFD Grand Blanc
Collected Date: 10/16/2007
Submitted Date/Time: 10/17/2007 08:00
Sampled by: Kevin Schneider
P.O. #: 10710409EST

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S34011.01	SS2-47NWNW	Soil	10/16/2007 08:10
S34011.02	SS2-46WWW	Soil	10/16/2007 08:20
S34011.03	SS2-48	Soil	10/16/2007 08:30
S34011.04	SS2-48S	Soil	10/16/2007 08:40

Analytical Laboratory Report

Lab Sample ID: S34011.01
Sample Tag: SS2-47NWNW
Collected Date/Time: 10/16/2007 08:10
Matrix: Soil
COC Reference: 043928

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.9	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	10/18/07 12:00	PER		
Inorganics								
Total Solids	89	%	1	160.3	10/17/07 14:53	WAR		
Metals								
Arsenic	6.15	mg/kg	0.10	6020	10/18/07 13:06	PER	7440-38-2	

Analytical Laboratory Report

Lab Sample ID: S34011.02
Sample Tag: SS2-46WWW
Collected Date/Time: 10/16/2007 08:20
Matrix: Soil
COC Reference: 043928

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.9	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	10/18/07 12:00	PER		
Inorganics								
Total Solids	94	%	1	160.3	10/17/07 14:53	WAR		
Metals								
Arsenic	4.24	mg/kg	0.10	6020	10/18/07 13:08	PER	7440-38-2	

Analytical Laboratory Report

Lab Sample ID: S34011.03
Sample Tag: SS2-48
Collected Date/Time: 10/16/2007 08:30
Matrix: Soil
COC Reference: 043928

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.9	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	10/18/07 12:00	PER		
Inorganics								
Total Solids	84	%	1	160.3	10/17/07 14:53	WAR		
Metals								
Arsenic	28.0	mg/kg	0.10	6020	10/18/07 13:09	PER	7440-38-2	

Analytical Laboratory Report

Lab Sample ID: S34011.04
Sample Tag: SS2-48S
Collected Date/Time: 10/16/2007 08:40
Matrix: Soil
COC Reference: 043928

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	8oz. Glass	None	Yes	4.9	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Other / Misc.								
Hold until notified	Completed				10/17/07 17:00	PCS		

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-6333
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

043928

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Cliff Yantz / Kevin Schneider
COMPANY: O'Brien & Gere
ADDRESS: 37000 Grand River
CITY: Farmington Hills STATE: MI ZIP CODE: 48335
PHONE NO.: 248-477-5701 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: GM MFD Grand Blanc
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Schneider

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☒ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	DATE (2007)	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Arsenic	SPECIAL INSTRUCTIONS/NOTES
34011.01	10/16	8:10	SS2-47 NW NW	S	1	X							X	
.02	10/16	8:20	SS2-46 WWW	S	1	X							X	
.03	10/16	8:30	SS2-48	S	1	X							X	
.04	10/16	8:40	SS2-48S	S	1	X							X	hold

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	O'Brien + Gere	10/16	1630
RECEIVED BY: SIGNATURE/ORGANIZATION		10/16	1638
RELINQUISHED BY: SIGNATURE/ORGANIZATION			
RECEIVED BY: SIGNATURE/ORGANIZATION			

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION			
RECEIVED BY: SIGNATURE/ORGANIZATION	Barbara Richardson	10-17-07	8:00

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 4.9

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Analytical Laboratory Report

Final Report

Report ID: S49562.01(02)
Generated on 08/16/2011
Replaces report S49562.01(01) generated on 08/15/2011

Report to

Attention: Clifford Yantz
O'Brien & Gere Engineers, Inc.
37000 Grand River Ave.
Suite 260
Farmington, MI48335

Phone: 248-477-5701 FAX:
Email: YantzCS@obg.com/SecresME@obg.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S49562.01-S49562.46
Project: Dort Hwy Land
Collected Date: 08/01/2011
Submitted Date/Time: 08/02/2011 14:20
Sampled by: Kevin Schneider
P.O. #: MLT1296

All Analyses completed

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
""Not detected"" indicates that parameter was not found at a level equal to or greater than the RL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:
Michigan DNRE (#9956), Ohio EPA (#CL0002), NELAC NY (#11814), NELAC FL (#E871045), WBENC (#2005110032)
Some analytes reported may not be certified.Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (46 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S49562.01	SS-01	Soil	08/01/2011 09:40
S49562.02	SS-02	Soil	08/01/2011 09:45
S49562.03	SS-05	Soil	08/01/2011 10:00
S49562.04	SS-06	Soil	08/01/2011 10:05
S49562.05	SS-07	Soil	08/01/2011 10:15
S49562.06	SS-07 CO-LOCATED	Soil	08/01/2011 10:15
S49562.07	SS-08	Soil	08/01/2011 10:25
S49562.08	SS-09	Soil	08/01/2011 10:45
S49562.09	SS-10	Soil	08/01/2011 10:50
S49562.10	SS-03	Soil	08/01/2011 11:00
S49562.11	SS-04	Soil	08/01/2011 11:05
S49562.12	EBK-01	QC	08/01/2011 11:20
S49562.13	SS-11	Soil	08/01/2011 11:30
S49562.14	SS-12	Soil	08/01/2011 11:40
S49562.15	SS-20	Soil	08/01/2011 11:55
S49562.16	SS-19	Soil	08/01/2011 12:00
S49562.17	SS-18	Soil	08/01/2011 12:05
S49562.18	SS-17	Soil	08/01/2011 12:15
S49562.19	SS-15	Soil	08/01/2011 13:50
S49562.20	SS-15 MS	Soil	08/01/2011 13:50
S49562.21	SS-15 MSD	Soil	08/01/2011 13:50
S49562.22	SS-16	Soil	08/01/2011 14:10
S49562.23	DUP-01	Soil	08/01/2011 00:01
S49562.24	FBK-01	QC	08/01/2011 14:25
S49562.25	EBK-02	QC	08/01/2011 14:40
S49562.26	FB-05	Soild	08/01/2011 15:20
S49562.27	FBS-05	Soil	08/01/2011 15:25
S49562.28	FB-04	Solid	08/01/2011 15:50
S49562.29	FBS-04	Soil	08/01/2011 15:55
S49562.30	DUP-02	Soild	08/01/2011 00:01
S49562.31	FB-03	Solid	08/01/2011 16:20
S49562.32	FB-03 CO-LOCATED	Solid	08/01/2011 16:20
S49562.33	FBS-03	Soil	08/01/2011 16:25
S49562.34	FBK-02	QC	08/01/2011 16:30
S49562.35	EBK-02	QC	08/01/2011 16:40
S49562.36	FB-02	Solid	08/01/2011 16:50
S49562.37	FB-02 MS	Solid	08/01/2011 16:50
S49562.38	FB-02 MSD	Solid	08/01/2011 16:50
S49562.39	FBS-02	Soil	08/01/2011 16:55
S49562.40	FB-01	Solid	08/01/2011 17:10
S49562.41	FBS-01	Soil	08/01/2011 17:15
S49562.42	SS-14	Soil	08/01/2011 18:00
S49562.43	SS-14 CO-LOCATED	Soil	08/01/2011 18:00
S49562.44	SS-13	Soil	08/01/2011 18:10
S49562.45	TBK-01	QC	08/01/2011 00:01
S49562.46	MeOH BK-01	QC	08/01/2011 00:01

Lab Sample ID: S49562.01
Sample Tag: SS-01
Collected Date/Time: 08/01/2011 09:40
Matrix: Soil
COC Reference: 63750

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	08/04/11 23:17	DLR		
Inorganics								
Total Solids	93	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	400	ug/kg	300	8270C	08/08/11 20:21	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/08/11 20:21	PL	208-96-8	
Anthracene	1,000	ug/kg	300	8270C	08/08/11 20:21	PL	120-12-7	
Benzo(a)anthracene	3,100	ug/kg	300	8270C	08/08/11 20:21	PL	56-55-3	
Benzo(a)pyrene	3,800	ug/kg	300	8270C	08/08/11 20:21	PL	50-32-8	
Benzo(b)fluoranthene	6,900	ug/kg	300	8270C	08/08/11 20:21	PL	205-99-2	p
Benzo(k)fluoranthene	7,100	ug/kg	300	8270C	08/08/11 20:21	PL	207-08-9	p
Benzo(ghi)perylene	1,700	ug/kg	300	8270C	08/08/11 20:21	PL	191-24-2	
Chrysene	3,500	ug/kg	300	8270C	08/08/11 20:21	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/08/11 20:21	PL	53-70-3	
Fluoranthene	7,100	ug/kg	300	8270C	08/08/11 20:21	PL	206-44-0	
Fluorene	400	ug/kg	300	8270C	08/08/11 20:21	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	1,700	ug/kg	300	8270C	08/08/11 20:21	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/08/11 20:21	PL	91-20-3	
Phenanthrene	4,200	ug/kg	300	8270C	08/08/11 20:21	PL	85-01-8	
Pyrene	6,000	ug/kg	300	8270C	08/08/11 20:21	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 20:21	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 20:21	PL	90-12-0	

p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.02
Sample Tag: SS-02
Collected Date/Time: 08/01/2011 09:45
Matrix: Soil
COC Reference: 63750

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	08/04/11 23:17	DLR		
Inorganics								
Total Solids	94	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	08/08/11 18:46	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/08/11 18:46	PL	208-96-8	
Anthracene	400	ug/kg	300	8270C	08/08/11 18:46	PL	120-12-7	
Benzo(a)anthracene	1,500	ug/kg	300	8270C	08/08/11 18:46	PL	56-55-3	
Benzo(a)pyrene	1,800	ug/kg	300	8270C	08/08/11 18:46	PL	50-32-8	
Benzo(b)fluoranthene	3,300	ug/kg	300	8270C	08/08/11 18:46	PL	205-99-2	p
Benzo(k)fluoranthene	3,200	ug/kg	300	8270C	08/08/11 18:46	PL	207-08-9	p
Benzo(ghi)perylene	1,000	ug/kg	300	8270C	08/08/11 18:46	PL	191-24-2	
Chrysene	1,700	ug/kg	300	8270C	08/08/11 18:46	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/08/11 18:46	PL	53-70-3	
Fluoranthene	3,400	ug/kg	300	8270C	08/08/11 18:46	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	08/08/11 18:46	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	1,000	ug/kg	300	8270C	08/08/11 18:46	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/08/11 18:46	PL	91-20-3	
Phenanthrene	1,800	ug/kg	300	8270C	08/08/11 18:46	PL	85-01-8	
Pyrene	2,800	ug/kg	300	8270C	08/08/11 18:46	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 18:46	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 18:46	PL	90-12-0	

p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.03
Sample Tag: SS-05
Collected Date/Time: 08/01/2011 10:00
Matrix: Soil
COC Reference: 63750

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	08/04/11 23:17	DLR		
Inorganics								
Total Solids	91	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	08/08/11 20:40	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/08/11 20:40	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	08/08/11 20:40	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	08/08/11 20:40	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	08/08/11 20:40	PL	50-32-8	
Benzo(b)fluoranthene	300	ug/kg	300	8270C	08/08/11 20:40	PL	205-99-2	p
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	08/08/11 20:40	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	08/08/11 20:40	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	08/08/11 20:40	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/08/11 20:40	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	08/08/11 20:40	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	08/08/11 20:40	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	08/08/11 20:40	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/08/11 20:40	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	08/08/11 20:40	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	8270C	08/08/11 20:40	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 20:40	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 20:40	PL	90-12-0	

p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.04
Sample Tag: SS-06
Collected Date/Time: 08/01/2011 10:05
Matrix: Soil
COC Reference: 63750

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	08/04/11 23:17	DLR		
Inorganics								
Total Solids	91	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	08/08/11 20:59	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/08/11 20:59	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	08/08/11 20:59	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	08/08/11 20:59	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	08/08/11 20:59	PL	50-32-8	
Benzo(b)fluoranthene	400	ug/kg	300	8270C	08/08/11 20:59	PL	205-99-2	p
Benzo(k)fluoranthene	300	ug/kg	300	8270C	08/08/11 20:59	PL	207-08-9	p
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	08/08/11 20:59	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	08/08/11 20:59	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/08/11 20:59	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	08/08/11 20:59	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	08/08/11 20:59	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	08/08/11 20:59	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/08/11 20:59	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	08/08/11 20:59	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	8270C	08/08/11 20:59	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 20:59	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 20:59	PL	90-12-0	

p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.05
Sample Tag: SS-07
Collected Date/Time: 08/01/2011 10:15
Matrix: Soil
COC Reference: 63750

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
PNA Extraction	Completed			3550B	08/04/11 23:17	DLR		
Inorganics								
Total Solids	89	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	2.50	mg/kg	0.20	6020	08/09/11 16:49	PER	7440-38-2	
Barium	37.0	mg/kg	1.0	6020	08/09/11 16:49	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	08/09/11 16:49	PER	7440-43-9	
Chromium	7.45	mg/kg	0.50	6020	08/09/11 16:49	PER	7440-47-3	
Lead	35.0	mg/kg	0.30	6020	08/09/11 16:49	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:09	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 16:49	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 16:49	PER	7440-22-4	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	08/08/11 19:24	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/08/11 19:24	PL	208-96-8	
Anthracene	600	ug/kg	300	8270C	08/08/11 19:24	PL	120-12-7	
Benzo(a)anthracene	2,000	ug/kg	300	8270C	08/08/11 19:24	PL	56-55-3	
Benzo(a)pyrene	3,200	ug/kg	300	8270C	08/08/11 19:24	PL	50-32-8	
Benzo(b)fluoranthene	5,100	ug/kg	300	8270C	08/08/11 19:24	PL	205-99-2	p
Benzo(k)fluoranthene	5,200	ug/kg	300	8270C	08/08/11 19:24	PL	207-08-9	p
Benzo(ghi)perylene	1,600	ug/kg	300	8270C	08/08/11 19:24	PL	191-24-2	
Chrysene	2,500	ug/kg	300	8270C	08/08/11 19:24	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/08/11 19:24	PL	53-70-3	
Fluoranthene	4,600	ug/kg	300	8270C	08/08/11 19:24	PL	206-44-0	
Fluorene	300	ug/kg	300	8270C	08/08/11 19:24	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	1,600	ug/kg	300	8270C	08/08/11 19:24	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/08/11 19:24	PL	91-20-3	
Phenanthrene	2,600	ug/kg	300	8270C	08/08/11 19:24	PL	85-01-8	
Pyrene	3,800	ug/kg	300	8270C	08/08/11 19:24	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 19:24	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 19:24	PL	90-12-0	

p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.06
Sample Tag: SS-07 CO-LOCATED
Collected Date/Time: 08/01/2011 10:15
Matrix: Soil
COC Reference: 63750

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
PNA Extraction	Completed			3550B	08/04/11 23:17	DLR		
Inorganics								
Total Solids	90	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	2.19	mg/kg	0.20	6020	08/09/11 16:57	PER	7440-38-2	
Barium	30.2	mg/kg	1.0	6020	08/09/11 16:57	PER	7440-39-3	
Cadmium	0.20	mg/kg	0.20	6020	08/09/11 16:57	PER	7440-43-9	
Chromium	3.27	mg/kg	0.50	6020	08/09/11 16:57	PER	7440-47-3	
Lead	12.6	mg/kg	0.30	6020	08/09/11 16:57	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:11	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 16:57	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 16:57	PER	7440-22-4	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	08/08/11 17:11	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/08/11 17:11	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	08/08/11 17:11	PL	120-12-7	
Benzo(a)anthracene	1,000	ug/kg	300	8270C	08/08/11 17:11	PL	56-55-3	
Benzo(a)pyrene	1,400	ug/kg	300	8270C	08/08/11 17:11	PL	50-32-8	
Benzo(b)fluoranthene	2,300	ug/kg	300	8270C	08/08/11 17:11	PL	205-99-2	p
Benzo(k)fluoranthene	2,300	ug/kg	300	8270C	08/08/11 17:11	PL	207-08-9	p
Benzo(ghi)perylene	900	ug/kg	300	8270C	08/08/11 17:11	PL	191-24-2	
Chrysene	1,300	ug/kg	300	8270C	08/08/11 17:11	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/08/11 17:11	PL	53-70-3	
Fluoranthene	2,200	ug/kg	300	8270C	08/08/11 17:11	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	08/08/11 17:11	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	900	ug/kg	300	8270C	08/08/11 17:11	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/08/11 17:11	PL	91-20-3	
Phenanthrene	1,100	ug/kg	300	8270C	08/08/11 17:11	PL	85-01-8	
Pyrene	1,700	ug/kg	300	8270C	08/08/11 17:11	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 17:11	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 17:11	PL	90-12-0	

p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.07
Sample Tag: SS-08
Collected Date/Time: 08/01/2011 10:25
Matrix: Soil
COC Reference: 63750

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
PNA Extraction	Completed			3550B	08/04/11 23:17	DLR		
Inorganics								
Total Solids	82	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	3.64	mg/kg	0.20	6020	08/09/11 16:59	PER	7440-38-2	
Barium	42.9	mg/kg	1.0	6020	08/09/11 16:59	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	08/09/11 16:59	PER	7440-43-9	
Chromium	6.85	mg/kg	0.50	6020	08/09/11 16:59	PER	7440-47-3	
Lead	5.19	mg/kg	0.30	6020	08/09/11 16:59	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:13	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 16:59	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 16:59	PER	7440-22-4	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	08/08/11 17:30	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/08/11 17:30	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	08/08/11 17:30	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	08/08/11 17:30	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	08/08/11 17:30	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	08/08/11 17:30	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	08/08/11 17:30	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	08/08/11 17:30	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	08/08/11 17:30	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/08/11 17:30	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	08/08/11 17:30	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	08/08/11 17:30	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	08/08/11 17:30	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/08/11 17:30	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	08/08/11 17:30	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	8270C	08/08/11 17:30	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 17:30	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 17:30	PL	90-12-0	

Lab Sample ID: S49562.08
Sample Tag: SS-09
Collected Date/Time: 08/01/2011 10:45
Matrix: Soil
COC Reference: 63750

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
Inorganics								
Total Solids	89	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	2.19	mg/kg	0.20	6020	08/09/11 17:01	PER	7440-38-2	
Barium	54.4	mg/kg	1.0	6020	08/09/11 17:01	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	08/09/11 17:01	PER	7440-43-9	
Chromium	3.31	mg/kg	0.50	6020	08/09/11 17:01	PER	7440-47-3	
Lead	6.81	mg/kg	0.30	6020	08/09/11 17:01	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:16	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 17:01	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 17:01	PER	7440-22-4	

Lab Sample ID: S49562.09
Sample Tag: SS-10
Collected Date/Time: 08/01/2011 10:50
Matrix: Soil
COC Reference: 63750

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
Inorganics								
Total Solids	88	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	1.76	mg/kg	0.20	6020	08/09/11 17:03	PER	7440-38-2	
Barium	36.4	mg/kg	1.0	6020	08/09/11 17:03	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	08/09/11 17:03	PER	7440-43-9	
Chromium	3.50	mg/kg	0.50	6020	08/09/11 17:03	PER	7440-47-3	
Lead	6.48	mg/kg	0.30	6020	08/09/11 17:03	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:18	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 17:03	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 17:03	PER	7440-22-4	

Lab Sample ID: S49562.10
Sample Tag: SS-03
Collected Date/Time: 08/01/2011 11:00
Matrix: Soil
COC Reference: 63750

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
Inorganics								
Total Solids	91	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	2.07	mg/kg	0.20	6020	08/09/11 17:05	PER	7440-38-2	
Barium	41.5	mg/kg	1.0	6020	08/09/11 17:05	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	08/09/11 17:05	PER	7440-43-9	
Chromium	3.82	mg/kg	0.50	6020	08/09/11 17:05	PER	7440-47-3	
Lead	9.79	mg/kg	0.30	6020	08/09/11 17:05	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:20	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 17:05	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 17:05	PER	7440-22-4	

Lab Sample ID: S49562.11
Sample Tag: SS-04
Collected Date/Time: 08/01/2011 11:05
Matrix: Soil
COC Reference: 63750

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
Inorganics								
Total Solids	89	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	2.56	mg/kg	0.20	6020	08/09/11 17:07	PER	7440-38-2	
Barium	55.0	mg/kg	1.0	6020	08/09/11 17:07	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	08/09/11 17:07	PER	7440-43-9	
Chromium	2.96	mg/kg	0.50	6020	08/09/11 17:07	PER	7440-47-3	
Lead	6.00	mg/kg	0.30	6020	08/09/11 17:07	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:22	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 17:07	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 17:07	PER	7440-22-4	

Lab Sample ID: S49562.12
Sample Tag: EBK-01
Collected Date/Time: 08/01/2011 11:20
Matrix: QC
COC Reference: 63750

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Amber	None	Yes	4.3	IR
1	125ml Plastic	HNO3	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			245.1	08/08/11 11:37	JRH		
Metal Digestion	Completed			3015A	08/10/11 01:00	SLR		
PNA Extraction	Completed			3510C	08/05/11 15:42	PL		
Metals								
Arsenic	Not detected	mg/L	0.002	200.8	08/10/11 15:08	SLS	7440-38-2	
Barium	Not detected	mg/L	0.005	200.8	08/10/11 15:08	SLS	7440-39-3	
Cadmium	Not detected	mg/L	0.0005	200.8	08/10/11 15:08	SLS	7440-43-9	
Chromium	Not detected	mg/L	0.005	200.8	08/10/11 15:08	SLS	7440-47-3	
Lead	Not detected	mg/L	0.003	200.8	08/10/11 15:08	SLS	7439-92-1	
Mercury	Not detected	mg/L	0.0002	245.1	08/08/11 15:19	JRT	7439-97-6	
Selenium	Not detected	mg/L	0.005	200.8	08/10/11 15:08	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0005	200.8	08/10/11 15:08	SLS	7440-22-4	
Organics - Semi-Volatiles								
Polynuclear Aromatic Hydrocarbon								
Acenaphthene	Not detected	ug/L	5	8270C	08/08/11 14:39	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	5	8270C	08/08/11 14:39	PL	208-96-8	
Anthracene	Not detected	ug/L	5	8270C	08/08/11 14:39	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/L	5	8270C	08/08/11 14:39	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	5	8270C	08/08/11 14:39	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	5	8270C	08/08/11 14:39	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/L	5	8270C	08/08/11 14:39	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/L	5	8270C	08/08/11 14:39	PL	191-24-2	
Chrysene	Not detected	ug/L	5	8270C	08/08/11 14:39	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/L	5	8270C	08/08/11 14:39	PL	53-70-3	
Fluoranthene	Not detected	ug/L	5	8270C	08/08/11 14:39	PL	206-44-0	
Fluorene	Not detected	ug/L	5	8270C	08/08/11 14:39	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	5	8270C	08/08/11 14:39	PL	193-39-5	
Naphthalene	Not detected	ug/L	5	8270C	08/08/11 14:39	PL	91-20-3	
Phenanthrene	Not detected	ug/L	5	8270C	08/08/11 14:39	PL	85-01-8	
Pyrene	Not detected	ug/L	5	8270C	08/08/11 14:39	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/L	5	8270C	08/08/11 14:39	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/L	5	8270C	08/08/11 14:39	PL	90-12-0	

Lab Sample ID: S49562.13
Sample Tag: SS-11
Collected Date/Time: 08/01/2011 11:30
Matrix: Soil
COC Reference: 63759

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
Inorganics								
Total Solids	90	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	2.87	mg/kg	0.20	6020	08/09/11 17:09	PER	7440-38-2	
Barium	42.1	mg/kg	1.0	6020	08/09/11 17:09	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	08/09/11 17:09	PER	7440-43-9	
Chromium	2.51	mg/kg	0.50	6020	08/09/11 17:09	PER	7440-47-3	
Lead	5.36	mg/kg	0.30	6020	08/09/11 17:09	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:25	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 17:09	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 17:09	PER	7440-22-4	

Lab Sample ID: S49562.14
Sample Tag: SS-12
Collected Date/Time: 08/01/2011 11:40
Matrix: Soil
COC Reference: 63759

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
Inorganics								
Total Solids	88	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	1.41	mg/kg	0.20	6020	08/09/11 17:11	PER	7440-38-2	
Barium	57.8	mg/kg	1.0	6020	08/09/11 17:11	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	08/09/11 17:11	PER	7440-43-9	
Chromium	3.57	mg/kg	0.50	6020	08/09/11 17:11	PER	7440-47-3	
Lead	4.82	mg/kg	0.30	6020	08/09/11 17:11	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:27	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 17:11	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 17:11	PER	7440-22-4	

Lab Sample ID: S49562.15
Sample Tag: SS-20
Collected Date/Time: 08/01/2011 11:55
Matrix: Soil
COC Reference: 63759

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	08/04/11 23:17	DLR		
Inorganics								
Total Solids	92	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	08/08/11 17:49	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/08/11 17:49	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	08/08/11 17:49	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	08/08/11 17:49	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	08/08/11 17:49	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	08/08/11 17:49	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	08/08/11 17:49	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	08/08/11 17:49	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	08/08/11 17:49	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/08/11 17:49	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	08/08/11 17:49	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	08/08/11 17:49	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	08/08/11 17:49	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/08/11 17:49	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	08/08/11 17:49	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	8270C	08/08/11 17:49	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 17:49	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 17:49	PL	90-12-0	

Lab Sample ID: S49562.16
Sample Tag: SS-19
Collected Date/Time: 08/01/2011 12:00
Matrix: Soil
COC Reference: 63759

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	08/04/11 23:17	DLR		
Inorganics								
Total Solids	93	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	08/08/11 18:08	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/08/11 18:08	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	08/08/11 18:08	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	08/08/11 18:08	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	08/08/11 18:08	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	08/08/11 18:08	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	08/08/11 18:08	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	08/08/11 18:08	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	08/08/11 18:08	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/08/11 18:08	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	08/08/11 18:08	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	08/08/11 18:08	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	08/08/11 18:08	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/08/11 18:08	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	08/08/11 18:08	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	8270C	08/08/11 18:08	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 18:08	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 18:08	PL	90-12-0	

Lab Sample ID: S49562.17
Sample Tag: SS-18
Collected Date/Time: 08/01/2011 12:05
Matrix: Soil
COC Reference: 63759

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	08/04/11 23:17	DLR		
Inorganics								
Total Solids	93	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	08/08/11 18:27	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/08/11 18:27	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	8270C	08/08/11 18:27	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	08/08/11 18:27	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	08/08/11 18:27	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	08/08/11 18:27	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	08/08/11 18:27	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	08/08/11 18:27	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	8270C	08/08/11 18:27	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/08/11 18:27	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	8270C	08/08/11 18:27	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	08/08/11 18:27	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	08/08/11 18:27	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/08/11 18:27	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	8270C	08/08/11 18:27	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	8270C	08/08/11 18:27	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 18:27	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 18:27	PL	90-12-0	

Lab Sample ID: S49562.18
Sample Tag: SS-17
Collected Date/Time: 08/01/2011 12:15
Matrix: Soil
COC Reference: 63759

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
PNA Extraction	Completed			3550B	08/04/11 23:17	DLR		
Inorganics								
Total Solids	91	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	400	ug/kg	300	8270C	08/08/11 21:37	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/08/11 21:37	PL	208-96-8	
Anthracene	2,300	ug/kg	300	8270C	08/08/11 21:37	PL	120-12-7	
Benzo(a)anthracene	2,900	ug/kg	300	8270C	08/08/11 21:37	PL	56-55-3	
Benzo(a)pyrene	2,600	ug/kg	300	8270C	08/08/11 21:37	PL	50-32-8	I
Benzo(b)fluoranthene	5,400	ug/kg	300	8270C	08/08/11 21:37	PL	205-99-2	pI
Benzo(k)fluoranthene	5,400	ug/kg	300	8270C	08/08/11 21:37	PL	207-08-9	pI
Benzo(ghi)perylene	800	ug/kg	300	8270C	08/08/11 21:37	PL	191-24-2	I
Chrysene	3,100	ug/kg	300	8270C	08/08/11 21:37	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/08/11 21:37	PL	53-70-3	I
Fluoranthene	6,700	ug/kg	300	8270C	08/08/11 21:37	PL	206-44-0	
Fluorene	400	ug/kg	300	8270C	08/08/11 21:37	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	800	ug/kg	300	8270C	08/08/11 21:37	PL	193-39-5	I
Naphthalene	Not detected	ug/kg	300	8270C	08/08/11 21:37	PL	91-20-3	
Phenanthrene	5,600	ug/kg	300	8270C	08/08/11 21:37	PL	85-01-8	
Pyrene	6,200	ug/kg	300	8270C	08/08/11 21:37	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 21:37	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 21:37	PL	90-12-0	
Polynuclear Aromatics (Replicate 01)								
Acenaphthene	400	ug/kg	300	8270C	08/09/11 17:15	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/09/11 17:15	PL	208-96-8	
Anthracene	2,400	ug/kg	300	8270C	08/09/11 17:15	PL	120-12-7	
Benzo(a)anthracene	3,000	ug/kg	300	8270C	08/09/11 17:15	PL	56-55-3	
Benzo(a)pyrene	2,700	ug/kg	300	8270C	08/09/11 17:15	PL	50-32-8	
Benzo(b)fluoranthene	5,500	ug/kg	300	8270C	08/09/11 17:15	PL	205-99-2	p
Benzo(k)fluoranthene	5,500	ug/kg	300	8270C	08/09/11 17:15	PL	207-08-9	p
Benzo(ghi)perylene	900	ug/kg	300	8270C	08/09/11 17:15	PL	191-24-2	
Chrysene	3,100	ug/kg	300	8270C	08/09/11 17:15	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/09/11 17:15	PL	53-70-3	
Fluoranthene	6,800	ug/kg	300	8270C	08/09/11 17:15	PL	206-44-0	
Fluorene	500	ug/kg	300	8270C	08/09/11 17:15	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	900	ug/kg	300	8270C	08/09/11 17:15	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/09/11 17:15	PL	91-20-3	

I-Matrix interference with internal standard
p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.18 (continued)
Sample Tag: SS-17

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (Replicate 01) (continued)								
Phenanthrene	5,700	ug/kg	300	8270C	08/09/11 17:15	PL	85-01-8	
Pyrene	6,000	ug/kg	300	8270C	08/09/11 17:15	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/09/11 17:15	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/09/11 17:15	PL	90-12-0	

Lab Sample ID: S49562.19
Sample Tag: SS-15
Collected Date/Time: 08/01/2011 13:50
Matrix: Soil
COC Reference: 63759

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR
1	40ml Glass	MeOH	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	08/05/11 16:14	DLR		
Extraction, PCB	Completed			3550B	08/05/11 13:39	ADB		
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
Inorganics								
Total Solids	89	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	1.35	mg/kg	0.20	6020	08/09/11 17:13	PER	7440-38-2	
Barium	63.6	mg/kg	1.0	6020	08/09/11 17:13	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	08/09/11 17:13	PER	7440-43-9	
Chromium	3.87	mg/kg	0.50	6020	08/09/11 17:13	PER	7440-47-3	
Lead	7.36	mg/kg	0.30	6020	08/09/11 17:13	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:29	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 17:13	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 17:13	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 11:44	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 11:44	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 11:44	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 11:44	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 11:44	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 11:44	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 11:44	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 11:44	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 11:44	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 11:44	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 11:44	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 11:44	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 11:44	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 11:44	JANB	11096-82-5	
Organics - Semi-Volatiles								
Semi-Volatile Organics - MDEQ								
Acenaphthene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	208-96-8	
Anthracene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	120-12-7	

Lab Sample ID: S49562.19 (continued)
Sample Tag: SS-15

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
Benzo(a)anthracene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	56-55-3	
Benzo(b)fluoranthene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	191-24-2	
Benzo(a)pyrene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	117-81-7	
4-Bromophenyl phenyl ether	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	101-55-3	
Butyl benzyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	85-68-7	
4-Chloroaniline	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	106-47-8	
2-Chloronaphthalene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	91-58-7	
4-Chloro-3-methylphenol	Not detected	ug/kg	280	8270C	08/08/11 18:10	PL	59-50-7	
2-Chlorophenol	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	7005-72-3	
Chrysene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	218-01-9	
p,m-Cresol	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	95-48-7	
Dibenzo(ah)anthracene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	53-70-3	
Dibenzofuran	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	132-64-9	
di-n-Butyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	84-74-2	
1,2-Dichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	106-46-7	
3,3'-Dichlorobenzidine	Not detected	ug/kg	2,000	8270C	08/08/11 18:10	PL	91-94-1	
2,4-Dichlorophenol	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	120-83-2	
Diethyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	84-66-2	
2,4-Dimethylphenol	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	105-67-9	
Dimethyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	830	8270C	08/08/11 18:10	PL	534-52-1	
2,4-Dinitrophenol	Not detected	ug/kg	830	8270C	08/08/11 18:10	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	606-20-2	
1,2-Diphenylhydrazine	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	122-66-7	
di-n-Octyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	117-84-0	
Fluoranthene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	206-44-0	
Fluorene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	86-73-7	
Hexachlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	118-74-1	
Hexachlorobutadiene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	77-47-4	
Hexachloroethane	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	193-39-5	
Isophorone	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	91-57-6	
Naphthalene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	91-20-3	
2-Nitroaniline	Not detected	ug/kg	830	8270C	08/08/11 18:10	PL	88-74-4	
3-Nitroaniline	Not detected	ug/kg	830	8270C	08/08/11 18:10	PL	99-09-2	
4-Nitroaniline	Not detected	ug/kg	830	8270C	08/08/11 18:10	PL	100-01-6	

Lab Sample ID: S49562.19 (continued)
Sample Tag: SS-15

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
Nitrobenzene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	98-95-3	
2-Nitrophenol	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	88-75-5	
4-Nitrophenol	Not detected	ug/kg	830	8270C	08/08/11 18:10	PL	100-02-7	
N-Nitrosodiphenylamine	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	621-64-7	
Pentachlorophenol	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	87-86-5	
Phenanthrene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	85-01-8	
Phenol	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	108-95-2	
Pyrene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	129-00-0	
1,2,4-Trichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	120-82-1	
2,4,5-Trichlorophenol	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/kg	330	8270C	08/08/11 18:10	PL	88-06-2	
Organics - Volatiles								
Volatile Organics 5035								
Diethyl ether	Not detected	ug/kg	200	8260B/5035	08/07/11 01:56	WAT	60-29-7	
Acetone	Not detected	ug/kg	1,000	8260B/5035	08/07/11 01:56	WAT	67-64-1	
Methyl iodide	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	74-88-4	
Carbon disulfide	Not detected	ug/kg	300	8260B/5035	08/07/11 01:56	WAT	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	200	8260B/5035	08/07/11 01:56	WAT	1634-04-4	
Acrylonitrile	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	107-13-1	
2-Butanone (MEK)	Not detected	ug/kg	930	8260B/5035	08/07/11 01:56	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	300	8260B/5035	08/07/11 01:56	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	300	8260B/5035	08/07/11 01:56	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	200	8260B/5035	08/07/11 01:56	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	300	8260B/5035	08/07/11 01:56	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	156-59-2	
Tetrahydrofuran	Not detected	ug/kg	1,000	8260B/5035	08/07/11 01:56	WAT	109-99-9	
Chloroform	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	67-66-3	
Bromochloromethane	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	8260B/5035	08/07/11 01:56	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	8260B/5035	08/07/11 01:56	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	56-23-5	
Benzene	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	75-27-4	
Dibromomethane	Not detected	ug/kg	300	8260B/5035	08/07/11 01:56	WAT	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	10061-01-5	
Toluene	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	10061-02-6	

Lab Sample ID: S49562.19 (continued)
Sample Tag: SS-15

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
1,1,2-Trichloroethane	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	110-57-6	
Dibromochloromethane	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	20	8260B/5035	08/07/11 01:56	WAT	106-93-4	M
Chlorobenzene	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	630-20-6	
Ethylbenzene	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT		
o-Xylene	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	95-47-6	
Styrene	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	300	8260B/5035	08/07/11 01:56	WAT	98-82-8	
Bromoform	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	96-18-4	
n-Propylbenzene	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	103-65-1	
Bromobenzene	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	108-67-8	
tert-Butylbenzene	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	95-63-6	
sec-Butylbenzene	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	135-98-8	
p-Isopropyltoluene	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/07/11 01:56	WAT	526-73-8	
n-Butylbenzene	Not detected	ug/kg	60	8260B/5035	08/07/11 01:56	WAT	104-51-8	
Hexachloroethane	Not detected	ug/kg	400	8260B/5035	08/07/11 01:56	WAT	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	300	8260B/5035	08/07/11 01:56	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	410	8260B/5035	08/07/11 01:56	WAT	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/kg	410	8260B/5035	08/07/11 01:56	WAT	87-61-6	
Naphthalene	Not detected	ug/kg	410	8260B/5035	08/07/11 01:56	WAT	91-20-3	
2-Methylnaphthalene	Not detected	ug/kg	410	8260B/5035	08/07/11 01:56	WAT	91-57-6	

M-Result reported to MDL not RDL

Lab Sample ID: S49562.20
Sample Tag: SS-15 MS
Collected Date/Time: 08/01/2011 13:50
Matrix: Soil
COC Reference: 63759

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR
1	40ml Glass	MeOH	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	08/05/11 16:14	DLR		
Extraction, PCB	Completed			3550B	08/05/11 13:39	ADB		
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
Inorganics								
Total Solids	89	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	25.3	mg/kg	0.20	6020	08/09/11 17:19	PER	7440-38-2	
Barium	88.5	mg/kg	1.0	6020	08/09/11 17:19	PER	7440-39-3	
Cadmium	22.8	mg/kg	0.20	6020	08/09/11 17:19	PER	7440-43-9	
Chromium	28.1	mg/kg	0.50	6020	08/09/11 17:19	PER	7440-47-3	
Lead	27.7	mg/kg	0.30	6020	08/09/11 17:19	PER	7439-92-1	
Mercury	0.117	mg/kg	0.050	7471A	08/09/11 15:31	JRT	7439-97-6	
Selenium	23.9	mg/kg	0.50	6020	08/09/11 17:19	PER	7782-49-2	
Silver	21.6	mg/kg	0.20	6020	08/09/11 17:19	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	20	ug/kg	330	8082	08/05/11 11:55	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 11:55	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 11:55	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 11:55	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 11:55	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 11:55	JANB	11097-69-1	
PCB-1260	20	ug/kg	330	8082	08/05/11 11:55	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	20	ug/kg	330	8082	08/05/11 11:55	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 11:55	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 11:55	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 11:55	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 11:55	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 11:55	JANB	11097-69-1	
PCB-1260	20	ug/kg	330	8082	08/05/11 11:55	JANB	11096-82-5	
Organics - Semi-Volatiles								
Semi-Volatile Organics - MDEQ								
Acenaphthene	1,437	ug/kg	330	8270C	08/08/11 18:44	PL	83-32-9	1
Acenaphthylene	1,476	ug/kg	330	8270C	08/08/11 18:44	PL	208-96-8	1

1-Dry Weight Spike: 1.87 mg/kg

Lab Sample ID: S49562.20 (continued)
Sample Tag: SS-15 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
Anthracene	1,508	ug/kg	330	8270C	08/08/11 18:44	PL	120-12-7	1
Benzo(a)anthracene	1,502	ug/kg	330	8270C	08/08/11 18:44	PL	56-55-3	1
Benzo(b)fluoranthene	1,465	ug/kg	330	8270C	08/08/11 18:44	PL	205-99-2	1
Benzo(k)fluoranthene	1,376	ug/kg	330	8270C	08/08/11 18:44	PL	207-08-9	1
Benzo(ghi)perylene	1,430	ug/kg	330	8270C	08/08/11 18:44	PL	191-24-2	1
Benzo(a)pyrene	1,323	ug/kg	330	8270C	08/08/11 18:44	PL	50-32-8	1
bis(2-Chloroethoxy)methane	1,330	ug/kg	330	8270C	08/08/11 18:44	PL	111-91-1	1
bis(2-Chloroethyl)ether	1,327	ug/kg	330	8270C	08/08/11 18:44	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	1,280	ug/kg	330	8270C	08/08/11 18:44	PL	108-60-1	1
bis(2-Ethylhexyl)phthalate	1,761	ug/kg	330	8270C	08/08/11 18:44	PL	117-81-7	1
4-Bromophenyl phenyl ether	1,460	ug/kg	330	8270C	08/08/11 18:44	PL	101-55-3	1
Butyl benzyl phthalate	1,600	ug/kg	330	8270C	08/08/11 18:44	PL	85-68-7	1
4-Chloroaniline	1,234	ug/kg	330	8270C	08/08/11 18:44	PL	106-47-8	1
2-Chloronaphthalene	1,380	ug/kg	330	8270C	08/08/11 18:44	PL	91-58-7	1
4-Chloro-3-methylphenol	1,475	ug/kg	280	8270C	08/08/11 18:44	PL	59-50-7	1
2-Chlorophenol	1,326	ug/kg	330	8270C	08/08/11 18:44	PL	95-57-8	1
4-Chlorophenyl phenyl ether	1,497	ug/kg	330	8270C	08/08/11 18:44	PL	7005-72-3	1
Chrysene	1,910	ug/kg	330	8270C	08/08/11 18:44	PL	218-01-9	1
p,m-Cresol	2,523	ug/kg	330	8270C	08/08/11 18:44	PL	3/4-Cresol	1
o-Cresol	1,368	ug/kg	330	8270C	08/08/11 18:44	PL	95-48-7	1
Dibenzo(ah)anthracene	1,492	ug/kg	330	8270C	08/08/11 18:44	PL	53-70-3	1
Dibenzofuran	1,499	ug/kg	330	8270C	08/08/11 18:44	PL	132-64-9	1
di-n-Butyl phthalate	1,605	ug/kg	330	8270C	08/08/11 18:44	PL	84-74-2	1
1,2-Dichlorobenzene	1,244	ug/kg	330	8270C	08/08/11 18:44	PL	95-50-1	1
1,3-Dichlorobenzene	1,212	ug/kg	330	8270C	08/08/11 18:44	PL	541-73-1	1
1,4-Dichlorobenzene	1,222	ug/kg	330	8270C	08/08/11 18:44	PL	106-46-7	1
3,3'-Dichlorobenzidine	1,400	ug/kg	2,000	8270C	08/08/11 18:44	PL	91-94-1	1J
2,4-Dichlorophenol	1,349	ug/kg	330	8270C	08/08/11 18:44	PL	120-83-2	1
Diethyl phthalate	1,555	ug/kg	330	8270C	08/08/11 18:44	PL	84-66-2	1
2,4-Dimethylphenol	1,371	ug/kg	330	8270C	08/08/11 18:44	PL	105-67-9	1
Dimethyl phthalate	1,521	ug/kg	330	8270C	08/08/11 18:44	PL	131-11-3	1
4,6-Dinitro-2-methylphenol	1,044	ug/kg	830	8270C	08/08/11 18:44	PL	534-52-1	1
2,4-Dinitrophenol	406	ug/kg	830	8270C	08/08/11 18:44	PL	51-28-5	1J
2,4-Dinitrotoluene	1,555	ug/kg	330	8270C	08/08/11 18:44	PL	121-14-2	1
2,6-Dinitrotoluene	1,497	ug/kg	330	8270C	08/08/11 18:44	PL	606-20-2	1
1,2-Diphenylhydrazine	1,741	ug/kg	330	8270C	08/08/11 18:44	PL	122-66-7	1
di-n-Octyl phthalate	1,595	ug/kg	330	8270C	08/08/11 18:44	PL	117-84-0	1
Fluoranthene	1,518	ug/kg	330	8270C	08/08/11 18:44	PL	206-44-0	1
Fluorene	1,530	ug/kg	330	8270C	08/08/11 18:44	PL	86-73-7	1
Hexachlorobenzene	1,474	ug/kg	330	8270C	08/08/11 18:44	PL	118-74-1	1
Hexachlorobutadiene	1,257	ug/kg	330	8270C	08/08/11 18:44	PL	87-68-3	1
Hexachlorocyclopentadiene	1,091	ug/kg	330	8270C	08/08/11 18:44	PL	77-47-4	1
Hexachloroethane	1,215	ug/kg	330	8270C	08/08/11 18:44	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	1,473	ug/kg	330	8270C	08/08/11 18:44	PL	193-39-5	1
Isophorone	1,504	ug/kg	330	8270C	08/08/11 18:44	PL	78-59-1	1
2-Methylnaphthalene	1,409	ug/kg	330	8270C	08/08/11 18:44	PL	91-57-6	1
Naphthalene	1,340	ug/kg	330	8270C	08/08/11 18:44	PL	91-20-3	1

1-Dry Weight Spike: 1.87 mg/kg
J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S49562.20 (continued)
Sample Tag: SS-15 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
2-Nitroaniline	1,505	ug/kg	830	8270C	08/08/11 18:44	PL	88-74-4	1
3-Nitroaniline	1,385	ug/kg	830	8270C	08/08/11 18:44	PL	99-09-2	1
4-Nitroaniline	1,351	ug/kg	830	8270C	08/08/11 18:44	PL	100-01-6	1
Nitrobenzene	1,332	ug/kg	330	8270C	08/08/11 18:44	PL	98-95-3	1
2-Nitrophenol	1,379	ug/kg	330	8270C	08/08/11 18:44	PL	88-75-5	1
4-Nitrophenol	1,333	ug/kg	830	8270C	08/08/11 18:44	PL	100-02-7	1
N-Nitrosodiphenylamine	796	ug/kg	330	8270C	08/08/11 18:44	PL	86-30-6	1
N-Nitrosodi-n-propylamine	1,414	ug/kg	330	8270C	08/08/11 18:44	PL	621-64-7	1
Pentachlorophenol	1,155	ug/kg	330	8270C	08/08/11 18:44	PL	87-86-5	1
Phenanthrene	1,532	ug/kg	330	8270C	08/08/11 18:44	PL	85-01-8	1
Phenol	1,350	ug/kg	330	8270C	08/08/11 18:44	PL	108-95-2	1
Pyrene	1,535	ug/kg	330	8270C	08/08/11 18:44	PL	129-00-0	1
1,2,4-Trichlorobenzene	1,279	ug/kg	330	8270C	08/08/11 18:44	PL	120-82-1	1
2,4,5-Trichlorophenol	1,428	ug/kg	330	8270C	08/08/11 18:44	PL	95-95-4	1
2,4,6-Trichlorophenol	1,435	ug/kg	330	8270C	08/08/11 18:44	PL	88-06-2	1
Organics - Volatiles								
Volatile Organics 5035								
Diethyl ether	1,900	ug/kg	200	8260B/5035	08/07/11 05:32	WAT	60-29-7	2
Acetone	2,000	ug/kg	1,000	8260B/5035	08/07/11 05:32	WAT	67-64-1	2
Methyl iodide	2,600	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	74-88-4	2
Carbon disulfide	2,400	ug/kg	300	8260B/5035	08/07/11 05:32	WAT	75-15-0	2
tert-Methyl butyl ether (MTBE)	2,600	ug/kg	200	8260B/5035	08/07/11 05:32	WAT	1634-04-4	2
Acrylonitrile	2,500	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	107-13-1	2
2-Butanone (MEK)	2,160	ug/kg	890	8260B/5035	08/07/11 05:32	WAT	78-93-3	2
Dichlorodifluoromethane	1,100	ug/kg	300	8260B/5035	08/07/11 05:32	WAT	75-71-8	2
Chloromethane	1,600	ug/kg	300	8260B/5035	08/07/11 05:32	WAT	74-87-3	2
Vinyl chloride	1,880	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	75-01-4	2
Bromomethane	1,200	ug/kg	200	8260B/5035	08/07/11 05:32	WAT	74-83-9	2
Chloroethane	1,000	ug/kg	300	8260B/5035	08/07/11 05:32	WAT	75-00-3	2
Trichlorofluoromethane	1,800	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	75-69-4	2
1,1-Dichloroethene	2,310	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	75-35-4	2
Methylene chloride	2,700	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	75-09-2	2
trans-1,2-Dichloroethene	2,620	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	156-60-5	2
1,1-Dichloroethane	2,700	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	75-34-3	2
cis-1,2-Dichloroethene	2,820	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	156-59-2	2
Tetrahydrofuran	2,000	ug/kg	1,000	8260B/5035	08/07/11 05:32	WAT	109-99-9	2
Chloroform	2,750	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	67-66-3	2
Bromochloromethane	2,900	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	74-97-5	2
1,1,1-Trichloroethane	2,810	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	71-55-6	2
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	8260B/5035	08/07/11 05:32	WAT	108-10-1	2
2-Hexanone	Not detected	ug/kg	3,000	8260B/5035	08/07/11 05:32	WAT	591-78-6	2
Carbon tetrachloride	2,570	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	56-23-5	2
Benzene	2,660	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	71-43-2	2
1,2-Dichloroethane	2,510	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	107-06-2	2
Trichloroethene	2,730	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	79-01-6	2
1,2-Dichloropropane	2,720	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	78-87-5	2

1-Dry Weight Spike: 1.87 mg/kg
2-Sample spiked at 2.5mg/kg

Lab Sample ID: S49562.20 (continued)
Sample Tag: SS-15 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
Bromodichloromethane	2,700	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	75-27-4	1
Dibromomethane	2,900	ug/kg	300	8260B/5035	08/07/11 05:32	WAT	74-95-3	1
cis-1,3-Dichloropropene	2,580	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	10061-01-5	1
Toluene	2,700	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	108-88-3	1
trans-1,3-Dichloropropene	2,580	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	10061-02-6	1
1,1,2-Trichloroethane	2,630	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	79-00-5	1
Tetrachloroethene	2,450	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	127-18-4	1
trans-1,4-Dichloro-2-butene	2,130	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	110-57-6	1
Dibromochloromethane	2,800	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	124-48-1	1
1,2-Dibromoethane	3,030	ug/kg	20	8260B/5035	08/07/11 05:32	WAT	106-93-4	1M
Chlorobenzene	2,960	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	108-90-7	1
1,1,1,2-Tetrachloroethane	3,100	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	630-20-6	1
Ethylbenzene	2,900	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	100-41-4	1
p,m-Xylene	5,800	ug/kg	100	8260B/5035	08/07/11 05:32	WAT		1
o-Xylene	2,970	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	95-47-6	1
Styrene	2,590	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	100-42-5	1
Isopropylbenzene	3,000	ug/kg	300	8260B/5035	08/07/11 05:32	WAT	98-82-8	1
Bromoform	2,800	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	75-25-2	1
1,1,2,2-Tetrachloroethane	2,820	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	79-34-5	1
1,2,3-Trichloropropane	2,900	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	96-18-4	1
n-Propylbenzene	3,000	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	103-65-1	1
Bromobenzene	3,100	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	108-86-1	1
1,3,5-Trimethylbenzene	3,100	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	108-67-8	1
tert-Butylbenzene	2,960	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	98-06-6	1
1,2,4-Trimethylbenzene	3,000	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	95-63-6	1
sec-Butylbenzene	2,890	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	135-98-8	1
p-Isopropyltoluene	2,900	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	99-87-6	1
1,3-Dichlorobenzene	2,900	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	541-73-1	1
1,4-Dichlorobenzene	2,800	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	106-46-7	1
1,2-Dichlorobenzene	3,000	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	95-50-1	1
1,2,3-Trimethylbenzene	2,900	ug/kg	100	8260B/5035	08/07/11 05:32	WAT	526-73-8	1
n-Butylbenzene	2,760	ug/kg	60	8260B/5035	08/07/11 05:32	WAT	104-51-8	1
Hexachloroethane	2,800	ug/kg	400	8260B/5035	08/07/11 05:32	WAT	67-72-1	1
1,2-Dibromo-3-chloropropane	3,000	ug/kg	300	8260B/5035	08/07/11 05:32	WAT	96-12-8	1
1,2,4-Trichlorobenzene	3,010	ug/kg	390	8260B/5035	08/07/11 05:32	WAT	120-82-1	1
1,2,3-Trichlorobenzene	3,270	ug/kg	390	8260B/5035	08/07/11 05:32	WAT	87-61-6	1
Naphthalene	3,370	ug/kg	390	8260B/5035	08/07/11 05:32	WAT	91-20-3	1
2-Methylnaphthalene	3,100	ug/kg	390	8260B/5035	08/07/11 05:32	WAT	91-57-6	1

1-Sample spiked at 2.5mg/kg
M-Result reported to MDL not RDL

Lab Sample ID: S49562.21
Sample Tag: SS-15 MSD
Collected Date/Time: 08/01/2011 13:50
Matrix: Soil
COC Reference: 63759

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR
1	40ml Glass	MeOH	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	08/05/11 16:14	DLR		
Extraction, PCB	Completed			3550B	08/05/11 13:39	ADB		
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
Inorganics								
Total Solids	88	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	25.0	mg/kg	0.20	6020	08/09/11 17:22	PER	7440-38-2	
Barium	85.4	mg/kg	1.0	6020	08/09/11 17:22	PER	7440-39-3	
Cadmium	22.2	mg/kg	0.20	6020	08/09/11 17:22	PER	7440-43-9	
Chromium	27.8	mg/kg	0.50	6020	08/09/11 17:22	PER	7440-47-3	
Lead	28.4	mg/kg	0.30	6020	08/09/11 17:22	PER	7439-92-1	
Mercury	0.124	mg/kg	0.050	7471A	08/09/11 15:34	JRT	7439-97-6	
Selenium	23.4	mg/kg	0.50	6020	08/09/11 17:22	PER	7782-49-2	
Silver	21.0	mg/kg	0.20	6020	08/09/11 17:22	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	30	ug/kg	330	8082	08/05/11 12:30	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 12:30	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 12:30	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 12:30	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 12:30	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 12:30	JANB	11097-69-1	
PCB-1260	30	ug/kg	330	8082	08/05/11 12:30	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	30	ug/kg	330	8082	08/05/11 12:30	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 12:30	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 12:30	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 12:30	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 12:30	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 12:30	JANB	11097-69-1	
PCB-1260	30	ug/kg	330	8082	08/05/11 12:30	JANB	11096-82-5	
Organics - Semi-Volatiles								
Semi-Volatile Organics - MDEQ								
Acenaphthene	1,455	ug/kg	330	8270C	08/08/11 19:18	PL	83-32-9	1
Acenaphthylene	1,504	ug/kg	330	8270C	08/08/11 19:18	PL	208-96-8	1

1-Dry Weight Spike: 1.89 mg/kg

Lab Sample ID: S49562.21 (continued)
Sample Tag: SS-15 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
Anthracene	1,555	ug/kg	330	8270C	08/08/11 19:18	PL	120-12-7	1
Benzo(a)anthracene	1,545	ug/kg	330	8270C	08/08/11 19:18	PL	56-55-3	1
Benzo(b)fluoranthene	1,496	ug/kg	330	8270C	08/08/11 19:18	PL	205-99-2	1
Benzo(k)fluoranthene	1,424	ug/kg	330	8270C	08/08/11 19:18	PL	207-08-9	1
Benzo(ghi)perylene	1,440	ug/kg	330	8270C	08/08/11 19:18	PL	191-24-2	1
Benzo(a)pyrene	1,367	ug/kg	330	8270C	08/08/11 19:18	PL	50-32-8	1
bis(2-Chloroethoxy)methane	1,375	ug/kg	330	8270C	08/08/11 19:18	PL	111-91-1	1
bis(2-Chloroethyl)ether	1,380	ug/kg	330	8270C	08/08/11 19:18	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	1,302	ug/kg	330	8270C	08/08/11 19:18	PL	108-60-1	1
bis(2-Ethylhexyl)phthalate	1,782	ug/kg	330	8270C	08/08/11 19:18	PL	117-81-7	1
4-Bromophenyl phenyl ether	1,464	ug/kg	330	8270C	08/08/11 19:18	PL	101-55-3	1
Butyl benzyl phthalate	1,646	ug/kg	330	8270C	08/08/11 19:18	PL	85-68-7	1
4-Chloroaniline	1,264	ug/kg	330	8270C	08/08/11 19:18	PL	106-47-8	1
2-Chloronaphthalene	1,418	ug/kg	330	8270C	08/08/11 19:18	PL	91-58-7	1
4-Chloro-3-methylphenol	1,508	ug/kg	280	8270C	08/08/11 19:18	PL	59-50-7	1
2-Chlorophenol	1,351	ug/kg	330	8270C	08/08/11 19:18	PL	95-57-8	1
4-Chlorophenyl phenyl ether	1,522	ug/kg	330	8270C	08/08/11 19:18	PL	7005-72-3	1
Chrysene	1,967	ug/kg	330	8270C	08/08/11 19:18	PL	218-01-9	1
p,m-Cresol	2,596	ug/kg	330	8270C	08/08/11 19:18	PL	3/4-Cresol	1
o-Cresol	1,398	ug/kg	330	8270C	08/08/11 19:18	PL	95-48-7	1
Dibenzo(ah)anthracene	1,491	ug/kg	330	8270C	08/08/11 19:18	PL	53-70-3	1
Dibenzofuran	1,541	ug/kg	330	8270C	08/08/11 19:18	PL	132-64-9	1
di-n-Butyl phthalate	1,642	ug/kg	330	8270C	08/08/11 19:18	PL	84-74-2	1
1,2-Dichlorobenzene	1,273	ug/kg	330	8270C	08/08/11 19:18	PL	95-50-1	1
1,3-Dichlorobenzene	1,249	ug/kg	330	8270C	08/08/11 19:18	PL	541-73-1	1
1,4-Dichlorobenzene	1,245	ug/kg	330	8270C	08/08/11 19:18	PL	106-46-7	1
3,3'-Dichlorobenzidine	1,500	ug/kg	2,000	8270C	08/08/11 19:18	PL	91-94-1	1J
2,4-Dichlorophenol	1,375	ug/kg	330	8270C	08/08/11 19:18	PL	120-83-2	1
Diethyl phthalate	1,596	ug/kg	330	8270C	08/08/11 19:18	PL	84-66-2	1
2,4-Dimethylphenol	1,421	ug/kg	330	8270C	08/08/11 19:18	PL	105-67-9	1
Dimethyl phthalate	1,558	ug/kg	330	8270C	08/08/11 19:18	PL	131-11-3	1
4,6-Dinitro-2-methylphenol	997	ug/kg	830	8270C	08/08/11 19:18	PL	534-52-1	1
2,4-Dinitrophenol	346	ug/kg	830	8270C	08/08/11 19:18	PL	51-28-5	J1
2,4-Dinitrotoluene	1,628	ug/kg	330	8270C	08/08/11 19:18	PL	121-14-2	1
2,6-Dinitrotoluene	1,545	ug/kg	330	8270C	08/08/11 19:18	PL	606-20-2	1
1,2-Diphenylhydrazine	1,781	ug/kg	330	8270C	08/08/11 19:18	PL	122-66-7	1
di-n-Octyl phthalate	1,639	ug/kg	330	8270C	08/08/11 19:18	PL	117-84-0	1
Fluoranthene	1,546	ug/kg	330	8270C	08/08/11 19:18	PL	206-44-0	1
Fluorene	1,546	ug/kg	330	8270C	08/08/11 19:18	PL	86-73-7	1
Hexachlorobenzene	1,525	ug/kg	330	8270C	08/08/11 19:18	PL	118-74-1	1
Hexachlorobutadiene	1,266	ug/kg	330	8270C	08/08/11 19:18	PL	87-68-3	1
Hexachlorocyclopentadiene	1,067	ug/kg	330	8270C	08/08/11 19:18	PL	77-47-4	1
Hexachloroethane	1,237	ug/kg	330	8270C	08/08/11 19:18	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	1,484	ug/kg	330	8270C	08/08/11 19:18	PL	193-39-5	1
Isophorone	1,544	ug/kg	330	8270C	08/08/11 19:18	PL	78-59-1	1
2-Methylnaphthalene	1,433	ug/kg	330	8270C	08/08/11 19:18	PL	91-57-6	1
Naphthalene	1,373	ug/kg	330	8270C	08/08/11 19:18	PL	91-20-3	1

1-Dry Weight Spike: 1.89 mg/kg
J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S49562.21 (continued)
Sample Tag: SS-15 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
2-Nitroaniline	1,516	ug/kg	830	8270C	08/08/11 19:18	PL	88-74-4	1
3-Nitroaniline	1,414	ug/kg	830	8270C	08/08/11 19:18	PL	99-09-2	1
4-Nitroaniline	1,520	ug/kg	830	8270C	08/08/11 19:18	PL	100-01-6	1
Nitrobenzene	1,360	ug/kg	330	8270C	08/08/11 19:18	PL	98-95-3	1
2-Nitrophenol	1,397	ug/kg	330	8270C	08/08/11 19:18	PL	88-75-5	1
4-Nitrophenol	1,382	ug/kg	830	8270C	08/08/11 19:18	PL	100-02-7	1
N-Nitrosodiphenylamine	819	ug/kg	330	8270C	08/08/11 19:18	PL	86-30-6	1
N-Nitrosodi-n-propylamine	1,440	ug/kg	330	8270C	08/08/11 19:18	PL	621-64-7	1
Pentachlorophenol	1,177	ug/kg	330	8270C	08/08/11 19:18	PL	87-86-5	1
Phenanthrene	1,563	ug/kg	330	8270C	08/08/11 19:18	PL	85-01-8	1
Phenol	1,402	ug/kg	330	8270C	08/08/11 19:18	PL	108-95-2	1
Pyrene	1,576	ug/kg	330	8270C	08/08/11 19:18	PL	129-00-0	1
1,2,4-Trichlorobenzene	1,302	ug/kg	330	8270C	08/08/11 19:18	PL	120-82-1	1
2,4,5-Trichlorophenol	1,473	ug/kg	330	8270C	08/08/11 19:18	PL	95-95-4	1
2,4,6-Trichlorophenol	1,409	ug/kg	330	8270C	08/08/11 19:18	PL	88-06-2	1
Organics - Volatiles								
Volatile Organics 5035								
Diethyl ether	2,500	ug/kg	300	8260B/5035	08/07/11 05:50	WAT	60-29-7	2
Acetone	3,000	ug/kg	1,000	8260B/5035	08/07/11 05:50	WAT	67-64-1	2
Methyl iodide	3,200	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	74-88-4	2
Carbon disulfide	2,800	ug/kg	300	8260B/5035	08/07/11 05:50	WAT	75-15-0	2
tert-Methyl butyl ether (MTBE)	3,400	ug/kg	300	8260B/5035	08/07/11 05:50	WAT	1634-04-4	2
Acrylonitrile	3,200	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	107-13-1	2
2-Butanone (MEK)	2,920	ug/kg	940	8260B/5035	08/07/11 05:50	WAT	78-93-3	2
Dichlorodifluoromethane	1,400	ug/kg	300	8260B/5035	08/07/11 05:50	WAT	75-71-8	2
Chloromethane	1,900	ug/kg	300	8260B/5035	08/07/11 05:50	WAT	74-87-3	2
Vinyl chloride	2,210	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	75-01-4	2
Bromomethane	1,400	ug/kg	300	8260B/5035	08/07/11 05:50	WAT	74-83-9	2
Chloroethane	1,200	ug/kg	300	8260B/5035	08/07/11 05:50	WAT	75-00-3	2
Trichlorofluoromethane	2,300	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	75-69-4	2
1,1-Dichloroethene	2,860	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	75-35-4	2
Methylene chloride	3,300	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	75-09-2	2
trans-1,2-Dichloroethene	3,140	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	156-60-5	2
1,1-Dichloroethane	3,290	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	75-34-3	2
cis-1,2-Dichloroethene	3,450	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	156-59-2	2
Tetrahydrofuran	3,000	ug/kg	1,000	8260B/5035	08/07/11 05:50	WAT	109-99-9	2
Chloroform	3,380	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	67-66-3	2
Bromochloromethane	3,600	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	74-97-5	2
1,1,1-Trichloroethane	3,430	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	71-55-6	2
4-Methyl-2-pentanone (MIBK)	3,000	ug/kg	3,000	8260B/5035	08/07/11 05:50	WAT	108-10-1	2
2-Hexanone	Not detected	ug/kg	3,000	8260B/5035	08/07/11 05:50	WAT	591-78-6	2
Carbon tetrachloride	3,060	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	56-23-5	2
Benzene	3,160	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	71-43-2	2
1,2-Dichloroethane	3,050	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	107-06-2	2
Trichloroethene	3,340	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	79-01-6	2
1,2-Dichloropropane	3,260	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	78-87-5	2

1-Dry Weight Spike: 1.89 mg/kg
2-Sample spiked at 2.5 mg/kg

Lab Sample ID: S49562.21 (continued)
Sample Tag: SS-15 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
Bromodichloromethane	3,300	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	75-27-4	1
Dibromomethane	3,600	ug/kg	300	8260B/5035	08/07/11 05:50	WAT	74-95-3	1
cis-1,3-Dichloropropene	3,150	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	10061-01-5	1
Toluene	3,300	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	108-88-3	1
trans-1,3-Dichloropropene	3,170	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	10061-02-6	1
1,1,2-Trichloroethane	3,340	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	79-00-5	1
Tetrachloroethene	2,860	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	127-18-4	1
trans-1,4-Dichloro-2-butene	2,720	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	110-57-6	1
Dibromochloromethane	3,300	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	124-48-1	1
1,2-Dibromoethane	3,660	ug/kg	30	8260B/5035	08/07/11 05:50	WAT	106-93-4	1M
Chlorobenzene	3,490	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	108-90-7	1
1,1,1,2-Tetrachloroethane	3,600	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	630-20-6	1
Ethylbenzene	3,370	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	100-41-4	1
p,m-Xylene	6,800	ug/kg	100	8260B/5035	08/07/11 05:50	WAT		1
o-Xylene	3,490	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	95-47-6	1
Styrene	3,080	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	100-42-5	1
Isopropylbenzene	3,500	ug/kg	300	8260B/5035	08/07/11 05:50	WAT	98-82-8	1
Bromoform	3,400	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	75-25-2	1
1,1,2,2-Tetrachloroethane	3,280	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	79-34-5	1
1,2,3-Trichloropropane	3,600	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	96-18-4	1
n-Propylbenzene	3,400	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	103-65-1	1
Bromobenzene	3,700	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	108-86-1	1
1,3,5-Trimethylbenzene	3,600	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	108-67-8	1
tert-Butylbenzene	3,500	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	98-06-6	1
1,2,4-Trimethylbenzene	3,500	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	95-63-6	1
sec-Butylbenzene	3,490	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	135-98-8	1
p-Isopropyltoluene	3,400	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	99-87-6	1
1,3-Dichlorobenzene	3,400	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	541-73-1	1
1,4-Dichlorobenzene	3,300	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	106-46-7	1
1,2-Dichlorobenzene	3,600	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	95-50-1	1
1,2,3-Trimethylbenzene	3,500	ug/kg	100	8260B/5035	08/07/11 05:50	WAT	526-73-8	1
n-Butylbenzene	3,160	ug/kg	60	8260B/5035	08/07/11 05:50	WAT	104-51-8	1
Hexachloroethane	3,400	ug/kg	400	8260B/5035	08/07/11 05:50	WAT	67-72-1	1
1,2-Dibromo-3-chloropropane	3,600	ug/kg	300	8260B/5035	08/07/11 05:50	WAT	96-12-8	1
1,2,4-Trichlorobenzene	3,410	ug/kg	410	8260B/5035	08/07/11 05:50	WAT	120-82-1	1
1,2,3-Trichlorobenzene	3,780	ug/kg	410	8260B/5035	08/07/11 05:50	WAT	87-61-6	1
Naphthalene	3,980	ug/kg	410	8260B/5035	08/07/11 05:50	WAT	91-20-3	1
2-Methylnaphthalene	3,420	ug/kg	410	8260B/5035	08/07/11 05:50	WAT	91-57-6	1

1-Sample spiked at 2.5 mg/kg
M-Result reported to MDL not RDL

Lab Sample ID: S49562.22
Sample Tag: SS-16
Collected Date/Time: 08/01/2011 14:10
Matrix: Soil
COC Reference: 63759

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR
1	40ml Glass	MeOH	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	08/05/11 16:14	DLR		
Extraction, PCB	Completed			3550B	08/05/11 13:39	ADB		
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
Inorganics								
Total Solids	90	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	1.80	mg/kg	0.20	6020	08/09/11 17:30	PER	7440-38-2	
Barium	53.2	mg/kg	1.0	6020	08/09/11 17:30	PER	7440-39-3	
Cadmium	0.21	mg/kg	0.20	6020	08/09/11 17:30	PER	7440-43-9	
Chromium	6.31	mg/kg	0.50	6020	08/09/11 17:30	PER	7440-47-3	
Lead	12.6	mg/kg	0.30	6020	08/09/11 17:30	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:41	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 17:30	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 17:30	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 14:54	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 14:54	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 14:54	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 14:54	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 14:54	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 14:54	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 14:54	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 14:54	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 14:54	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 14:54	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 14:54	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 14:54	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 14:54	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 14:54	JANB	11096-82-5	
Organics - Semi-Volatiles								
Semi-Volatile Organics - MDEQ								
Acenaphthene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	208-96-8	
Anthracene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	120-12-7	

Lab Sample ID: S49562.22 (continued)
Sample Tag: SS-16

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
Benzo(a)anthracene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	56-55-3	
Benzo(b)fluoranthene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	191-24-2	
Benzo(a)pyrene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	117-81-7	
4-Bromophenyl phenyl ether	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	101-55-3	
Butyl benzyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	85-68-7	
4-Chloroaniline	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	106-47-8	
2-Chloronaphthalene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	91-58-7	
4-Chloro-3-methylphenol	Not detected	ug/kg	280	8270C	08/08/11 22:08	PL	59-50-7	
2-Chlorophenol	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	7005-72-3	
Chrysene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	218-01-9	
p,m-Cresol	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	95-48-7	
Dibenzo(ah)anthracene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	53-70-3	
Dibenzofuran	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	132-64-9	
di-n-Butyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	84-74-2	
1,2-Dichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	106-46-7	
3,3'-Dichlorobenzidine	Not detected	ug/kg	2,000	8270C	08/08/11 22:08	PL	91-94-1	
2,4-Dichlorophenol	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	120-83-2	
Diethyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	84-66-2	
2,4-Dimethylphenol	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	105-67-9	
Dimethyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	830	8270C	08/08/11 22:08	PL	534-52-1	
2,4-Dinitrophenol	Not detected	ug/kg	830	8270C	08/08/11 22:08	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	606-20-2	
1,2-Diphenylhydrazine	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	122-66-7	
di-n-Octyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	117-84-0	
Fluoranthene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	206-44-0	
Fluorene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	86-73-7	
Hexachlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	118-74-1	
Hexachlorobutadiene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	77-47-4	
Hexachloroethane	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	193-39-5	
Isophorone	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	91-57-6	
Naphthalene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	91-20-3	
2-Nitroaniline	Not detected	ug/kg	830	8270C	08/08/11 22:08	PL	88-74-4	
3-Nitroaniline	Not detected	ug/kg	830	8270C	08/08/11 22:08	PL	99-09-2	
4-Nitroaniline	Not detected	ug/kg	830	8270C	08/08/11 22:08	PL	100-01-6	

Lab Sample ID: S49562.22 (continued)
Sample Tag: SS-16

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
Nitrobenzene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	98-95-3	
2-Nitrophenol	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	88-75-5	
4-Nitrophenol	Not detected	ug/kg	830	8270C	08/08/11 22:08	PL	100-02-7	
N-Nitrosodiphenylamine	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	621-64-7	
Pentachlorophenol	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	87-86-5	
Phenanthrene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	85-01-8	
Phenol	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	108-95-2	
Pyrene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	129-00-0	
1,2,4-Trichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	120-82-1	
2,4,5-Trichlorophenol	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/kg	330	8270C	08/08/11 22:08	PL	88-06-2	
Organics - Volatiles								
Volatile Organics 5035								
Diethyl ether	Not detected	ug/kg	200	8260B/5035	08/07/11 02:14	WAT	60-29-7	
Acetone	Not detected	ug/kg	1,000	8260B/5035	08/07/11 02:14	WAT	67-64-1	
Methyl iodide	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	74-88-4	
Carbon disulfide	Not detected	ug/kg	300	8260B/5035	08/07/11 02:14	WAT	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	200	8260B/5035	08/07/11 02:14	WAT	1634-04-4	
Acrylonitrile	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	107-13-1	
2-Butanone (MEK)	Not detected	ug/kg	880	8260B/5035	08/07/11 02:14	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	300	8260B/5035	08/07/11 02:14	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	300	8260B/5035	08/07/11 02:14	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	200	8260B/5035	08/07/11 02:14	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	300	8260B/5035	08/07/11 02:14	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	156-59-2	
Tetrahydrofuran	Not detected	ug/kg	1,000	8260B/5035	08/07/11 02:14	WAT	109-99-9	
Chloroform	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	67-66-3	
Bromochloromethane	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	8260B/5035	08/07/11 02:14	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	8260B/5035	08/07/11 02:14	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	56-23-5	
Benzene	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	75-27-4	
Dibromomethane	Not detected	ug/kg	300	8260B/5035	08/07/11 02:14	WAT	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	10061-01-5	
Toluene	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	10061-02-6	

Lab Sample ID: S49562.22 (continued)
Sample Tag: SS-16

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
1,1,2-Trichloroethane	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	110-57-6	
Dibromochloromethane	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	20	8260B/5035	08/07/11 02:14	WAT	106-93-4	M
Chlorobenzene	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	630-20-6	
Ethylbenzene	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT		
o-Xylene	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	95-47-6	
Styrene	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	300	8260B/5035	08/07/11 02:14	WAT	98-82-8	
Bromoform	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	96-18-4	
n-Propylbenzene	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	103-65-1	
Bromobenzene	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	108-67-8	
tert-Butylbenzene	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	95-63-6	
sec-Butylbenzene	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	135-98-8	
p-Isopropyltoluene	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/07/11 02:14	WAT	526-73-8	
n-Butylbenzene	Not detected	ug/kg	60	8260B/5035	08/07/11 02:14	WAT	104-51-8	
Hexachloroethane	Not detected	ug/kg	400	8260B/5035	08/07/11 02:14	WAT	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	300	8260B/5035	08/07/11 02:14	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	390	8260B/5035	08/07/11 02:14	WAT	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/kg	390	8260B/5035	08/07/11 02:14	WAT	87-61-6	
Naphthalene	Not detected	ug/kg	390	8260B/5035	08/07/11 02:14	WAT	91-20-3	
2-Methylnaphthalene	Not detected	ug/kg	390	8260B/5035	08/07/11 02:14	WAT	91-57-6	

M-Result reported to MDL not RDL

Lab Sample ID: S49562.23
Sample Tag: DUP-01
Collected Date/Time: 08/01/2011 00:01
Matrix: Soil
COC Reference: 63759

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR
1	40ml Glass	MeOH	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	08/05/11 16:14	DLR		
Extraction, PCB	Completed			3550B	08/05/11 13:39	ADB		
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
Inorganics								
Total Solids	92	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	1.92	mg/kg	0.20	6020	08/09/11 17:32	PER	7440-38-2	
Barium	44.4	mg/kg	1.0	6020	08/09/11 17:32	PER	7440-39-3	
Cadmium	0.22	mg/kg	0.20	6020	08/09/11 17:32	PER	7440-43-9	
Chromium	6.06	mg/kg	0.50	6020	08/09/11 17:32	PER	7440-47-3	
Lead	13.0	mg/kg	0.30	6020	08/09/11 17:32	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:43	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 17:32	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 17:32	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 15:04	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 15:04	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 15:04	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 15:04	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 15:04	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 15:04	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 15:04	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 15:04	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 15:04	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 15:04	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 15:04	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 15:04	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 15:04	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 15:04	JANB	11096-82-5	
Organics - Semi-Volatiles								
Semi-Volatile Organics - MDEQ								
Acenaphthene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	208-96-8	
Anthracene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	120-12-7	

Lab Sample ID: S49562.23 (continued)
Sample Tag: DUP-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
Benzo(a)anthracene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	56-55-3	
Benzo(b)fluoranthene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	191-24-2	
Benzo(a)pyrene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	117-81-7	
4-Bromophenyl phenyl ether	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	101-55-3	
Butyl benzyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	85-68-7	
4-Chloroaniline	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	106-47-8	
2-Chloronaphthalene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	91-58-7	
4-Chloro-3-methylphenol	Not detected	ug/kg	280	8270C	08/08/11 22:42	PL	59-50-7	
2-Chlorophenol	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	7005-72-3	
Chrysene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	218-01-9	
p,m-Cresol	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	95-48-7	
Dibenzo(ah)anthracene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	53-70-3	
Dibenzofuran	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	132-64-9	
di-n-Butyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	84-74-2	
1,2-Dichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	106-46-7	
3,3'-Dichlorobenzidine	Not detected	ug/kg	2,000	8270C	08/08/11 22:42	PL	91-94-1	
2,4-Dichlorophenol	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	120-83-2	
Diethyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	84-66-2	
2,4-Dimethylphenol	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	105-67-9	
Dimethyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	830	8270C	08/08/11 22:42	PL	534-52-1	
2,4-Dinitrophenol	Not detected	ug/kg	830	8270C	08/08/11 22:42	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	606-20-2	
1,2-Diphenylhydrazine	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	122-66-7	
di-n-Octyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	117-84-0	
Fluoranthene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	206-44-0	
Fluorene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	86-73-7	
Hexachlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	118-74-1	
Hexachlorobutadiene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	77-47-4	
Hexachloroethane	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	193-39-5	
Isophorone	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	91-57-6	
Naphthalene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	91-20-3	
2-Nitroaniline	Not detected	ug/kg	830	8270C	08/08/11 22:42	PL	88-74-4	
3-Nitroaniline	Not detected	ug/kg	830	8270C	08/08/11 22:42	PL	99-09-2	
4-Nitroaniline	Not detected	ug/kg	830	8270C	08/08/11 22:42	PL	100-01-6	

Lab Sample ID: S49562.23 (continued)
Sample Tag: DUP-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
Nitrobenzene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	98-95-3	
2-Nitrophenol	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	88-75-5	
4-Nitrophenol	Not detected	ug/kg	830	8270C	08/08/11 22:42	PL	100-02-7	
N-Nitrosodiphenylamine	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	621-64-7	
Pentachlorophenol	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	87-86-5	
Phenanthrene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	85-01-8	
Phenol	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	108-95-2	
Pyrene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	129-00-0	
1,2,4-Trichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	120-82-1	
2,4,5-Trichlorophenol	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/kg	330	8270C	08/08/11 22:42	PL	88-06-2	
Organics - Volatiles								
Volatile Organics 5035								
Diethyl ether	Not detected	ug/kg	200	8260B/5035	08/09/11 17:27	JGH	60-29-7	
Acetone	Not detected	ug/kg	1,000	8260B/5035	08/09/11 17:27	JGH	67-64-1	
Methyl iodide	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	74-88-4	
Carbon disulfide	Not detected	ug/kg	300	8260B/5035	08/09/11 17:27	JGH	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	200	8260B/5035	08/09/11 17:27	JGH	1634-04-4	
Acrylonitrile	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	107-13-1	
2-Butanone (MEK)	Not detected	ug/kg	830	8260B/5035	08/09/11 17:27	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	300	8260B/5035	08/09/11 17:27	JGH	75-71-8	
Chloromethane	Not detected	ug/kg	300	8260B/5035	08/09/11 17:27	JGH	74-87-3	
Vinyl chloride	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	75-01-4	
Bromomethane	Not detected	ug/kg	200	8260B/5035	08/09/11 17:27	JGH	74-83-9	
Chloroethane	Not detected	ug/kg	300	8260B/5035	08/09/11 17:27	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	75-35-4	
Methylene chloride	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	156-59-2	
Tetrahydrofuran	Not detected	ug/kg	1,000	8260B/5035	08/09/11 17:27	JGH	109-99-9	
Chloroform	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	67-66-3	
Bromochloromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	8260B/5035	08/09/11 17:27	JGH	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	8260B/5035	08/09/11 17:27	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	56-23-5	
Benzene	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	107-06-2	
Trichloroethene	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	75-27-4	
Dibromomethane	Not detected	ug/kg	300	8260B/5035	08/09/11 17:27	JGH	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	10061-01-5	
Toluene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	10061-02-6	

Lab Sample ID: S49562.23 (continued)
Sample Tag: DUP-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
1,1,2-Trichloroethane	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	110-57-6	
Dibromochloromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	20	8260B/5035	08/09/11 17:27	JGH	106-93-4	M
Chlorobenzene	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	630-20-6	
Ethylbenzene	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH		
o-Xylene	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	95-47-6	
Styrene	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/kg	300	8260B/5035	08/09/11 17:27	JGH	98-82-8	
Bromoform	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	96-18-4	
n-Propylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	103-65-1	
Bromobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	108-67-8	
tert-Butylbenzene	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	95-63-6	
sec-Butylbenzene	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	135-98-8	
p-Isopropyltoluene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:27	JGH	526-73-8	
n-Butylbenzene	Not detected	ug/kg	60	8260B/5035	08/09/11 17:27	JGH	104-51-8	
Hexachloroethane	Not detected	ug/kg	300	8260B/5035	08/09/11 17:27	JGH	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	300	8260B/5035	08/09/11 17:27	JGH	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	370	8260B/5035	08/09/11 17:27	JGH	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/kg	370	8260B/5035	08/09/11 17:27	JGH	87-61-6	
Naphthalene	Not detected	ug/kg	370	8260B/5035	08/09/11 17:27	JGH	91-20-3	
2-Methylnaphthalene	Not detected	ug/kg	370	8260B/5035	08/09/11 17:27	JGH	91-57-6	

M-Result reported to MDL not RDL

Lab Sample ID: S49562.24
Sample Tag: FBK-01
Collected Date/Time: 08/01/2011 14:25
Matrix: QC
COC Reference: 63759

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	1L Amber	None	Yes	4.3	IR
2	40ml Glass	HCL	Yes	4.3	IR
1	125ml Plastic	HNO3	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/05/11 15:41	PL		
Extraction, PCB	Completed			3510C	08/03/11 13:33	ADB		
Mercury Digestion	Completed			245.1	08/08/11 11:37	JRH		
Metal Digestion	Completed			3015A	08/10/11 01:00	SLR		
Metals								
Arsenic	Not detected	mg/L	0.002	200.8	08/10/11 15:11	SLS	7440-38-2	
Barium	0.006	mg/L	0.005	200.8	08/10/11 15:11	SLS	7440-39-3	
Cadmium	Not detected	mg/L	0.0005	200.8	08/10/11 15:11	SLS	7440-43-9	
Chromium	Not detected	mg/L	0.005	200.8	08/10/11 15:11	SLS	7440-47-3	
Lead	Not detected	mg/L	0.003	200.8	08/10/11 15:11	SLS	7439-92-1	
Mercury	Not detected	mg/L	0.0002	245.1	08/08/11 15:22	JRT	7439-97-6	
Selenium	Not detected	mg/L	0.005	200.8	08/10/11 15:11	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0005	200.8	08/10/11 15:11	SLS	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/L	0.1	8082	08/03/11 12:33	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.1	8082	08/03/11 12:33	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.1	8082	08/03/11 12:33	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	8082	08/03/11 12:33	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.1	8082	08/03/11 12:33	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	8082	08/03/11 12:33	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	8082	08/03/11 12:33	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/L	0.1	8082	08/03/11 12:33	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.1	8082	08/03/11 12:33	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.1	8082	08/03/11 12:33	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	8082	08/03/11 12:33	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.1	8082	08/03/11 12:33	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	8082	08/03/11 12:33	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	8082	08/03/11 12:33	JANB	11096-82-5	
Organics - Semi-Volatiles								
Semi-Volatile Organics - MDEQ								
Acenaphthene	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	208-96-8	
Anthracene	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/L	1	8270C	08/08/11 17:02	PL	56-55-3	
Benzo(b)fluoranthene	Not detected	ug/L	1	8270C	08/08/11 17:02	PL	205-99-2	

Lab Sample ID: S49562.24 (continued)
Sample Tag: FBK-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
Benzo(k)fluoranthene	Not detected	ug/L	1	8270C	08/08/11 17:02	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/L	1	8270C	08/08/11 17:02	PL	191-24-2	
Benzo(a)pyrene	Not detected	ug/L	1	8270C	08/08/11 17:02	PL	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	117-81-7	
4-Bromophenyl phenyl ether	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	101-55-3	
Butyl benzyl phthalate	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	85-68-7	
4-Chloroaniline	Not detected	ug/L	10	8270C	08/08/11 17:02	PL	106-47-8	
2-Chloronaphthalene	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	91-58-7	
4-Chloro-3-methylphenol	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	59-50-7	
2-Chlorophenol	Not detected	ug/L	10	8270C	08/08/11 17:02	PL	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	7005-72-3	
Chrysene	Not detected	ug/L	1	8270C	08/08/11 17:02	PL	218-01-9	
p,m-Cresol	Not detected	ug/L	20	8270C	08/08/11 17:02	PL	3/4-Cresol	
o-Cresol	Not detected	ug/L	10	8270C	08/08/11 17:02	PL	95-48-7	
Dibenzo(ah)anthracene	Not detected	ug/L	2	8270C	08/08/11 17:02	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	4	8270C	08/08/11 17:02	PL	132-64-9	
di-n-Butyl phthalate	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	84-74-2	
1,2-Dichlorobenzene	Not detected	ug/L	1	8270C	08/08/11 17:02	PL	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/L	1	8270C	08/08/11 17:02	PL	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8270C	08/08/11 17:02	PL	106-46-7	
3,3'-Dichlorobenzidine	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	91-94-1	
2,4-Dichlorophenol	Not detected	ug/L	10	8270C	08/08/11 17:02	PL	120-83-2	
Diethyl phthalate	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	84-66-2	
2,4-Dimethylphenol	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	105-67-9	
Dimethyl phthalate	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	20	8270C	08/08/11 17:02	PL	534-52-1	
2,4-Dinitrophenol	Not detected	ug/L	25	8270C	08/08/11 17:02	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	606-20-2	
1,2-Diphenylhydrazine	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	122-66-7	
di-n-Octyl phthalate	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	117-84-0	
Fluoranthene	Not detected	ug/L	1	8270C	08/08/11 17:02	PL	206-44-0	
Fluorene	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	86-73-7	
Hexachlorobenzene	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	118-74-1	
Hexachlorobutadiene	Not detected	ug/L	10	8270C	08/08/11 17:02	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	2	8270C	08/08/11 17:02	PL	193-39-5	
Isophorone	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	91-57-6	
Naphthalene	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	91-20-3	
2-Nitroaniline	Not detected	ug/L	25	8270C	08/08/11 17:02	PL	88-74-4	
3-Nitroaniline	Not detected	ug/L	25	8270C	08/08/11 17:02	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	25	8270C	08/08/11 17:02	PL	100-01-6	
Nitrobenzene	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	98-95-3	
2-Nitrophenol	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	88-75-5	

Lab Sample ID: S49562.24 (continued)
Sample Tag: FBK-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
4-Nitrophenol	Not detected	ug/L	25	8270C	08/08/11 17:02	PL	100-02-7	
N-Nitrosodiphenylamine	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	621-64-7	
Pentachlorophenol	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	87-86-5	
Phenanthrene	Not detected	ug/L	2	8270C	08/08/11 17:02	PL	85-01-8	
Phenol	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	108-95-2	
Pyrene	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	129-00-0	
1,2,4-Trichlorobenzene	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	120-82-1	
2,4,5-Trichlorophenol	Not detected	ug/L	5	8270C	08/08/11 17:02	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	4	8270C	08/08/11 17:02	PL	88-06-2	
Organics - Volatiles								
Volatile Organics - DEQ List								
Diethyl ether	Not detected	ug/L	10	8260B	08/09/11 18:50	JGH	60-29-7	
Acetone	Not detected	ug/L	50	8260B	08/09/11 18:50	JGH	67-64-1	
Methyl iodide	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	74-88-4	
Carbon disulfide	Not detected	ug/L	5	8260B	08/09/11 18:50	JGH	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	8260B	08/09/11 18:50	JGH	1634-04-4	
Acrylonitrile	Not detected	ug/L	2	8260B	08/09/11 18:50	JGH	107-13-1	
2-Butanone (MEK)	Not detected	ug/L	25	8260B	08/09/11 18:50	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	5	8260B	08/09/11 18:50	JGH	75-71-8	
Chloromethane	Not detected	ug/L	5	8260B	08/09/11 18:50	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	75-01-4	
Bromomethane	Not detected	ug/L	5	8260B	08/09/11 18:50	JGH	74-83-9	
Chloroethane	Not detected	ug/L	5	8260B	08/09/11 18:50	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	5	8260B	08/09/11 18:50	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	156-59-2	
Tetrahydrofuran	Not detected	ug/L	90	8260B	08/09/11 18:50	JGH	109-99-9	
Chloroform	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	67-66-3	
Bromochloromethane	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	50	8260B	08/09/11 18:50	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	50	8260B	08/09/11 18:50	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	56-23-5	
Benzene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	75-27-4	
Dibromomethane	Not detected	ug/L	5	8260B	08/09/11 18:50	JGH	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	127-18-4	

Lab Sample ID: S49562.24 (continued)
Sample Tag: FBK-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics - DEQ List (continued)								
trans-1,4-Dichloro-2-butene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	110-57-6	
Dibromochloromethane	Not detected	ug/L	5	8260B	08/09/11 18:50	JGH	124-48-1	
1,2-Dibromoethane	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	106-93-4	
Chlorobenzene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	630-20-6	
Ethylbenzene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	8260B	08/09/11 18:50	JGH		
o-Xylene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	95-47-6	
Styrene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	5	8260B	08/09/11 18:50	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	96-18-4	
n-Propylbenzene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	103-65-1	
Bromobenzene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	108-67-8	
tert-Butylbenzene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	95-63-6	
sec-Butylbenzene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	135-98-8	
p-Isopropyltoluene	Not detected	ug/L	5	8260B	08/09/11 18:50	JGH	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	526-73-8	
n-Butylbenzene	Not detected	ug/L	1	8260B	08/09/11 18:50	JGH	104-51-8	
Hexachloroethane	Not detected	ug/L	5	8260B	08/09/11 18:50	JGH	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	5	8260B	08/09/11 18:50	JGH	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/L	5	8260B	08/09/11 18:50	JGH	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/L	5	8260B	08/09/11 18:50	JGH	87-61-6	
Naphthalene	Not detected	ug/L	5	8260B	08/09/11 18:50	JGH	91-20-3	
2-Methylnaphthalene	Not detected	ug/L	5	8260B	08/09/11 18:50	JGH	91-57-6	

Lab Sample ID: S49562.25
Sample Tag: EBK-02
Collected Date/Time: 08/01/2011 14:40
Matrix: QC
COC Reference: 63759

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	1L Amber	None	Yes	4.3	IR
2	40ml Glass	HCL	Yes	4.3	IR
1	125ml Plastic	HNO3	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/05/11 15:41	PL		
Extraction, PCB	Completed			3510C	08/03/11 13:33	ADB		
Mercury Digestion	Completed			245.1	08/08/11 11:37	JRH		
Metal Digestion	Completed			3015A	08/10/11 01:00	SLR		
Metals								
Arsenic	Not detected	mg/L	0.002	200.8	08/10/11 15:14	SLS	7440-38-2	
Barium	Not detected	mg/L	0.005	200.8	08/10/11 15:14	SLS	7440-39-3	
Cadmium	Not detected	mg/L	0.0005	200.8	08/10/11 15:14	SLS	7440-43-9	
Chromium	Not detected	mg/L	0.005	200.8	08/10/11 15:14	SLS	7440-47-3	
Lead	Not detected	mg/L	0.003	200.8	08/10/11 15:14	SLS	7439-92-1	
Mercury	Not detected	mg/L	0.0002	245.1	08/08/11 15:24	JRT	7439-97-6	
Selenium	Not detected	mg/L	0.005	200.8	08/10/11 15:14	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0005	200.8	08/10/11 15:14	SLS	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/L	0.1	8082	08/03/11 12:43	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.1	8082	08/03/11 12:43	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.1	8082	08/03/11 12:43	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	8082	08/03/11 12:43	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.1	8082	08/03/11 12:43	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	8082	08/03/11 12:43	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	8082	08/03/11 12:43	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/L	0.1	8082	08/03/11 12:43	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.1	8082	08/03/11 12:43	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.1	8082	08/03/11 12:43	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	8082	08/03/11 12:43	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.1	8082	08/03/11 12:43	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	8082	08/03/11 12:43	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	8082	08/03/11 12:43	JANB	11096-82-5	
Organics - Semi-Volatiles								
Semi-Volatile Organics - MDEQ								
Acenaphthene	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	208-96-8	
Anthracene	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/L	1	8270C	08/08/11 17:36	PL	56-55-3	
Benzo(b)fluoranthene	Not detected	ug/L	1	8270C	08/08/11 17:36	PL	205-99-2	

Lab Sample ID: S49562.25 (continued)
Sample Tag: EBK-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
Benzo(k)fluoranthene	Not detected	ug/L	1	8270C	08/08/11 17:36	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/L	1	8270C	08/08/11 17:36	PL	191-24-2	
Benzo(a)pyrene	Not detected	ug/L	1	8270C	08/08/11 17:36	PL	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	117-81-7	
4-Bromophenyl phenyl ether	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	101-55-3	
Butyl benzyl phthalate	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	85-68-7	
4-Chloroaniline	Not detected	ug/L	10	8270C	08/08/11 17:36	PL	106-47-8	
2-Chloronaphthalene	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	91-58-7	
4-Chloro-3-methylphenol	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	59-50-7	
2-Chlorophenol	Not detected	ug/L	10	8270C	08/08/11 17:36	PL	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	7005-72-3	
Chrysene	Not detected	ug/L	1	8270C	08/08/11 17:36	PL	218-01-9	
p,m-Cresol	Not detected	ug/L	20	8270C	08/08/11 17:36	PL	3/4-Cresol	
o-Cresol	Not detected	ug/L	10	8270C	08/08/11 17:36	PL	95-48-7	
Dibenzo(ah)anthracene	Not detected	ug/L	2	8270C	08/08/11 17:36	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	4	8270C	08/08/11 17:36	PL	132-64-9	
di-n-Butyl phthalate	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	84-74-2	
1,2-Dichlorobenzene	Not detected	ug/L	1	8270C	08/08/11 17:36	PL	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/L	1	8270C	08/08/11 17:36	PL	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8270C	08/08/11 17:36	PL	106-46-7	
3,3'-Dichlorobenzidine	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	91-94-1	
2,4-Dichlorophenol	Not detected	ug/L	10	8270C	08/08/11 17:36	PL	120-83-2	
Diethyl phthalate	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	84-66-2	
2,4-Dimethylphenol	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	105-67-9	
Dimethyl phthalate	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	20	8270C	08/08/11 17:36	PL	534-52-1	
2,4-Dinitrophenol	Not detected	ug/L	25	8270C	08/08/11 17:36	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	606-20-2	
1,2-Diphenylhydrazine	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	122-66-7	
di-n-Octyl phthalate	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	117-84-0	
Fluoranthene	Not detected	ug/L	1	8270C	08/08/11 17:36	PL	206-44-0	
Fluorene	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	86-73-7	
Hexachlorobenzene	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	118-74-1	
Hexachlorobutadiene	Not detected	ug/L	10	8270C	08/08/11 17:36	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	2	8270C	08/08/11 17:36	PL	193-39-5	
Isophorone	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	91-57-6	
Naphthalene	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	91-20-3	
2-Nitroaniline	Not detected	ug/L	25	8270C	08/08/11 17:36	PL	88-74-4	
3-Nitroaniline	Not detected	ug/L	25	8270C	08/08/11 17:36	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	25	8270C	08/08/11 17:36	PL	100-01-6	
Nitrobenzene	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	98-95-3	
2-Nitrophenol	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	88-75-5	

Lab Sample ID: S49562.25 (continued)
Sample Tag: EBK-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
4-Nitrophenol	Not detected	ug/L	25	8270C	08/08/11 17:36	PL	100-02-7	
N-Nitrosodiphenylamine	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	621-64-7	
Pentachlorophenol	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	87-86-5	
Phenanthrene	Not detected	ug/L	2	8270C	08/08/11 17:36	PL	85-01-8	
Phenol	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	108-95-2	
Pyrene	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	129-00-0	
1,2,4-Trichlorobenzene	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	120-82-1	
2,4,5-Trichlorophenol	Not detected	ug/L	5	8270C	08/08/11 17:36	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	4	8270C	08/08/11 17:36	PL	88-06-2	
Organics - Volatiles								
Volatile Organics - DEQ List								
Diethyl ether	Not detected	ug/L	10	8260B	08/09/11 19:08	JGH	60-29-7	
Acetone	Not detected	ug/L	50	8260B	08/09/11 19:08	JGH	67-64-1	
Methyl iodide	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	74-88-4	
Carbon disulfide	Not detected	ug/L	5	8260B	08/09/11 19:08	JGH	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	8260B	08/09/11 19:08	JGH	1634-04-4	
Acrylonitrile	Not detected	ug/L	2	8260B	08/09/11 19:08	JGH	107-13-1	
2-Butanone (MEK)	Not detected	ug/L	25	8260B	08/09/11 19:08	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	5	8260B	08/09/11 19:08	JGH	75-71-8	
Chloromethane	Not detected	ug/L	5	8260B	08/09/11 19:08	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	75-01-4	
Bromomethane	Not detected	ug/L	5	8260B	08/09/11 19:08	JGH	74-83-9	
Chloroethane	Not detected	ug/L	5	8260B	08/09/11 19:08	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	5	8260B	08/09/11 19:08	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	156-59-2	
Tetrahydrofuran	Not detected	ug/L	90	8260B	08/09/11 19:08	JGH	109-99-9	
Chloroform	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	67-66-3	
Bromochloromethane	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	50	8260B	08/09/11 19:08	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	50	8260B	08/09/11 19:08	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	56-23-5	
Benzene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	75-27-4	
Dibromomethane	Not detected	ug/L	5	8260B	08/09/11 19:08	JGH	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	127-18-4	

Lab Sample ID: S49562.25 (continued)
Sample Tag: EBK-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics - DEQ List (continued)								
trans-1,4-Dichloro-2-butene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	110-57-6	
Dibromochloromethane	Not detected	ug/L	5	8260B	08/09/11 19:08	JGH	124-48-1	
1,2-Dibromoethane	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	106-93-4	
Chlorobenzene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	630-20-6	
Ethylbenzene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	8260B	08/09/11 19:08	JGH		
o-Xylene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	95-47-6	
Styrene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	5	8260B	08/09/11 19:08	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	96-18-4	
n-Propylbenzene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	103-65-1	
Bromobenzene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	108-67-8	
tert-Butylbenzene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	95-63-6	
sec-Butylbenzene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	135-98-8	
p-Isopropyltoluene	Not detected	ug/L	5	8260B	08/09/11 19:08	JGH	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	526-73-8	
n-Butylbenzene	Not detected	ug/L	1	8260B	08/09/11 19:08	JGH	104-51-8	
Hexachloroethane	Not detected	ug/L	5	8260B	08/09/11 19:08	JGH	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	5	8260B	08/09/11 19:08	JGH	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/L	5	8260B	08/09/11 19:08	JGH	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/L	5	8260B	08/09/11 19:08	JGH	87-61-6	
Naphthalene	Not detected	ug/L	5	8260B	08/09/11 19:08	JGH	91-20-3	
2-Methylnaphthalene	Not detected	ug/L	5	8260B	08/09/11 19:08	JGH	91-57-6	

Lab Sample ID: S49562.26
Sample Tag: FB-05
Collected Date/Time: 08/01/2011 15:20
Matrix: Soild
COC Reference: 52240

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Plastic Bag	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Extraction, PCB	Completed			3550B	08/05/11 13:39	ADB		
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/10/11 10:00	PER		
PNA Extraction	Completed			3550B	08/04/11 23:17	DLR		
Metals								
Arsenic	1.38	mg/kg	0.20	6020	08/10/11 13:52	PER	7440-38-2	
Barium	22.0	mg/kg	1.0	6020	08/10/11 13:52	PER	7440-39-3	
Cadmium	0.27	mg/kg	0.20	6020	08/10/11 13:52	PER	7440-43-9	
Chromium	3.63	mg/kg	0.50	6020	08/10/11 13:52	PER	7440-47-3	
Lead	22.5	mg/kg	0.30	6020	08/10/11 13:52	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:45	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/10/11 13:52	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/10/11 13:52	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 15:15	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 15:15	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 15:15	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 15:15	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 15:15	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 15:15	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 15:15	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 15:15	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 15:15	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 15:15	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 15:15	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 15:15	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 15:15	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 15:15	JANB	11096-82-5	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	540,000	ug/kg	40,000	8270C	08/12/11 20:05	PL	83-32-9	XYT
Acenaphthylene	40,000	ug/kg	40,000	8270C	08/12/11 20:05	PL	208-96-8	XYT
Anthracene	630,000	ug/kg	40,000	8270C	08/12/11 20:05	PL	120-12-7	XYT
Benzo(a)anthracene	890,000	ug/kg	40,000	8270C	08/12/11 20:05	PL	56-55-3	XYT
Benzo(a)pyrene	740,000	ug/kg	40,000	8270C	08/12/11 20:05	PL	50-32-8	XYT
Benzo(b)fluoranthene	1,450,000	ug/kg	40,000	8270C	08/12/11 20:05	PL	205-99-2	XYTp

X-Elevated reporting limit due to matrix interference Y-Elevated reporting limit due to high target concentration T-No correction for total solids
p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.26 (continued)
Sample Tag: FB-05

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(k)fluoranthene	1,590,000	ug/kg	40,000	8270C	08/12/11 20:05	PL	207-08-9	XYTp
Benzo(ghi)perylene	220,000	ug/kg	40,000	8270C	08/12/11 20:05	PL	191-24-2	XYT
Chrysene	990,000	ug/kg	40,000	8270C	08/12/11 20:05	PL	218-01-9	XYT
Dibenzo(ah)anthracene	Not detected	ug/kg	40,000	8270C	08/12/11 20:05	PL	53-70-3	XYT
Fluoranthene	2,880,000	ug/kg	40,000	8270C	08/12/11 20:05	PL	206-44-0	XYT
Fluorene	820,000	ug/kg	40,000	8270C	08/12/11 20:05	PL	86-73-7	XYT
Indeno(1,2,3-cd)pyrene	240,000	ug/kg	40,000	8270C	08/12/11 20:05	PL	193-39-5	XYT
Naphthalene	370,000	ug/kg	40,000	8270C	08/12/11 20:05	PL	91-20-3	XYT
Phenanthrene	4,330,000	ug/kg	40,000	8270C	08/12/11 20:05	PL	85-01-8	XYT
Pyrene	1,930,000	ug/kg	40,000	8270C	08/12/11 20:05	PL	129-00-0	XYT
2-Methylnaphthalene	300,000	ug/kg	40,000	8270C	08/12/11 20:05	PL	91-57-6	XYT
1-Methylnaphthalene	190,000	ug/kg	40,000	8270C	08/12/11 20:05	PL	90-12-0	XYT

X-Elevated reporting limit due to matrix interference Y-Elevated reporting limit due to high target concentration T-No correction for total solids
p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.27
Sample Tag: FBS-05
Collected Date/Time: 08/01/2011 15:25
Matrix: Soil
COC Reference: 52240

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Extraction, PCB	Completed			3550B	08/05/11 13:39	ADB		
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
PNA Extraction	Completed			3550B	08/04/11 23:17	DLR		
Inorganics								
Total Solids	83	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	2.44	mg/kg	0.20	6020	08/09/11 17:34	PER	7440-38-2	
Barium	54.9	mg/kg	1.0	6020	08/09/11 17:34	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	08/09/11 17:34	PER	7440-43-9	
Chromium	5.53	mg/kg	0.50	6020	08/09/11 17:34	PER	7440-47-3	
Lead	11.5	mg/kg	0.30	6020	08/09/11 17:34	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:47	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 17:34	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 17:34	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 13:52	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 13:52	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 13:52	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 13:52	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 13:52	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 13:52	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 13:52	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 13:52	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 13:52	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 13:52	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 13:52	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 13:52	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 13:52	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 13:52	JANB	11096-82-5	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	500	ug/kg	300	8270C	08/08/11 19:05	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/08/11 19:05	PL	208-96-8	
Anthracene	1,100	ug/kg	300	8270C	08/08/11 19:05	PL	120-12-7	
Benzo(a)anthracene	3,800	ug/kg	300	8270C	08/08/11 19:05	PL	56-55-3	

Lab Sample ID: S49562.27 (continued)
Sample Tag: FBS-05

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(a)pyrene	4,700	ug/kg	300	8270C	08/08/11 19:05	PL	50-32-8	
Benzo(b)fluoranthene	7,800	ug/kg	300	8270C	08/08/11 19:05	PL	205-99-2	p
Benzo(k)fluoranthene	8,100	ug/kg	300	8270C	08/08/11 19:05	PL	207-08-9	p
Benzo(ghi)perylene	2,000	ug/kg	300	8270C	08/08/11 19:05	PL	191-24-2	
Chrysene	4,200	ug/kg	300	8270C	08/08/11 19:05	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/08/11 19:05	PL	53-70-3	
Fluoranthene	8,700	ug/kg	300	8270C	08/08/11 19:05	PL	206-44-0	
Fluorene	800	ug/kg	300	8270C	08/08/11 19:05	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	2,100	ug/kg	300	8270C	08/08/11 19:05	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/08/11 19:05	PL	91-20-3	
Phenanthrene	4,700	ug/kg	300	8270C	08/08/11 19:05	PL	85-01-8	
Pyrene	6,200	ug/kg	300	8270C	08/08/11 19:05	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 19:05	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/08/11 19:05	PL	90-12-0	

p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.28
Sample Tag: FB-04
Collected Date/Time: 08/01/2011 15:50
Matrix: Solid
COC Reference: 52240

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Plastic Bag	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Extraction, PCB	Completed			3550B	08/05/11 13:39	ADB		
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/10/11 10:00	PER		
PNA Extraction	Completed			3550B	08/04/11 23:17	DLR		
Metals								
Arsenic	1.14	mg/kg	0.20	6020	08/10/11 13:56	PER	7440-38-2	
Barium	8.56	mg/kg	1.0	6020	08/10/11 13:56	PER	7440-39-3	
Cadmium	0.21	mg/kg	0.20	6020	08/10/11 13:56	PER	7440-43-9	
Chromium	1.57	mg/kg	0.50	6020	08/10/11 13:56	PER	7440-47-3	
Lead	10.1	mg/kg	0.30	6020	08/10/11 13:56	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:50	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/10/11 13:56	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/10/11 13:56	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 15:25	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 15:25	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 15:25	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 15:25	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 15:25	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 15:25	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 15:25	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 15:25	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 15:25	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 15:25	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 15:25	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 15:25	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 15:25	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 15:25	JANB	11096-82-5	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	850,000	ug/kg	80,000	8270C	08/12/11 20:24	PL	83-32-9	XYT
Acenaphthylene	400,000	ug/kg	80,000	8270C	08/12/11 20:24	PL	208-96-8	XYT
Anthracene	1,200,000	ug/kg	80,000	8270C	08/12/11 20:24	PL	120-12-7	XYT
Benzo(a)anthracene	1,850,000	ug/kg	80,000	8270C	08/12/11 20:24	PL	56-55-3	XYT
Benzo(a)pyrene	1,750,000	ug/kg	80,000	8270C	08/12/11 20:24	PL	50-32-8	XYT
Benzo(b)fluoranthene	2,890,000	ug/kg	80,000	8270C	08/12/11 20:24	PL	205-99-2	XYTp

X-Elevated reporting limit due to matrix interference Y-Elevated reporting limit due to high target concentration T-No correction for total solids
p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.28 (continued)
Sample Tag: FB-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(k)fluoranthene	3,160,000	ug/kg	80,000	8270C	08/12/11 20:24	PL	207-08-9	XYTp
Benzo(ghi)perylene	530,000	ug/kg	80,000	8270C	08/12/11 20:24	PL	191-24-2	XYT
Chrysene	1,800,000	ug/kg	80,000	8270C	08/12/11 20:24	PL	218-01-9	XYT
Dibenzo(ah)anthracene	Not detected	ug/kg	80,000	8270C	08/12/11 20:24	PL	53-70-3	XYT
Fluoranthene	5,390,000	ug/kg	80,000	8270C	08/12/11 20:24	PL	206-44-0	XYT
Fluorene	1,090,000	ug/kg	80,000	8270C	08/12/11 20:24	PL	86-73-7	XYT
Indeno(1,2,3-cd)pyrene	580,000	ug/kg	80,000	8270C	08/12/11 20:24	PL	193-39-5	XYT
Naphthalene	2,070,000	ug/kg	80,000	8270C	08/12/11 20:24	PL	91-20-3	XYT
Phenanthrene	7,620,000	ug/kg	80,000	8270C	08/12/11 20:24	PL	85-01-8	XYT
Pyrene	4,320,000	ug/kg	80,000	8270C	08/12/11 20:24	PL	129-00-0	XYT
2-Methylnaphthalene	1,150,000	ug/kg	80,000	8270C	08/12/11 20:24	PL	91-57-6	XYT
1-Methylnaphthalene	800,000	ug/kg	80,000	8270C	08/12/11 20:24	PL	90-12-0	XYT

X-Elevated reporting limit due to matrix interference Y-Elevated reporting limit due to high target concentration T-No correction for total solids
p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.29
Sample Tag: FBS-04
Collected Date/Time: 08/01/2011 15:55
Matrix: Soil
COC Reference: 52240

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Extraction, PCB	Completed			3550B	08/05/11 13:39	ADB		
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
PNA Extraction	Completed			3550B	08/04/11 23:17	DLR		
Inorganics								
Total Solids	87	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	2.51	mg/kg	0.20	6020	08/09/11 17:36	PER	7440-38-2	
Barium	62.6	mg/kg	1.0	6020	08/09/11 17:36	PER	7440-39-3	
Cadmium	0.24	mg/kg	0.20	6020	08/09/11 17:36	PER	7440-43-9	
Chromium	5.68	mg/kg	0.50	6020	08/09/11 17:36	PER	7440-47-3	
Lead	12.4	mg/kg	0.30	6020	08/09/11 17:36	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:52	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 17:36	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 17:36	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 15:36	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 15:36	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 15:36	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 15:36	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 15:36	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 15:36	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 15:36	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 15:36	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 15:36	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 15:36	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 15:36	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 15:36	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 15:36	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 15:36	JANB	11096-82-5	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	1,600	ug/kg	300	8270C	08/08/11 19:43	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/08/11 19:43	PL	208-96-8	
Anthracene	3,100	ug/kg	300	8270C	08/08/11 19:43	PL	120-12-7	
Benzo(a)anthracene	9,700	ug/kg	300	8270C	08/08/11 19:43	PL	56-55-3	

Lab Sample ID: S49562.29 (continued)
Sample Tag: FBS-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(a)pyrene	14,600	ug/kg	300	8270C	08/08/11 19:43	PL	50-32-8	
Benzo(b)fluoranthene	24,400	ug/kg	300	8270C	08/08/11 19:43	PL	205-99-2	p
Benzo(k)fluoranthene	26,300	ug/kg	300	8270C	08/08/11 19:43	PL	207-08-9	p
Benzo(ghi)perylene	5,600	ug/kg	300	8270C	08/08/11 19:43	PL	191-24-2	
Chrysene	10,900	ug/kg	300	8270C	08/08/11 19:43	PL	218-01-9	
Dibenzo(ah)anthracene	400	ug/kg	300	8270C	08/08/11 19:43	PL	53-70-3	
Fluoranthene	24,700	ug/kg	300	8270C	08/08/11 19:43	PL	206-44-0	
Fluorene	1,900	ug/kg	300	8270C	08/08/11 19:43	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	6,100	ug/kg	300	8270C	08/08/11 19:43	PL	193-39-5	
Naphthalene	700	ug/kg	300	8270C	08/08/11 19:43	PL	91-20-3	
Phenanthrene	14,300	ug/kg	300	8270C	08/08/11 19:43	PL	85-01-8	
Pyrene	19,600	ug/kg	300	8270C	08/08/11 19:43	PL	129-00-0	
2-Methylnaphthalene	400	ug/kg	300	8270C	08/08/11 19:43	PL	91-57-6	
1-Methylnaphthalene	400	ug/kg	300	8270C	08/08/11 19:43	PL	90-12-0	

p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.30
Sample Tag: DUP-02
Collected Date/Time: 08/01/2011 00:01
Matrix: Soild
COC Reference: 52240

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Plastic Bag	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Extraction, PCB	Completed			3550B	08/05/11 13:39	ADB		
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/10/11 10:00	PER		
PNA Extraction	Completed			3550B	08/05/11 16:12	DLR		
Metals								
Arsenic	1.21	mg/kg	0.20	6020	08/10/11 13:58	PER	7440-38-2	
Barium	9.82	mg/kg	1.0	6020	08/10/11 13:58	PER	7440-39-3	
Cadmium	0.22	mg/kg	0.20	6020	08/10/11 13:58	PER	7440-43-9	
Chromium	2.33	mg/kg	0.50	6020	08/10/11 13:58	PER	7440-47-3	
Lead	10.0	mg/kg	0.30	6020	08/10/11 13:58	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:54	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/10/11 13:58	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/10/11 13:58	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 15:46	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 15:46	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 15:46	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 15:46	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 15:46	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 15:46	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 15:46	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 15:46	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 15:46	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 15:46	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 15:46	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 15:46	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 15:46	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 15:46	JANB	11096-82-5	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	390,000	ug/kg	20,000	8270C	08/09/11 14:05	PL	83-32-9	XT
Acenaphthylene	110,000	ug/kg	20,000	8270C	08/09/11 14:05	PL	208-96-8	XT
Anthracene	550,000	ug/kg	20,000	8270C	08/09/11 14:05	PL	120-12-7	XT
Benzo(a)anthracene	800,000	ug/kg	20,000	8270C	08/09/11 14:05	PL	56-55-3	XT
Benzo(a)pyrene	800,000	ug/kg	20,000	8270C	08/09/11 14:05	PL	50-32-8	XT
Benzo(b)fluoranthene	1,390,000	ug/kg	20,000	8270C	08/09/11 14:05	PL	205-99-2	XTp

X-Elevated reporting limit due to matrix interference T-No correction for total solids
p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.30 (continued)
Sample Tag: DUP-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(k)fluoranthene	1,510,000	ug/kg	20,000	8270C	08/09/11 14:05	PL	207-08-9	XTp
Benzo(ghi)perylene	250,000	ug/kg	20,000	8270C	08/09/11 14:05	PL	191-24-2	XT
Chrysene	820,000	ug/kg	20,000	8270C	08/09/11 14:05	PL	218-01-9	XT
Dibenzo(ah)anthracene	Not detected	ug/kg	20,000	8270C	08/09/11 14:05	PL	53-70-3	XT
Fluoranthene	2,530,000	ug/kg	20,000	8270C	08/09/11 14:05	PL	206-44-0	XT
Fluorene	460,000	ug/kg	20,000	8270C	08/09/11 14:05	PL	86-73-7	XT
Indeno(1,2,3-cd)pyrene	280,000	ug/kg	20,000	8270C	08/09/11 14:05	PL	193-39-5	XT
Naphthalene	590,000	ug/kg	20,000	8270C	08/09/11 14:05	PL	91-20-3	XT
Phenanthrene	3,120,000	ug/kg	20,000	8270C	08/09/11 14:05	PL	85-01-8	XT
Pyrene	1,920,000	ug/kg	20,000	8270C	08/09/11 14:05	PL	129-00-0	XT
2-Methylnaphthalene	330,000	ug/kg	20,000	8270C	08/09/11 14:05	PL	91-57-6	XT
1-Methylnaphthalene	250,000	ug/kg	20,000	8270C	08/09/11 14:05	PL	90-12-0	XT

X-Elevated reporting limit due to matrix interference T-No correction for total solids p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.31
Sample Tag: FB-03
Collected Date/Time: 08/01/2011 16:20
Matrix: Solid
COC Reference: 52240

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Plastic Bag	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Extraction, PCB	Completed			3550B	08/05/11 13:39	ADB		
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/10/11 10:00	PER		
PNA Extraction	Completed			3550B	08/05/11 16:12	DLR		
Metals								
Arsenic	1.91	mg/kg	0.20	6020	08/10/11 14:00	PER	7440-38-2	
Barium	23.1	mg/kg	1.0	6020	08/10/11 14:00	PER	7440-39-3	
Cadmium	0.42	mg/kg	0.20	6020	08/10/11 14:00	PER	7440-43-9	
Chromium	7.23	mg/kg	0.50	6020	08/10/11 14:00	PER	7440-47-3	
Lead	27.4	mg/kg	0.30	6020	08/10/11 14:00	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:56	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/10/11 14:00	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/10/11 14:00	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 15:56	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 15:56	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 15:56	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 15:56	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 15:56	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 15:56	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 15:56	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 15:56	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 15:56	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 15:56	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 15:56	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 15:56	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 15:56	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 15:56	JANB	11096-82-5	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	320,000	ug/kg	20,000	8270C	08/09/11 14:24	PL	83-32-9	XT
Acenaphthylene	80,000	ug/kg	20,000	8270C	08/09/11 14:24	PL	208-96-8	XT
Anthracene	550,000	ug/kg	20,000	8270C	08/09/11 14:24	PL	120-12-7	XT
Benzo(a)anthracene	910,000	ug/kg	20,000	8270C	08/09/11 14:24	PL	56-55-3	XT
Benzo(a)pyrene	860,000	ug/kg	20,000	8270C	08/09/11 14:24	PL	50-32-8	XT
Benzo(b)fluoranthene	1,580,000	ug/kg	20,000	8270C	08/09/11 14:24	PL	205-99-2	XTp

X-Elevated reporting limit due to matrix interference T-No correction for total solids
p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.31 (continued)
Sample Tag: FB-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(k)fluoranthene	1,760,000	ug/kg	20,000	8270C	08/09/11 14:24	PL	207-08-9	XTp
Benzo(ghi)perylene	260,000	ug/kg	20,000	8270C	08/09/11 14:24	PL	191-24-2	XT
Chrysene	1,000,000	ug/kg	20,000	8270C	08/09/11 14:24	PL	218-01-9	XT
Dibenzo(ah)anthracene	30,000	ug/kg	20,000	8270C	08/09/11 14:24	PL	53-70-3	XT
Fluoranthene	2,640,000	ug/kg	20,000	8270C	08/09/11 14:24	PL	206-44-0	XT
Fluorene	470,000	ug/kg	20,000	8270C	08/09/11 14:24	PL	86-73-7	XT
Indeno(1,2,3-cd)pyrene	290,000	ug/kg	20,000	8270C	08/09/11 14:24	PL	193-39-5	XT
Naphthalene	220,000	ug/kg	20,000	8270C	08/09/11 14:24	PL	91-20-3	XT
Phenanthrene	3,090,000	ug/kg	20,000	8270C	08/09/11 14:24	PL	85-01-8	XT
Pyrene	2,000,000	ug/kg	20,000	8270C	08/09/11 14:24	PL	129-00-0	XT
2-Methylnaphthalene	170,000	ug/kg	20,000	8270C	08/09/11 14:24	PL	91-57-6	XT
1-Methylnaphthalene	120,000	ug/kg	20,000	8270C	08/09/11 14:24	PL	90-12-0	XT

X-Elevated reporting limit due to matrix interference T-No correction for total solids p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.32
Sample Tag: FB-03 CO-LOCATED
Collected Date/Time: 08/01/2011 16:20
Matrix: Solid
COC Reference: 52240

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Plastic Bag	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Extraction, PCB	Completed			3550B	08/05/11 13:39	ADB		
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/10/11 10:00	PER		
PNA Extraction	Completed			3550B	08/05/11 16:12	DLR		
Metals								
Arsenic	2.12	mg/kg	0.20	6020	08/10/11 14:02	PER	7440-38-2	
Barium	75.5	mg/kg	1.0	6020	08/10/11 14:02	PER	7440-39-3	
Cadmium	1.00	mg/kg	0.20	6020	08/10/11 14:02	PER	7440-43-9	
Chromium	27.5	mg/kg	0.50	6020	08/10/11 14:02	PER	7440-47-3	
Lead	69.8	mg/kg	0.30	6020	08/10/11 14:02	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 15:59	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/10/11 14:02	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/10/11 14:02	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 16:38	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 16:38	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 16:38	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 16:38	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 16:38	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 16:38	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 16:38	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 16:38	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 16:38	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 16:38	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 16:38	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 16:38	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 16:38	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 16:38	JANB	11096-82-5	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	290,000	ug/kg	20,000	8270C	08/09/11 14:43	PL	83-32-9	XT
Acenaphthylene	70,000	ug/kg	20,000	8270C	08/09/11 14:43	PL	208-96-8	XT
Anthracene	510,000	ug/kg	20,000	8270C	08/09/11 14:43	PL	120-12-7	XT
Benzo(a)anthracene	840,000	ug/kg	20,000	8270C	08/09/11 14:43	PL	56-55-3	XT
Benzo(a)pyrene	850,000	ug/kg	20,000	8270C	08/09/11 14:43	PL	50-32-8	XT
Benzo(b)fluoranthene	1,540,000	ug/kg	20,000	8270C	08/09/11 14:43	PL	205-99-2	XTp

X-Elevated reporting limit due to matrix interference T-No correction for total solids
p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.32 (continued)
Sample Tag: FB-03 CO-LOCATED

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(k)fluoranthene	1,710,000	ug/kg	20,000	8270C	08/09/11 14:43	PL	207-08-9	XTp
Benzo(ghi)perylene	250,000	ug/kg	20,000	8270C	08/09/11 14:43	PL	191-24-2	XT
Chrysene	930,000	ug/kg	20,000	8270C	08/09/11 14:43	PL	218-01-9	XT
Dibenzo(ah)anthracene	20,000	ug/kg	20,000	8270C	08/09/11 14:43	PL	53-70-3	XT
Fluoranthene	2,530,000	ug/kg	20,000	8270C	08/09/11 14:43	PL	206-44-0	XT
Fluorene	430,000	ug/kg	20,000	8270C	08/09/11 14:43	PL	86-73-7	XT
Indeno(1,2,3-cd)pyrene	280,000	ug/kg	20,000	8270C	08/09/11 14:43	PL	193-39-5	XT
Naphthalene	140,000	ug/kg	20,000	8270C	08/09/11 14:43	PL	91-20-3	XT
Phenanthrene	2,770,000	ug/kg	20,000	8270C	08/09/11 14:43	PL	85-01-8	XT
Pyrene	1,930,000	ug/kg	20,000	8270C	08/09/11 14:43	PL	129-00-0	XT
2-Methylnaphthalene	110,000	ug/kg	20,000	8270C	08/09/11 14:43	PL	91-57-6	XT
1-Methylnaphthalene	90,000	ug/kg	20,000	8270C	08/09/11 14:43	PL	90-12-0	XT

X-Elevated reporting limit due to matrix interference T-No correction for total solids p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.33
Sample Tag: FBS-03
Collected Date/Time: 08/01/2011 16:25
Matrix: Soil
COC Reference: 52240

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Extraction, PCB	Completed			3550B	08/05/11 13:39	ADB		
Mercury Digestion	Completed			7471A	08/09/11 11:10	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
PNA Extraction	Completed			3550B	08/05/11 16:12	DLR		
Inorganics								
Total Solids	89	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	2.55	mg/kg	0.20	6020	08/09/11 17:38	PER	7440-38-2	
Barium	58.8	mg/kg	1.0	6020	08/09/11 17:38	PER	7440-39-3	
Cadmium	0.57	mg/kg	0.20	6020	08/09/11 17:38	PER	7440-43-9	
Chromium	11.2	mg/kg	0.50	6020	08/09/11 17:38	PER	7440-47-3	
Lead	36.7	mg/kg	0.30	6020	08/09/11 17:38	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 16:01	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 17:38	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 17:38	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 16:48	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 16:48	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 16:48	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 16:48	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 16:48	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 16:48	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 16:48	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 16:48	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 16:48	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 16:48	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 16:48	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 16:48	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 16:48	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 16:48	JANB	11096-82-5	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	300	8270C	08/09/11 13:27	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	8270C	08/09/11 13:27	PL	208-96-8	
Anthracene	300	ug/kg	300	8270C	08/09/11 13:27	PL	120-12-7	
Benzo(a)anthracene	2,000	ug/kg	300	8270C	08/09/11 13:27	PL	56-55-3	

Lab Sample ID: S49562.33 (continued)
Sample Tag: FBS-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(a)pyrene	3,100	ug/kg	300	8270C	08/09/11 13:27	PL	50-32-8	
Benzo(b)fluoranthene	6,200	ug/kg	300	8270C	08/09/11 13:27	PL	205-99-2	p
Benzo(k)fluoranthene	6,300	ug/kg	300	8270C	08/09/11 13:27	PL	207-08-9	p
Benzo(ghi)perylene	1,600	ug/kg	300	8270C	08/09/11 13:27	PL	191-24-2	
Chrysene	3,200	ug/kg	300	8270C	08/09/11 13:27	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	08/09/11 13:27	PL	53-70-3	
Fluoranthene	4,400	ug/kg	300	8270C	08/09/11 13:27	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	8270C	08/09/11 13:27	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	1,700	ug/kg	300	8270C	08/09/11 13:27	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	8270C	08/09/11 13:27	PL	91-20-3	
Phenanthrene	2,000	ug/kg	300	8270C	08/09/11 13:27	PL	85-01-8	
Pyrene	3,600	ug/kg	300	8270C	08/09/11 13:27	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/09/11 13:27	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	8270C	08/09/11 13:27	PL	90-12-0	

p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.34
Sample Tag: FBK-02
Collected Date/Time: 08/01/2011 16:30
Matrix: QC
COC Reference: 52240

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	1L Amber	None	Yes	4.3	IR
1	125ml Plastic	HNO3	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Extraction, PCB	Completed			3510C	08/03/11 13:33	ADB		
Mercury Digestion	Completed			245.1	08/08/11 11:37	JRH		
Metal Digestion	Completed			3015A	08/10/11 01:00	SLR		
PNA Extraction	Completed			3510C	08/05/11 15:42	PL		
Metals								
Arsenic	Not detected	mg/L	0.002	200.8	08/10/11 15:17	SLS	7440-38-2	
Barium	Not detected	mg/L	0.005	200.8	08/10/11 15:17	SLS	7440-39-3	
Cadmium	Not detected	mg/L	0.0005	200.8	08/10/11 15:17	SLS	7440-43-9	
Chromium	Not detected	mg/L	0.005	200.8	08/10/11 15:17	SLS	7440-47-3	
Lead	Not detected	mg/L	0.003	200.8	08/10/11 15:17	SLS	7439-92-1	
Mercury	Not detected	mg/L	0.0002	245.1	08/08/11 15:26	JRT	7439-97-6	
Selenium	Not detected	mg/L	0.005	200.8	08/10/11 15:17	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0005	200.8	08/10/11 15:17	SLS	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/L	0.1	8082	08/03/11 12:54	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.1	8082	08/03/11 12:54	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.1	8082	08/03/11 12:54	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	8082	08/03/11 12:54	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.1	8082	08/03/11 12:54	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	8082	08/03/11 12:54	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	8082	08/03/11 12:54	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/L	0.1	8082	08/03/11 12:54	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.1	8082	08/03/11 12:54	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.1	8082	08/03/11 12:54	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	8082	08/03/11 12:54	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.1	8082	08/03/11 12:54	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	8082	08/03/11 12:54	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	8082	08/03/11 12:54	JANB	11096-82-5	
Organics - Semi-Volatiles								
Polynuclear Aromatic Hydrocarbon								
Acenaphthene	Not detected	ug/L	5	8270C	08/08/11 14:58	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	5	8270C	08/08/11 14:58	PL	208-96-8	
Anthracene	Not detected	ug/L	5	8270C	08/08/11 14:58	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/L	5	8270C	08/08/11 14:58	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	5	8270C	08/08/11 14:58	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	5	8270C	08/08/11 14:58	PL	205-99-2	

Lab Sample ID: S49562.34 (continued)
Sample Tag: FBK-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatic Hydrocarbon (continued)								
Benzo(k)fluoranthene	Not detected	ug/L	5	8270C	08/08/11 14:58	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/L	5	8270C	08/08/11 14:58	PL	191-24-2	
Chrysene	Not detected	ug/L	5	8270C	08/08/11 14:58	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/L	5	8270C	08/08/11 14:58	PL	53-70-3	
Fluoranthene	Not detected	ug/L	5	8270C	08/08/11 14:58	PL	206-44-0	
Fluorene	Not detected	ug/L	5	8270C	08/08/11 14:58	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	5	8270C	08/08/11 14:58	PL	193-39-5	
Naphthalene	Not detected	ug/L	5	8270C	08/08/11 14:58	PL	91-20-3	
Phenanthrene	Not detected	ug/L	5	8270C	08/08/11 14:58	PL	85-01-8	
Pyrene	Not detected	ug/L	5	8270C	08/08/11 14:58	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/L	5	8270C	08/08/11 14:58	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/L	5	8270C	08/08/11 14:58	PL	90-12-0	

Lab Sample ID: S49562.35
Sample Tag: EBK-02
Collected Date/Time: 08/01/2011 16:40
Matrix: QC
COC Reference: 52240

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	1L Amber	None	Yes	4.3	IR
1	125ml Plastic	HNO3	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Extraction, PCB	Completed			3510C	08/03/11 13:33	ADB		
Mercury Digestion	Completed			245.1	08/08/11 11:37	JRH		
Metal Digestion	Completed			3015A	08/10/11 01:00	SLR		
PNA Extraction	Completed			3510C	08/05/11 15:42	PL		
Metals								
Arsenic	Not detected	mg/L	0.002	200.8	08/10/11 15:20	SLS	7440-38-2	
Barium	Not detected	mg/L	0.005	200.8	08/10/11 15:20	SLS	7440-39-3	
Cadmium	Not detected	mg/L	0.0005	200.8	08/10/11 15:20	SLS	7440-43-9	
Chromium	Not detected	mg/L	0.005	200.8	08/10/11 15:20	SLS	7440-47-3	
Lead	Not detected	mg/L	0.003	200.8	08/10/11 15:20	SLS	7439-92-1	
Mercury	Not detected	mg/L	0.0002	245.1	08/08/11 15:28	JRT	7439-97-6	
Selenium	Not detected	mg/L	0.005	200.8	08/10/11 15:20	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0005	200.8	08/10/11 15:20	SLS	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/L	0.1	8082	08/03/11 13:04	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.1	8082	08/03/11 13:04	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.1	8082	08/03/11 13:04	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	8082	08/03/11 13:04	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.1	8082	08/03/11 13:04	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	8082	08/03/11 13:04	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	8082	08/03/11 13:04	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/L	0.1	8082	08/03/11 13:04	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.1	8082	08/03/11 13:04	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.1	8082	08/03/11 13:04	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	8082	08/03/11 13:04	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.1	8082	08/03/11 13:04	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	8082	08/03/11 13:04	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	8082	08/03/11 13:04	JANB	11096-82-5	
Organics - Semi-Volatiles								
Polynuclear Aromatic Hydrocarbon								
Acenaphthene	Not detected	ug/L	5	8270C	08/08/11 15:17	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	5	8270C	08/08/11 15:17	PL	208-96-8	
Anthracene	Not detected	ug/L	5	8270C	08/08/11 15:17	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/L	5	8270C	08/08/11 15:17	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	5	8270C	08/08/11 15:17	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	5	8270C	08/08/11 15:17	PL	205-99-2	

Lab Sample ID: S49562.35 (continued)
Sample Tag: EBK-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatic Hydrocarbon (continued)								
Benzo(k)fluoranthene	Not detected	ug/L	5	8270C	08/08/11 15:17	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/L	5	8270C	08/08/11 15:17	PL	191-24-2	
Chrysene	Not detected	ug/L	5	8270C	08/08/11 15:17	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/L	5	8270C	08/08/11 15:17	PL	53-70-3	
Fluoranthene	Not detected	ug/L	5	8270C	08/08/11 15:17	PL	206-44-0	
Fluorene	Not detected	ug/L	5	8270C	08/08/11 15:17	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	5	8270C	08/08/11 15:17	PL	193-39-5	
Naphthalene	Not detected	ug/L	5	8270C	08/08/11 15:17	PL	91-20-3	
Phenanthrene	Not detected	ug/L	5	8270C	08/08/11 15:17	PL	85-01-8	
Pyrene	Not detected	ug/L	5	8270C	08/08/11 15:17	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/L	5	8270C	08/08/11 15:17	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/L	5	8270C	08/08/11 15:17	PL	90-12-0	

Lab Sample ID: S49562.36
Sample Tag: FB-02
Collected Date/Time: 08/01/2011 16:50
Matrix: Solid
COC Reference: 52240

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Plastic Bag	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Extraction, PCB	Completed			3550B	08/05/11 13:47	ADB		
Mercury Digestion	Completed			7471A	08/09/11 14:00	JRH		
Metal Digestion	Completed			3050B	08/10/11 10:00	PER		
PNA Extraction	Completed			3550B	08/05/11 16:12	DLR		
Metals								
Arsenic	1.54	mg/kg	0.20	6020	08/10/11 14:08	PER	7440-38-2	
Barium	10.1	mg/kg	1.0	6020	08/10/11 14:08	PER	7440-39-3	
Cadmium	0.37	mg/kg	0.20	6020	08/10/11 14:08	PER	7440-43-9	
Chromium	2.49	mg/kg	0.50	6020	08/10/11 14:08	PER	7440-47-3	
Lead	10.7	mg/kg	0.30	6020	08/10/11 14:08	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 16:26	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/10/11 14:08	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/10/11 14:08	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 17:30	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 17:30	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 17:30	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 17:30	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 17:30	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 17:30	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 17:30	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 17:30	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 17:30	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 17:30	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 17:30	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 17:30	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 17:30	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 17:30	JANB	11096-82-5	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	850,000	ug/kg	80,000	8270C	08/12/11 19:08	PL	83-32-9	XYT
Acenaphthylene	Not detected	ug/kg	80,000	8270C	08/12/11 19:08	PL	208-96-8	XYT
Anthracene	1,430,000	ug/kg	80,000	8270C	08/12/11 19:08	PL	120-12-7	XYT
Benzo(a)anthracene	2,150,000	ug/kg	80,000	8270C	08/12/11 19:08	PL	56-55-3	XYT
Benzo(a)pyrene	1,880,000	ug/kg	80,000	8270C	08/12/11 19:08	PL	50-32-8	XYT
Benzo(b)fluoranthene	3,530,000	ug/kg	80,000	8270C	08/12/11 19:08	PL	205-99-2	XYTp

X-Elevated reporting limit due to matrix interference Y-Elevated reporting limit due to high target concentration T-No correction for total solids
p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.36 (continued)
Sample Tag: FB-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(k)fluoranthene	4,010,000	ug/kg	80,000	8270C	08/12/11 19:08	PL	207-08-9	XYTp
Benzo(ghi)perylene	640,000	ug/kg	80,000	8270C	08/12/11 19:08	PL	191-24-2	XYT
Chrysene	2,450,000	ug/kg	80,000	8270C	08/12/11 19:08	PL	218-01-9	XYT
Dibenzo(ah)anthracene	Not detected	ug/kg	80,000	8270C	08/12/11 19:08	PL	53-70-3	XYT
Fluoranthene	6,770,000	ug/kg	80,000	8270C	08/12/11 19:08	PL	206-44-0	XYT
Fluorene	1,310,000	ug/kg	80,000	8270C	08/12/11 19:08	PL	86-73-7	XYT
Indeno(1,2,3-cd)pyrene	700,000	ug/kg	80,000	8270C	08/12/11 19:08	PL	193-39-5	XYT
Naphthalene	Not detected	ug/kg	80,000	8270C	08/12/11 19:08	PL	91-20-3	XYT
Phenanthrene	8,280,000	ug/kg	80,000	8270C	08/12/11 19:08	PL	85-01-8	XYT
Pyrene	4,630,000	ug/kg	80,000	8270C	08/12/11 19:08	PL	129-00-0	XYT
2-Methylnaphthalene	Not detected	ug/kg	80,000	8270C	08/12/11 19:08	PL	91-57-6	XYT
1-Methylnaphthalene	Not detected	ug/kg	80,000	8270C	08/12/11 19:08	PL	90-12-0	XYT

X-Elevated reporting limit due to matrix interference Y-Elevated reporting limit due to high target concentration T-No correction for total solids
p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.37
Sample Tag: FB-02 MS
Collected Date/Time: 08/01/2011 16:50
Matrix: Solid
COC Reference: 52240

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Plastic Bag	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Extraction, PCB	Completed			3550B	08/05/11 13:47	ADB		
Mercury Digestion	Completed			7471A	08/09/11 14:00	JRH		
Metal Digestion	Completed			3050B	08/10/11 10:00	PER		
PNA Extraction	Completed			3550B	08/05/11 16:12	DLR		
Metals								
Arsenic	37.5	mg/kg	0.20	6020	08/10/11 14:15	PER	7440-38-2	
Barium	44.9	mg/kg	1.0	6020	08/10/11 14:15	PER	7440-39-3	
Cadmium	34.1	mg/kg	0.20	6020	08/10/11 14:15	PER	7440-43-9	
Chromium	37.5	mg/kg	0.50	6020	08/10/11 14:15	PER	7440-47-3	
Lead	45.2	mg/kg	0.30	6020	08/10/11 14:15	PER	7439-92-1	
Mercury	0.234	mg/kg	0.050	7471A	08/09/11 16:29	JRT	7439-97-6	
Selenium	37.5	mg/kg	0.50	6020	08/10/11 14:15	PER	7782-49-2	
Silver	33.3	mg/kg	0.20	6020	08/10/11 14:15	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	60	ug/kg	330	8082	08/05/11 17:40	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 17:40	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 17:40	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 17:40	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 17:40	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 17:40	JANB	11097-69-1	
PCB-1260	80	ug/kg	330	8082	08/05/11 17:40	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	60	ug/kg	330	8082	08/05/11 17:40	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 17:40	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 17:40	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 17:40	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 17:40	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 17:40	JANB	11097-69-1	
PCB-1260	80	ug/kg	330	8082	08/05/11 17:40	JANB	11096-82-5	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	1,090,000	ug/kg	80,000	8270C	08/12/11 19:27	PL	83-32-9	XTY1
Acenaphthylene	100,000	ug/kg	80,000	8270C	08/12/11 19:27	PL	208-96-8	XTY1
Anthracene	2,000,000	ug/kg	80,000	8270C	08/12/11 19:27	PL	120-12-7	XTY1
Benzo(a)anthracene	2,800,000	ug/kg	80,000	8270C	08/12/11 19:27	PL	56-55-3	XTY1
Benzo(a)pyrene	2,440,000	ug/kg	80,000	8270C	08/12/11 19:27	PL	50-32-8	XTY1
Benzo(b)fluoranthene	4,500,000	ug/kg	80,000	8270C	08/12/11 19:27	PL	205-99-2	XTYp1

X-Elevated reporting limit due to matrix interference T-No correction for total solids Y-Elevated reporting limit due to high target concentration 1-Dry Weight Spike: 10 mg/kg

p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.37 (continued)
Sample Tag: FB-02 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(k)fluoranthene	5,410,000	ug/kg	80,000	8270C	08/12/11 19:27	PL	207-08-9	XTYp1
Benzo(ghi)perylene	750,000	ug/kg	80,000	8270C	08/12/11 19:27	PL	191-24-2	XTY1
Chrysene	3,230,000	ug/kg	80,000	8270C	08/12/11 19:27	PL	218-01-9	XTY1
Dibenzo(ah)anthracene	Not detected	ug/kg	80,000	8270C	08/12/11 19:27	PL	53-70-3	XTY1
Fluoranthene	9,750,000	ug/kg	80,000	8270C	08/12/11 19:27	PL	206-44-0	XTYE1
Fluorene	1,570,000	ug/kg	80,000	8270C	08/12/11 19:27	PL	86-73-7	XTY1
Indeno(1,2,3-cd)pyrene	840,000	ug/kg	80,000	8270C	08/12/11 19:27	PL	193-39-5	XTY1
Naphthalene	360,000	ug/kg	80,000	8270C	08/12/11 19:27	PL	91-20-3	XTY1
Phenanthrene	14,330,000	ug/kg	80,000	8270C	08/12/11 19:27	PL	85-01-8	XTYE1
Pyrene	6,350,000	ug/kg	80,000	8270C	08/12/11 19:27	PL	129-00-0	XTY1
2-Methylnaphthalene	260,000	ug/kg	80,000	8270C	08/12/11 19:27	PL	91-57-6	XTY1
1-Methylnaphthalene	160,000	ug/kg	80,000	8270C	08/12/11 19:27	PL	90-12-0	XTY1
Polynuclear Aromatics (Replicate 01)								
Acenaphthene	1,497,000	ug/kg	75,000	8270C	08/16/11 13:05	PL	83-32-9	XYT
Acenaphthylene	111,000	ug/kg	75,000	8270C	08/16/11 13:05	PL	208-96-8	XYT
Anthracene	2,651,000	ug/kg	75,000	8270C	08/16/11 13:05	PL	120-12-7	XYT
Benzo(a)anthracene	3,767,000	ug/kg	75,000	8270C	08/16/11 13:05	PL	56-55-3	XYT
Benzo(a)pyrene	3,195,000	ug/kg	75,000	8270C	08/16/11 13:05	PL	50-32-8	XYT
Benzo(b)fluoranthene	5,805,000	ug/kg	75,000	8270C	08/16/11 13:05	PL	205-99-2	XYTp
Benzo(k)fluoranthene	6,380,000	ug/kg	75,000	8270C	08/16/11 13:05	PL	207-08-9	XYTp
Benzo(ghi)perylene	1,053,000	ug/kg	75,000	8270C	08/16/11 13:05	PL	191-24-2	XYT
Chrysene	4,079,000	ug/kg	75,000	8270C	08/16/11 13:05	PL	218-01-9	XYT
Dibenzo(ah)anthracene	116,000	ug/kg	75,000	8270C	08/16/11 13:05	PL	53-70-3	XYT
Fluoranthene	10,481,000	ug/kg	75,000	8270C	08/16/11 13:05	PL	206-44-0	XYT
Fluorene	2,136,000	ug/kg	75,000	8270C	08/16/11 13:05	PL	86-73-7	XYT
Indeno(1,2,3-cd)pyrene	1,253,000	ug/kg	75,000	8270C	08/16/11 13:05	PL	193-39-5	XYT
Naphthalene	477,000	ug/kg	75,000	8270C	08/16/11 13:05	PL	91-20-3	XYT
Phenanthrene	11,954,000	ug/kg	75,000	8270C	08/16/11 13:05	PL	85-01-8	XYT
Pyrene	8,120,000	ug/kg	75,000	8270C	08/16/11 13:05	PL	129-00-0	XYT
2-Methylnaphthalene	359,000	ug/kg	75,000	8270C	08/16/11 13:05	PL	91-57-6	XYT
1-Methylnaphthalene	215,000	ug/kg	75,000	8270C	08/16/11 13:05	PL	90-12-0	XYT

X-Elevated reporting limit due to matrix interference T-No correction for total solids Y-Elevated reporting limit due to high target concentration
p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak. 1-Dry Weight Spike: 10 mg/kg
E-Concentration exceeds calibration range

Lab Sample ID: S49562.38
Sample Tag: FB-02 MSD
Collected Date/Time: 08/01/2011 16:50
Matrix: Solid
COC Reference: 52240

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Plastic Bag	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Extraction, PCB	Completed			3550B	08/05/11 13:47	ADB		
Mercury Digestion	Completed			7471A	08/09/11 14:00	JRH		
Metal Digestion	Completed			3050B	08/10/11 10:00	PER		
PNA Extraction	Completed			3550B	08/05/11 16:12	DLR		
Metals								
Arsenic	36.8	mg/kg	0.20	6020	08/10/11 14:17	PER	7440-38-2	
Barium	42.3	mg/kg	1.0	6020	08/10/11 14:17	PER	7440-39-3	
Cadmium	32.4	mg/kg	0.20	6020	08/10/11 14:17	PER	7440-43-9	
Chromium	36.6	mg/kg	0.50	6020	08/10/11 14:17	PER	7440-47-3	
Lead	44.1	mg/kg	0.30	6020	08/10/11 14:17	PER	7439-92-1	
Mercury	0.221	mg/kg	0.050	7471A	08/09/11 16:31	JRT	7439-97-6	
Selenium	37.6	mg/kg	0.50	6020	08/10/11 14:17	PER	7782-49-2	
Silver	32.0	mg/kg	0.20	6020	08/10/11 14:17	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	60	ug/kg	330	8082	08/05/11 17:51	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 17:51	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 17:51	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 17:51	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 17:51	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 17:51	JANB	11097-69-1	
PCB-1260	80	ug/kg	330	8082	08/05/11 17:51	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	60	ug/kg	330	8082	08/05/11 17:51	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 17:51	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 17:51	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 17:51	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 17:51	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 17:51	JANB	11097-69-1	
PCB-1260	80	ug/kg	330	8082	08/05/11 17:51	JANB	11096-82-5	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	440,000	ug/kg	80,000	8270C	08/12/11 19:46	PL	83-32-9	XYT1
Acenaphthylene	Not detected	ug/kg	80,000	8270C	08/12/11 19:46	PL	208-96-8	XYT1
Anthracene	850,000	ug/kg	80,000	8270C	08/12/11 19:46	PL	120-12-7	XYT1
Benzo(a)anthracene	1,380,000	ug/kg	80,000	8270C	08/12/11 19:46	PL	56-55-3	XYT1
Benzo(a)pyrene	1,220,000	ug/kg	80,000	8270C	08/12/11 19:46	PL	50-32-8	XYT1
Benzo(b)fluoranthene	2,400,000	ug/kg	80,000	8270C	08/12/11 19:46	PL	205-99-2	XYT1p

X-Elevated reporting limit due to matrix interference Y-Elevated reporting limit due to high target concentration T-No correction for total solids 1-Dry Weight Spike 10 mg/kg

p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.38 (continued)
Sample Tag: FB-02 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(k)fluoranthene	2,560,000	ug/kg	80,000	8270C	08/12/11 19:46	PL	207-08-9	XYT1p
Benzo(ghi)perylene	410,000	ug/kg	80,000	8270C	08/12/11 19:46	PL	191-24-2	XYT1
Chrysene	1,640,000	ug/kg	80,000	8270C	08/12/11 19:46	PL	218-01-9	XYT1
Dibenzo(ah)anthracene	Not detected	ug/kg	80,000	8270C	08/12/11 19:46	PL	53-70-3	XYT1
Fluoranthene	4,050,000	ug/kg	80,000	8270C	08/12/11 19:46	PL	206-44-0	XYT1
Fluorene	800,000	ug/kg	80,000	8270C	08/12/11 19:46	PL	86-73-7	XYT1
Indeno(1,2,3-cd)pyrene	440,000	ug/kg	80,000	8270C	08/12/11 19:46	PL	193-39-5	XYT1
Naphthalene	Not detected	ug/kg	80,000	8270C	08/12/11 19:46	PL	91-20-3	XYT1
Phenanthrene	4,700,000	ug/kg	80,000	8270C	08/12/11 19:46	PL	85-01-8	XYT1
Pyrene	2,740,000	ug/kg	80,000	8270C	08/12/11 19:46	PL	129-00-0	XYT1
2-Methylnaphthalene	Not detected	ug/kg	80,000	8270C	08/12/11 19:46	PL	91-57-6	XYT1
1-Methylnaphthalene	Not detected	ug/kg	80,000	8270C	08/12/11 19:46	PL	90-12-0	XYT1

X-Elevated reporting limit due to matrix interference Y-Elevated reporting limit due to high target concentration T-No correction for total solids 1-Dry Weight Spike 10 mg/kg p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.39
Sample Tag: FBS-02
Collected Date/Time: 08/01/2011 16:55
Matrix: Soil
COC Reference: 60142

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Extraction, PCB	Completed			3550B	08/05/11 13:47	ADB		
Mercury Digestion	Completed			7471A	08/09/11 14:00	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
PNA Extraction	Completed			3550B	08/05/11 16:12	DLR		
Inorganics								
Total Solids	90	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	1.29	mg/kg	0.20	6020	08/09/11 17:40	PER	7440-38-2	
Barium	30.6	mg/kg	1.0	6020	08/09/11 17:40	PER	7440-39-3	
Cadmium	0.36	mg/kg	0.20	6020	08/09/11 17:40	PER	7440-43-9	
Chromium	5.56	mg/kg	0.50	6020	08/09/11 17:40	PER	7440-47-3	
Lead	20.4	mg/kg	0.30	6020	08/09/11 17:40	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 16:13	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 17:40	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 17:40	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 16:59	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 16:59	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 16:59	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 16:59	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 16:59	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 16:59	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 16:59	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 16:59	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 16:59	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 16:59	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 16:59	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 16:59	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 16:59	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 16:59	JANB	11096-82-5	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	3,500	ug/kg	400	8270C	08/09/11 13:46	PL	83-32-9	X
Acenaphthylene	Not detected	ug/kg	400	8270C	08/09/11 13:46	PL	208-96-8	X
Anthracene	5,900	ug/kg	400	8270C	08/09/11 13:46	PL	120-12-7	X

X-Elevated reporting limit due to matrix interference

Lab Sample ID: S49562.39 (continued)
Sample Tag: FBS-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(a)anthracene	16,500	ug/kg	400	8270C	08/09/11 13:46	PL	56-55-3	X
Benzo(a)pyrene	18,700	ug/kg	400	8270C	08/09/11 13:46	PL	50-32-8	X
Benzo(b)fluoranthene	33,400	ug/kg	400	8270C	08/09/11 13:46	PL	205-99-2	Xp
Benzo(k)fluoranthene	38,000	ug/kg	400	8270C	08/09/11 13:46	PL	207-08-9	Xp
Benzo(ghi)perylene	6,800	ug/kg	400	8270C	08/09/11 13:46	PL	191-24-2	X
Chrysene	18,600	ug/kg	400	8270C	08/09/11 13:46	PL	218-01-9	X
Dibenzo(ah)anthracene	400	ug/kg	400	8270C	08/09/11 13:46	PL	53-70-3	X
Fluoranthene	44,700	ug/kg	400	8270C	08/09/11 13:46	PL	206-44-0	X
Fluorene	4,900	ug/kg	400	8270C	08/09/11 13:46	PL	86-73-7	X
Indeno(1,2,3-cd)pyrene	7,500	ug/kg	400	8270C	08/09/11 13:46	PL	193-39-5	X
Naphthalene	Not detected	ug/kg	400	8270C	08/09/11 13:46	PL	91-20-3	X
Phenanthrene	33,200	ug/kg	400	8270C	08/09/11 13:46	PL	85-01-8	X
Pyrene	33,500	ug/kg	400	8270C	08/09/11 13:46	PL	129-00-0	X
2-Methylnaphthalene	500	ug/kg	400	8270C	08/09/11 13:46	PL	91-57-6	X
1-Methylnaphthalene	400	ug/kg	400	8270C	08/09/11 13:46	PL	90-12-0	X

X-Elevated reporting limit due to matrix interference
p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.40
Sample Tag: FB-01
Collected Date/Time: 08/01/2011 17:10
Matrix: Solid
COC Reference: 60142

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Plastic Bag	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Extraction, PCB	Completed			3550B	08/05/11 13:47	ADB		
Mercury Digestion	Completed			7471A	08/09/11 14:00	JRH		
Metal Digestion	Completed			3050B	08/10/11 10:00	PER		
PNA Extraction	Completed			3550B	08/05/11 16:12	DLR		
Metals								
Arsenic	2.43	mg/kg	0.20	6020	08/10/11 14:06	PER	7440-38-2	
Barium	6.91	mg/kg	1.0	6020	08/10/11 14:06	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	08/10/11 14:06	PER	7440-43-9	
Chromium	1.12	mg/kg	0.50	6020	08/10/11 14:06	PER	7440-47-3	
Lead	4.77	mg/kg	0.30	6020	08/10/11 14:06	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 16:15	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/10/11 14:06	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/10/11 14:06	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 17:09	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 17:09	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 17:09	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 17:09	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 17:09	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 17:09	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 17:09	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 17:09	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 17:09	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 17:09	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 17:09	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 17:09	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 17:09	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 17:09	JANB	11096-82-5	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	190,000	ug/kg	15,000	8270C	08/09/11 15:59	PL	83-32-9	XT
Acenaphthylene	27,000	ug/kg	15,000	8270C	08/09/11 15:59	PL	208-96-8	XT
Anthracene	338,000	ug/kg	15,000	8270C	08/09/11 15:59	PL	120-12-7	XT
Benzo(a)anthracene	405,000	ug/kg	15,000	8270C	08/09/11 15:59	PL	56-55-3	XT
Benzo(a)pyrene	332,000	ug/kg	15,000	8270C	08/09/11 15:59	PL	50-32-8	XT
Benzo(b)fluoranthene	680,000	ug/kg	15,000	8270C	08/09/11 15:59	PL	205-99-2	XTp

X-Elevated reporting limit due to matrix interference T-No correction for total solids
p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.40 (continued)
Sample Tag: FB-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(k)fluoranthene	707,000	ug/kg	15,000	8270C	08/09/11 15:59	PL	207-08-9	XTp
Benzo(ghi)perylene	95,000	ug/kg	15,000	8270C	08/09/11 15:59	PL	191-24-2	XT
Chrysene	474,000	ug/kg	15,000	8270C	08/09/11 15:59	PL	218-01-9	XT
Dibenzo(ah)anthracene	Not detected	ug/kg	15,000	8270C	08/09/11 15:59	PL	53-70-3	XT
Fluoranthene	1,233,000	ug/kg	15,000	8270C	08/09/11 15:59	PL	206-44-0	XT
Fluorene	251,000	ug/kg	15,000	8270C	08/09/11 15:59	PL	86-73-7	XT
Indeno(1,2,3-cd)pyrene	99,000	ug/kg	15,000	8270C	08/09/11 15:59	PL	193-39-5	XT
Naphthalene	256,000	ug/kg	15,000	8270C	08/09/11 15:59	PL	91-20-3	XT
Phenanthrene	1,515,000	ug/kg	15,000	8270C	08/09/11 15:59	PL	85-01-8	XT
Pyrene	970,000	ug/kg	15,000	8270C	08/09/11 15:59	PL	129-00-0	XT
2-Methylnaphthalene	136,000	ug/kg	15,000	8270C	08/09/11 15:59	PL	91-57-6	XT
1-Methylnaphthalene	76,000	ug/kg	15,000	8270C	08/09/11 15:59	PL	90-12-0	XT

X-Elevated reporting limit due to matrix interference T-No correction for total solids p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.41
Sample Tag: FBS-01
Collected Date/Time: 08/01/2011 17:15
Matrix: Soil
COC Reference: 60142

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Extraction, PCB	Completed			3550B	08/05/11 13:47	ADB		
Mercury Digestion	Completed			7471A	08/09/11 14:00	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
PNA Extraction	Completed			3550B	08/05/11 16:12	DLR		
Inorganics								
Total Solids	85	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	1.94	mg/kg	0.20	6020	08/09/11 17:42	PER	7440-38-2	
Barium	69.6	mg/kg	1.0	6020	08/09/11 17:42	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	08/09/11 17:42	PER	7440-43-9	
Chromium	4.54	mg/kg	0.50	6020	08/09/11 17:42	PER	7440-47-3	
Lead	8.50	mg/kg	0.30	6020	08/09/11 17:42	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 16:17	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 17:42	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 17:42	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 17:20	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 17:20	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 17:20	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 17:20	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 17:20	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 17:20	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 17:20	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 17:20	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 17:20	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 17:20	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 17:20	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 17:20	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 17:20	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 17:20	JANB	11096-82-5	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	20,800	ug/kg	2,000	8270C	08/09/11 16:18	PL	83-32-9	X
Acenaphthylene	Not detected	ug/kg	2,000	8270C	08/09/11 16:18	PL	208-96-8	X
Anthracene	37,600	ug/kg	2,000	8270C	08/09/11 16:18	PL	120-12-7	X

X-Elevated reporting limit due to matrix interference

Lab Sample ID: S49562.41 (continued)
Sample Tag: FBS-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(a)anthracene	88,200	ug/kg	2,000	8270C	08/09/11 16:18	PL	56-55-3	X
Benzo(a)pyrene	94,900	ug/kg	2,000	8270C	08/09/11 16:18	PL	50-32-8	X
Benzo(b)fluoranthene	175,800	ug/kg	2,000	8270C	08/09/11 16:18	PL	205-99-2	Xp
Benzo(k)fluoranthene	200,200	ug/kg	2,000	8270C	08/09/11 16:18	PL	207-08-9	Xp
Benzo(ghi)perylene	29,000	ug/kg	2,000	8270C	08/09/11 16:18	PL	191-24-2	X
Chrysene	88,200	ug/kg	2,000	8270C	08/09/11 16:18	PL	218-01-9	X
Dibenzo(ah)anthracene	2,400	ug/kg	2,000	8270C	08/09/11 16:18	PL	53-70-3	X
Fluoranthene	272,200	ug/kg	2,000	8270C	08/09/11 16:18	PL	206-44-0	X
Fluorene	23,100	ug/kg	2,000	8270C	08/09/11 16:18	PL	86-73-7	X
Indeno(1,2,3-cd)pyrene	31,400	ug/kg	2,000	8270C	08/09/11 16:18	PL	193-39-5	X
Naphthalene	Not detected	ug/kg	2,000	8270C	08/09/11 16:18	PL	91-20-3	X
Phenanthrene	159,100	ug/kg	2,000	8270C	08/09/11 16:18	PL	85-01-8	X
Pyrene	214,300	ug/kg	2,000	8270C	08/09/11 16:18	PL	129-00-0	X
2-Methylnaphthalene	2,300	ug/kg	2,000	8270C	08/09/11 16:18	PL	91-57-6	X
1-Methylnaphthalene	2,200	ug/kg	2,000	8270C	08/09/11 16:18	PL	90-12-0	X

X-Elevated reporting limit due to matrix interference
p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.

Lab Sample ID: S49562.42
Sample Tag: SS-14
Collected Date/Time: 08/01/2011 18:00
Matrix: Soil
COC Reference: 60142

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR
1	40ml Glass	MeOH	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	08/05/11 16:14	DLR		
Extraction, PCB	Completed			3550B	08/05/11 13:47	ADB		
Mercury Digestion	Completed			7471A	08/09/11 14:00	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
Inorganics								
Total Solids	85	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	0.65	mg/kg	0.20	6020	08/09/11 17:44	PER	7440-38-2	
Barium	93.5	mg/kg	1.0	6020	08/09/11 17:44	PER	7440-39-3	
Cadmium	0.20	mg/kg	0.20	6020	08/09/11 17:44	PER	7440-43-9	
Chromium	3.94	mg/kg	0.50	6020	08/09/11 17:44	PER	7440-47-3	
Lead	6.94	mg/kg	0.30	6020	08/09/11 17:44	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 16:20	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 17:44	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 17:44	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 14:02	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 14:02	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 14:02	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 14:02	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 14:02	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 14:02	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 14:02	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 14:02	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 14:02	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 14:02	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 14:02	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 14:02	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 14:02	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 14:02	JANB	11096-82-5	
Organics - Semi-Volatiles								
Semi-Volatile Organics - MDEQ								
Acenaphthene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	208-96-8	
Anthracene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	120-12-7	

Lab Sample ID: S49562.42 (continued)
Sample Tag: SS-14

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
Benzo(a)anthracene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	56-55-3	
Benzo(b)fluoranthene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	191-24-2	
Benzo(a)pyrene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	117-81-7	
4-Bromophenyl phenyl ether	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	101-55-3	
Butyl benzyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	85-68-7	
4-Chloroaniline	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	106-47-8	
2-Chloronaphthalene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	91-58-7	
4-Chloro-3-methylphenol	Not detected	ug/kg	280	8270C	08/08/11 19:52	PL	59-50-7	
2-Chlorophenol	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	7005-72-3	
Chrysene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	218-01-9	
p,m-Cresol	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	95-48-7	
Dibenzo(ah)anthracene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	53-70-3	
Dibenzofuran	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	132-64-9	
di-n-Butyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	84-74-2	
1,2-Dichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	106-46-7	
3,3'-Dichlorobenzidine	Not detected	ug/kg	2,000	8270C	08/08/11 19:52	PL	91-94-1	
2,4-Dichlorophenol	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	120-83-2	
Diethyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	84-66-2	
2,4-Dimethylphenol	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	105-67-9	
Dimethyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	830	8270C	08/08/11 19:52	PL	534-52-1	
2,4-Dinitrophenol	Not detected	ug/kg	830	8270C	08/08/11 19:52	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	606-20-2	
1,2-Diphenylhydrazine	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	122-66-7	
di-n-Octyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	117-84-0	
Fluoranthene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	206-44-0	
Fluorene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	86-73-7	
Hexachlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	118-74-1	
Hexachlorobutadiene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	77-47-4	
Hexachloroethane	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	193-39-5	
Isophorone	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	91-57-6	
Naphthalene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	91-20-3	
2-Nitroaniline	Not detected	ug/kg	830	8270C	08/08/11 19:52	PL	88-74-4	
3-Nitroaniline	Not detected	ug/kg	830	8270C	08/08/11 19:52	PL	99-09-2	
4-Nitroaniline	Not detected	ug/kg	830	8270C	08/08/11 19:52	PL	100-01-6	

Lab Sample ID: S49562.42 (continued)
Sample Tag: SS-14

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
Nitrobenzene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	98-95-3	
2-Nitrophenol	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	88-75-5	
4-Nitrophenol	Not detected	ug/kg	830	8270C	08/08/11 19:52	PL	100-02-7	
N-Nitrosodiphenylamine	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	621-64-7	
Pentachlorophenol	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	87-86-5	
Phenanthrene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	85-01-8	
Phenol	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	108-95-2	
Pyrene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	129-00-0	
1,2,4-Trichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	120-82-1	
2,4,5-Trichlorophenol	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/kg	330	8270C	08/08/11 19:52	PL	88-06-2	
Organics - Volatiles								
Volatile Organics 5035								
Diethyl ether	Not detected	ug/kg	300	8260B/5035	08/09/11 17:47	JGH	60-29-7	
Acetone	Not detected	ug/kg	1,000	8260B/5035	08/09/11 17:47	JGH	67-64-1	
Methyl iodide	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	74-88-4	
Carbon disulfide	Not detected	ug/kg	300	8260B/5035	08/09/11 17:47	JGH	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	8260B/5035	08/09/11 17:47	JGH	1634-04-4	
Acrylonitrile	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	107-13-1	
2-Butanone (MEK)	Not detected	ug/kg	1,000	8260B/5035	08/09/11 17:47	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	300	8260B/5035	08/09/11 17:47	JGH	75-71-8	
Chloromethane	Not detected	ug/kg	300	8260B/5035	08/09/11 17:47	JGH	74-87-3	
Vinyl chloride	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	75-01-4	
Bromomethane	Not detected	ug/kg	300	8260B/5035	08/09/11 17:47	JGH	74-83-9	
Chloroethane	Not detected	ug/kg	300	8260B/5035	08/09/11 17:47	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	75-35-4	
Methylene chloride	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	156-59-2	
Tetrahydrofuran	Not detected	ug/kg	1,000	8260B/5035	08/09/11 17:47	JGH	109-99-9	
Chloroform	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	67-66-3	
Bromochloromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	8260B/5035	08/09/11 17:47	JGH	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	8260B/5035	08/09/11 17:47	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	56-23-5	
Benzene	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	107-06-2	
Trichloroethene	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	75-27-4	
Dibromomethane	Not detected	ug/kg	300	8260B/5035	08/09/11 17:47	JGH	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	10061-01-5	
Toluene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	10061-02-6	

Lab Sample ID: S49562.42 (continued)
Sample Tag: SS-14

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
1,1,2-Trichloroethane	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	110-57-6	
Dibromochloromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	30	8260B/5035	08/09/11 17:47	JGH	106-93-4	M
Chlorobenzene	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	630-20-6	
Ethylbenzene	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH		
o-Xylene	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	95-47-6	
Styrene	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/kg	300	8260B/5035	08/09/11 17:47	JGH	98-82-8	
Bromoform	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	96-18-4	
n-Propylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	103-65-1	
Bromobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	108-67-8	
tert-Butylbenzene	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	95-63-6	
sec-Butylbenzene	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	135-98-8	
p-Isopropyltoluene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 17:47	JGH	526-73-8	
n-Butylbenzene	Not detected	ug/kg	70	8260B/5035	08/09/11 17:47	JGH	104-51-8	
Hexachloroethane	Not detected	ug/kg	400	8260B/5035	08/09/11 17:47	JGH	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	300	8260B/5035	08/09/11 17:47	JGH	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	440	8260B/5035	08/09/11 17:47	JGH	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/kg	440	8260B/5035	08/09/11 17:47	JGH	87-61-6	
Naphthalene	Not detected	ug/kg	440	8260B/5035	08/09/11 17:47	JGH	91-20-3	
2-Methylnaphthalene	Not detected	ug/kg	440	8260B/5035	08/09/11 17:47	JGH	91-57-6	

M-Result reported to MDL not RDL

Lab Sample ID: S49562.43
Sample Tag: SS-14 CO-LOCATED
Collected Date/Time: 08/01/2011 18:00
Matrix: Soil
COC Reference: 60142

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR
1	40ml Glass	MeOH	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	08/05/11 16:14	DLR		
Extraction, PCB	Completed			3550B	08/05/11 13:47	ADB		
Mercury Digestion	Completed			7471A	08/09/11 14:00	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
Inorganics								
Total Solids	87	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	0.74	mg/kg	0.20	6020	08/09/11 17:46	PER	7440-38-2	
Barium	66.0	mg/kg	1.0	6020	08/09/11 17:46	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	6020	08/09/11 17:46	PER	7440-43-9	
Chromium	3.53	mg/kg	0.50	6020	08/09/11 17:46	PER	7440-47-3	
Lead	8.68	mg/kg	0.30	6020	08/09/11 17:46	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 16:22	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 17:46	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 17:46	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 14:13	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 14:13	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 14:13	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 14:13	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 14:13	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 14:13	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 14:13	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 14:13	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 14:13	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 14:13	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 14:13	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 14:13	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 14:13	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 14:13	JANB	11096-82-5	
Organics - Semi-Volatiles								
Semi-Volatile Organics - MDEQ								
Acenaphthene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	208-96-8	
Anthracene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	120-12-7	

Lab Sample ID: S49562.43 (continued)
Sample Tag: SS-14 CO-LOCATED

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
Benzo(a)anthracene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	56-55-3	
Benzo(b)fluoranthene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	191-24-2	
Benzo(a)pyrene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	117-81-7	
4-Bromophenyl phenyl ether	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	101-55-3	
Butyl benzyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	85-68-7	
4-Chloroaniline	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	106-47-8	
2-Chloronaphthalene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	91-58-7	
4-Chloro-3-methylphenol	Not detected	ug/kg	280	8270C	08/08/11 20:26	PL	59-50-7	
2-Chlorophenol	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	7005-72-3	
Chrysene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	218-01-9	
p,m-Cresol	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	95-48-7	
Dibenzo(ah)anthracene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	53-70-3	
Dibenzofuran	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	132-64-9	
di-n-Butyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	84-74-2	
1,2-Dichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	106-46-7	
3,3'-Dichlorobenzidine	Not detected	ug/kg	2,000	8270C	08/08/11 20:26	PL	91-94-1	
2,4-Dichlorophenol	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	120-83-2	
Diethyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	84-66-2	
2,4-Dimethylphenol	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	105-67-9	
Dimethyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	830	8270C	08/08/11 20:26	PL	534-52-1	
2,4-Dinitrophenol	Not detected	ug/kg	830	8270C	08/08/11 20:26	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	606-20-2	
1,2-Diphenylhydrazine	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	122-66-7	
di-n-Octyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	117-84-0	
Fluoranthene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	206-44-0	
Fluorene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	86-73-7	
Hexachlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	118-74-1	
Hexachlorobutadiene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	77-47-4	
Hexachloroethane	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	193-39-5	
Isophorone	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	91-57-6	
Naphthalene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	91-20-3	
2-Nitroaniline	Not detected	ug/kg	830	8270C	08/08/11 20:26	PL	88-74-4	
3-Nitroaniline	Not detected	ug/kg	830	8270C	08/08/11 20:26	PL	99-09-2	
4-Nitroaniline	Not detected	ug/kg	830	8270C	08/08/11 20:26	PL	100-01-6	

Lab Sample ID: S49562.43 (continued)
Sample Tag: SS-14 CO-LOCATED

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
Nitrobenzene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	98-95-3	
2-Nitrophenol	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	88-75-5	
4-Nitrophenol	Not detected	ug/kg	830	8270C	08/08/11 20:26	PL	100-02-7	
N-Nitrosodiphenylamine	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	621-64-7	
Pentachlorophenol	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	87-86-5	
Phenanthrene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	85-01-8	
Phenol	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	108-95-2	
Pyrene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	129-00-0	
1,2,4-Trichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	120-82-1	
2,4,5-Trichlorophenol	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/kg	330	8270C	08/08/11 20:26	PL	88-06-2	
Organics - Volatiles								
Volatile Organics 5035								
Diethyl ether	Not detected	ug/kg	200	8260B/5035	08/09/11 18:06	JGH	60-29-7	
Acetone	Not detected	ug/kg	1,000	8260B/5035	08/09/11 18:06	JGH	67-64-1	
Methyl iodide	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	74-88-4	
Carbon disulfide	Not detected	ug/kg	300	8260B/5035	08/09/11 18:06	JGH	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	200	8260B/5035	08/09/11 18:06	JGH	1634-04-4	
Acrylonitrile	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	107-13-1	
2-Butanone (MEK)	Not detected	ug/kg	920	8260B/5035	08/09/11 18:06	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	300	8260B/5035	08/09/11 18:06	JGH	75-71-8	
Chloromethane	Not detected	ug/kg	300	8260B/5035	08/09/11 18:06	JGH	74-87-3	
Vinyl chloride	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	75-01-4	
Bromomethane	Not detected	ug/kg	200	8260B/5035	08/09/11 18:06	JGH	74-83-9	
Chloroethane	Not detected	ug/kg	300	8260B/5035	08/09/11 18:06	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	75-35-4	
Methylene chloride	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	156-59-2	
Tetrahydrofuran	Not detected	ug/kg	1,000	8260B/5035	08/09/11 18:06	JGH	109-99-9	
Chloroform	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	67-66-3	
Bromochloromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	8260B/5035	08/09/11 18:06	JGH	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	8260B/5035	08/09/11 18:06	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	56-23-5	
Benzene	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	107-06-2	
Trichloroethene	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	75-27-4	
Dibromomethane	Not detected	ug/kg	300	8260B/5035	08/09/11 18:06	JGH	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	10061-01-5	
Toluene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	10061-02-6	

Lab Sample ID: S49562.43 (continued)
Sample Tag: SS-14 CO-LOCATED

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
1,1,2-Trichloroethane	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	110-57-6	
Dibromochloromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	20	8260B/5035	08/09/11 18:06	JGH	106-93-4	M
Chlorobenzene	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	630-20-6	
Ethylbenzene	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH		
o-Xylene	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	95-47-6	
Styrene	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/kg	300	8260B/5035	08/09/11 18:06	JGH	98-82-8	
Bromoform	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	96-18-4	
n-Propylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	103-65-1	
Bromobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	108-67-8	
tert-Butylbenzene	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	95-63-6	
sec-Butylbenzene	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	135-98-8	
p-Isopropyltoluene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:06	JGH	526-73-8	
n-Butylbenzene	Not detected	ug/kg	60	8260B/5035	08/09/11 18:06	JGH	104-51-8	
Hexachloroethane	Not detected	ug/kg	400	8260B/5035	08/09/11 18:06	JGH	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	300	8260B/5035	08/09/11 18:06	JGH	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	410	8260B/5035	08/09/11 18:06	JGH	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/kg	410	8260B/5035	08/09/11 18:06	JGH	87-61-6	
Naphthalene	Not detected	ug/kg	410	8260B/5035	08/09/11 18:06	JGH	91-20-3	
2-Methylnaphthalene	Not detected	ug/kg	410	8260B/5035	08/09/11 18:06	JGH	91-57-6	

M-Result reported to MDL not RDL

Lab Sample ID: S49562.44
Sample Tag: SS-13
Collected Date/Time: 08/01/2011 18:10
Matrix: Soil
COC Reference: 60142

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.3	IR
1	40ml Glass	MeOH	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3550B	08/05/11 16:14	DLR		
Extraction, PCB	Completed			3550B	08/05/11 13:47	ADB		
Mercury Digestion	Completed			7471A	08/09/11 14:00	JRH		
Metal Digestion	Completed			3050B	08/09/11 12:00	PER		
Inorganics								
Total Solids	82	%	1	Std M 2540 B	08/04/11 12:00	DJS		
Metals								
Arsenic	1.78	mg/kg	0.20	6020	08/09/11 17:48	PER	7440-38-2	
Barium	44.1	mg/kg	1.0	6020	08/09/11 17:48	PER	7440-39-3	
Cadmium	0.24	mg/kg	0.20	6020	08/09/11 17:48	PER	7440-43-9	
Chromium	2.97	mg/kg	0.50	6020	08/09/11 17:48	PER	7440-47-3	
Lead	8.44	mg/kg	0.30	6020	08/09/11 17:48	PER	7439-92-1	
Mercury	Not detected	mg/kg	0.050	7471A	08/09/11 16:24	JRT	7439-97-6	
Selenium	Not detected	mg/kg	0.50	6020	08/09/11 17:48	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	6020	08/09/11 17:48	PER	7440-22-4	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 14:23	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 14:23	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 14:23	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 14:23	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 14:23	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 14:23	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 14:23	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/kg	330	8082	08/05/11 14:23	JANB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	8082	08/05/11 14:23	JANB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	8082	08/05/11 14:23	JANB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	8082	08/05/11 14:23	JANB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	8082	08/05/11 14:23	JANB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	8082	08/05/11 14:23	JANB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	8082	08/05/11 14:23	JANB	11096-82-5	
Organics - Semi-Volatiles								
Semi-Volatile Organics - MDEQ								
Acenaphthene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	208-96-8	
Anthracene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	120-12-7	

Lab Sample ID: S49562.44 (continued)
Sample Tag: SS-13

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
Benzo(a)anthracene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	56-55-3	
Benzo(b)fluoranthene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	191-24-2	
Benzo(a)pyrene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	117-81-7	
4-Bromophenyl phenyl ether	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	101-55-3	
Butyl benzyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	85-68-7	
4-Chloroaniline	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	106-47-8	
2-Chloronaphthalene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	91-58-7	
4-Chloro-3-methylphenol	Not detected	ug/kg	280	8270C	08/08/11 21:00	PL	59-50-7	
2-Chlorophenol	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	7005-72-3	
Chrysene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	218-01-9	
p,m-Cresol	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	95-48-7	
Dibenzo(ah)anthracene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	53-70-3	
Dibenzofuran	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	132-64-9	
di-n-Butyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	84-74-2	
1,2-Dichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	106-46-7	
3,3'-Dichlorobenzidine	Not detected	ug/kg	2,000	8270C	08/08/11 21:00	PL	91-94-1	
2,4-Dichlorophenol	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	120-83-2	
Diethyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	84-66-2	
2,4-Dimethylphenol	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	105-67-9	
Dimethyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	830	8270C	08/08/11 21:00	PL	534-52-1	
2,4-Dinitrophenol	Not detected	ug/kg	830	8270C	08/08/11 21:00	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	606-20-2	
1,2-Diphenylhydrazine	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	122-66-7	
di-n-Octyl phthalate	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	117-84-0	
Fluoranthene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	206-44-0	
Fluorene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	86-73-7	
Hexachlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	118-74-1	
Hexachlorobutadiene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	77-47-4	
Hexachloroethane	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	193-39-5	
Isophorone	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	91-57-6	
Naphthalene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	91-20-3	
2-Nitroaniline	Not detected	ug/kg	830	8270C	08/08/11 21:00	PL	88-74-4	
3-Nitroaniline	Not detected	ug/kg	830	8270C	08/08/11 21:00	PL	99-09-2	
4-Nitroaniline	Not detected	ug/kg	830	8270C	08/08/11 21:00	PL	100-01-6	

Lab Sample ID: S49562.44 (continued)
Sample Tag: SS-13

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
Nitrobenzene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	98-95-3	
2-Nitrophenol	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	88-75-5	
4-Nitrophenol	Not detected	ug/kg	830	8270C	08/08/11 21:00	PL	100-02-7	
N-Nitrosodiphenylamine	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	621-64-7	
Pentachlorophenol	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	87-86-5	
Phenanthrene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	85-01-8	
Phenol	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	108-95-2	
Pyrene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	129-00-0	
1,2,4-Trichlorobenzene	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	120-82-1	
2,4,5-Trichlorophenol	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/kg	330	8270C	08/08/11 21:00	PL	88-06-2	
Organics - Volatiles								
Volatile Organics 5035								
Diethyl ether	Not detected	ug/kg	300	8260B/5035	08/09/11 18:26	JGH	60-29-7	
Acetone	Not detected	ug/kg	1,000	8260B/5035	08/09/11 18:26	JGH	67-64-1	
Methyl iodide	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	74-88-4	
Carbon disulfide	Not detected	ug/kg	300	8260B/5035	08/09/11 18:26	JGH	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	8260B/5035	08/09/11 18:26	JGH	1634-04-4	
Acrylonitrile	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	107-13-1	
2-Butanone (MEK)	Not detected	ug/kg	1,000	8260B/5035	08/09/11 18:26	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	300	8260B/5035	08/09/11 18:26	JGH	75-71-8	
Chloromethane	Not detected	ug/kg	300	8260B/5035	08/09/11 18:26	JGH	74-87-3	
Vinyl chloride	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	75-01-4	
Bromomethane	Not detected	ug/kg	300	8260B/5035	08/09/11 18:26	JGH	74-83-9	
Chloroethane	Not detected	ug/kg	300	8260B/5035	08/09/11 18:26	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	75-35-4	
Methylene chloride	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	156-59-2	
Tetrahydrofuran	Not detected	ug/kg	1,000	8260B/5035	08/09/11 18:26	JGH	109-99-9	
Chloroform	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	67-66-3	
Bromochloromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	8260B/5035	08/09/11 18:26	JGH	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	8260B/5035	08/09/11 18:26	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	56-23-5	
Benzene	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	107-06-2	
Trichloroethene	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	75-27-4	
Dibromomethane	Not detected	ug/kg	300	8260B/5035	08/09/11 18:26	JGH	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	10061-01-5	
Toluene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	10061-02-6	

Lab Sample ID: S49562.44 (continued)
Sample Tag: SS-13

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
1,1,2-Trichloroethane	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	110-57-6	
Dibromochloromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	30	8260B/5035	08/09/11 18:26	JGH	106-93-4	M
Chlorobenzene	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	630-20-6	
Ethylbenzene	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH		
o-Xylene	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	95-47-6	
Styrene	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/kg	300	8260B/5035	08/09/11 18:26	JGH	98-82-8	
Bromoform	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	96-18-4	
n-Propylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	103-65-1	
Bromobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	108-67-8	
tert-Butylbenzene	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	95-63-6	
sec-Butylbenzene	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	135-98-8	
p-Isopropyltoluene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:26	JGH	526-73-8	
n-Butylbenzene	Not detected	ug/kg	70	8260B/5035	08/09/11 18:26	JGH	104-51-8	
Hexachloroethane	Not detected	ug/kg	400	8260B/5035	08/09/11 18:26	JGH	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	300	8260B/5035	08/09/11 18:26	JGH	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	450	8260B/5035	08/09/11 18:26	JGH	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/kg	450	8260B/5035	08/09/11 18:26	JGH	87-61-6	
Naphthalene	Not detected	ug/kg	450	8260B/5035	08/09/11 18:26	JGH	91-20-3	
2-Methylnaphthalene	Not detected	ug/kg	450	8260B/5035	08/09/11 18:26	JGH	91-57-6	

M-Result reported to MDL not RDL

Lab Sample ID: S49562.45
Sample Tag: TBK-01
Collected Date/Time: 08/01/2011 00:01
Matrix: QC
COC Reference: 60142

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
Volatile Organics - DEQ List								
Diethyl ether	Not detected	ug/L	10	8260B	08/09/11 19:26	JGH	60-29-7	
Acetone	Not detected	ug/L	50	8260B	08/09/11 19:26	JGH	67-64-1	
Methyl iodide	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	74-88-4	
Carbon disulfide	Not detected	ug/L	5	8260B	08/09/11 19:26	JGH	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	8260B	08/09/11 19:26	JGH	1634-04-4	
Acrylonitrile	Not detected	ug/L	2	8260B	08/09/11 19:26	JGH	107-13-1	
2-Butanone (MEK)	Not detected	ug/L	25	8260B	08/09/11 19:26	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	5	8260B	08/09/11 19:26	JGH	75-71-8	
Chloromethane	Not detected	ug/L	5	8260B	08/09/11 19:26	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	75-01-4	
Bromomethane	Not detected	ug/L	5	8260B	08/09/11 19:26	JGH	74-83-9	
Chloroethane	Not detected	ug/L	5	8260B	08/09/11 19:26	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	5	8260B	08/09/11 19:26	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	156-59-2	
Tetrahydrofuran	Not detected	ug/L	90	8260B	08/09/11 19:26	JGH	109-99-9	
Chloroform	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	67-66-3	
Bromochloromethane	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	50	8260B	08/09/11 19:26	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	50	8260B	08/09/11 19:26	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	56-23-5	
Benzene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	75-27-4	
Dibromomethane	Not detected	ug/L	5	8260B	08/09/11 19:26	JGH	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	110-57-6	
Dibromochloromethane	Not detected	ug/L	5	8260B	08/09/11 19:26	JGH	124-48-1	
1,2-Dibromoethane	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	106-93-4	
Chlorobenzene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	630-20-6	
Ethylbenzene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	100-41-4	

Lab Sample ID: S49562.45 (continued)
Sample Tag: TBK-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics - DEQ List (continued)								
p,m-Xylene	Not detected	ug/L	2	8260B	08/09/11 19:26	JGH		
o-Xylene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	95-47-6	
Styrene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	5	8260B	08/09/11 19:26	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	96-18-4	
n-Propylbenzene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	103-65-1	
Bromobenzene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	108-67-8	
tert-Butylbenzene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	95-63-6	
sec-Butylbenzene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	135-98-8	
p-Isopropyltoluene	Not detected	ug/L	5	8260B	08/09/11 19:26	JGH	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	526-73-8	
n-Butylbenzene	Not detected	ug/L	1	8260B	08/09/11 19:26	JGH	104-51-8	
Hexachloroethane	Not detected	ug/L	5	8260B	08/09/11 19:26	JGH	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	5	8260B	08/09/11 19:26	JGH	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/L	5	8260B	08/09/11 19:26	JGH	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/L	5	8260B	08/09/11 19:26	JGH	87-61-6	
Naphthalene	Not detected	ug/L	5	8260B	08/09/11 19:26	JGH	91-20-3	
2-Methylnaphthalene	Not detected	ug/L	5	8260B	08/09/11 19:26	JGH	91-57-6	

Lab Sample ID: S49562.46
Sample Tag: MeOH BK-01
Collected Date/Time: 08/01/2011 00:01
Matrix: QC
COC Reference: 60142

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
Volatile Organics 5035								
Diethyl ether	Not detected	ug/kg	200	8260B/5035	08/09/11 18:46	JGH	60-29-7	
Acetone	Not detected	ug/kg	1,000	8260B/5035	08/09/11 18:46	JGH	67-64-1	
Methyl iodide	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	74-88-4	
Carbon disulfide	Not detected	ug/kg	300	8260B/5035	08/09/11 18:46	JGH	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	200	8260B/5035	08/09/11 18:46	JGH	1634-04-4	
Acrylonitrile	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	107-13-1	
2-Butanone (MEK)	Not detected	ug/kg	750	8260B/5035	08/09/11 18:46	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	300	8260B/5035	08/09/11 18:46	JGH	75-71-8	
Chloromethane	Not detected	ug/kg	300	8260B/5035	08/09/11 18:46	JGH	74-87-3	
Vinyl chloride	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	75-01-4	
Bromomethane	Not detected	ug/kg	200	8260B/5035	08/09/11 18:46	JGH	74-83-9	
Chloroethane	Not detected	ug/kg	300	8260B/5035	08/09/11 18:46	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	75-35-4	
Methylene chloride	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	156-59-2	
Tetrahydrofuran	Not detected	ug/kg	1,000	8260B/5035	08/09/11 18:46	JGH	109-99-9	
Chloroform	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	67-66-3	
Bromochloromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	8260B/5035	08/09/11 18:46	JGH	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	8260B/5035	08/09/11 18:46	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	56-23-5	
Benzene	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	107-06-2	
Trichloroethene	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	75-27-4	
Dibromomethane	Not detected	ug/kg	300	8260B/5035	08/09/11 18:46	JGH	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	10061-01-5	
Toluene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	110-57-6	
Dibromochloromethane	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	20	8260B/5035	08/09/11 18:46	JGH	106-93-4	M
Chlorobenzene	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	630-20-6	

M-Result reported to MDL not RDL

Lab Sample ID: S49562.46 (continued)
Sample Tag: MeOH BK-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
Ethylbenzene	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH		
o-Xylene	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	95-47-6	
Styrene	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/kg	300	8260B/5035	08/09/11 18:46	JGH	98-82-8	
Bromoform	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	96-18-4	
n-Propylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	103-65-1	
Bromobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	108-67-8	
tert-Butylbenzene	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	95-63-6	
sec-Butylbenzene	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	135-98-8	
p-Isopropyltoluene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	08/09/11 18:46	JGH	526-73-8	
n-Butylbenzene	Not detected	ug/kg	50	8260B/5035	08/09/11 18:46	JGH	104-51-8	
Hexachloroethane	Not detected	ug/kg	300	8260B/5035	08/09/11 18:46	JGH	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	300	8260B/5035	08/09/11 18:46	JGH	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	330	8260B/5035	08/09/11 18:46	JGH	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/kg	330	8260B/5035	08/09/11 18:46	JGH	87-61-6	
Naphthalene	Not detected	ug/kg	330	8260B/5035	08/09/11 18:46	JGH	91-20-3	
2-Methylnaphthalene	Not detected	ug/kg	330	8260B/5035	08/09/11 18:46	JGH	91-57-6	

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C.O.C. PAGE # 1 OF 4

63750

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Clifford Yantz
COMPANY: O'Brien & Gere
ADDRESS: 37000 Grand River Ave Ste 260
CITY: Farmington Hills STATE: MI ZIP CODE: 48335
PHONE NO.: 248-477-5701 FAX NO.: 248-477-5962 P.O. NO.: MTL 1296
E-MAIL ADDRESS: clifford.yantz@OBG.com QUOTE NO.:

INVOICE TO

CONTACT NAME: [X] SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: Dort Hwy Land
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Todd Howe, Kara Schneider

TURNAROUND TIME REQUIRED: ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED: ☐ STANDARD ☐ LEVEL II ☒ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	PAH's	RCRA Metals	SPECIAL INSTRUCTIONS/NOTES
495620.01	8/1/11	940	SS-01	S	1	1							X		
.02		945	SS-02	S	1	1							X		
.03		1000	SS-05	S	1	1							X		
.04		1005	SS-06	S	1	1							X		
.05		1015	SS-07	S	1	1							X	X	
.06		1015	SS-07 CO-LOCATED	S	1	1							X	X	
.07		1025	SS-08	S	1	1							X	X	
.08		1045	SS-09	S	1	1								X	
.09		1050	SS-10	S	1	1								X	
.10		1100	SS-03	S	1	1								X	
.11		1105	SS-04	S	1	1								X	
.12	↓	1120	EBK-01	QC	2	1		1					X	X	Equipment Blank

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	OBG	8.3.11	1130
RECEIVED BY: SIGNATURE/ORGANIZATION	MerA	8.3.11	1130
RELINQUISHED BY: SIGNATURE/ORGANIZATION			
RECEIVED BY: SIGNATURE/ORGANIZATION			

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION		8.3.11	1430
RECEIVED BY: SIGNATURE/ORGANIZATION		8-3-11	1430

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL 4.3

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

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C.O.C. PAGE # 2 OF 4

63759

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Clifford Kantz
COMPANY: O'Brien & Gere
ADDRESS: 37000 Grand River Ave Ste 200
CITY: Farmington Hills STATE: MI ZIP CODE: 48335
PHONE NO.: 248-477-5701 FAX NO.: 248-477-5962 P.O. NO.: MTL 1296
E-MAIL ADDRESS: clifford.kantz@obg.com QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: Dort Hwy Land
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Schmidt DOD Krone

TURNAROUND TIME REQUIRED: ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED: ☐ STANDARD ☐ LEVEL II ☒ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	PAHs	RCRA Metals	PCBs	VOCs	SVOCs	SPECIAL INSTRUCTIONS/NOTES
495621.13	8/1/11	1130	SS-11	S	1	1								X				
.14		1140	SS-12	S	1	1								X				
.15		1155	SS-20	S	1	1							X					
.16		1200	SS-19	S	1	1							X					
.17		1205	SS-18	S	1	1							X					
.18		1215	SS-17	S	1	1							X					
.19		1350	SS-15	S	2	1					1			X	X	X	X	
.20/.21		1350	SS-15 MS/MSD	S	4	2					2			X	X	X	X	
.22		1410	SS-16	S	2	1					1			X	X	X	X	
.23		—	DUP-01	S	2	1					1			X	X	X	X	
24		1425	FBK-01	QC	6	3	2	1						X	X	X	X	Field Blank
.25	↓	1440	EBK 02	QC	6	3	2	1						X	X	X	X	Equipment Blank

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	OBG	8-2-11	1130
RECEIVED BY: SIGNATURE/ORGANIZATION	MAS	8-2-11	1132
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION		8-2-11	1400
RECEIVED BY: SIGNATURE/ORGANIZATION		8-2-11	1420

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL 4.2

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

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52240

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Clifford Yantz
COMPANY	O'Brien & Gere
ADDRESS	37000 Grand River Ave Ste 200
CITY	Farmington Hills
STATE	MI
ZIP CODE	48335
PHONE NO.	248-477-5701
FAX NO.	248-477-5962
P.O. NO.	MTL 12916
E-MAIL ADDRESS	clifford.yantz@obg.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☒ SAME
COMPANY	
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
FAX NO.	
P.O. NO.	

PROJECT NO./NAME	Dort Hwy Land
SAMPLER(S) - PLEASE PRINT/SIGN NAME	Todd Krave, Kevin Schneider
TURNAROUND TIME REQUIRED	☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER
DELIVERABLES REQUIRED	☐ STANDARD ☐ LEVEL II ☒ LEVEL III ☐ OTHER

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MATRIX CODE: GW=GROUNDWATER, WW=WASTEWATER, S=SOIL, L=LIQUID, SD=SOLID, SL=SLUDGE, O=OIL, A=AIR, W=WASTE, M=MISC

MERIT LAB NO.	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	PAHs	RCRA Metals	PCBs	SPECIAL INSTRUCTIONS/NOTES
49562.26	8/1/11	1520	FB-05	SD	1	1							X	X	X	
.27		1525	FBS-05	S	1	1							X	X	X	
.28		1550	FB-04	SD	1	1							X	X	X	
.29		1555	FBS-04	S	1	1							X	X	X	
.30		—	DUP-02	SD	1	1							X	X	X	
.31		1620	FB-03	SD	1	1							X	X	X	
.32		1620	FB-03 CO-LOCATED	SD	1	1							X	X	X	
.33		1625	FBS-03	S	1	1							X	X	X	
.34		1630	FBK-02	QC	4	3		1					X	X	X	Field Blank
.35		1640	EBK-03	QC	4	3		1					X	X	X	Equipment Blank
.36		1650	FB-02	SD	1	1							X	X	X	
.37/38	↓	1650	FB-02 MS/MSD	SD	2	2							X	X	X	

RELINQUISHED BY: SIGNATURE/ORGANIZATION	OBG	8-2-11	1130	
RECEIVED BY: SIGNATURE/ORGANIZATION	Merit	8-2-11	1132	
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME	
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME	

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME	
RECEIVED BY: SIGNATURE/ORGANIZATION		8-2-11	1420	

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4.3
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

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C.O.C. PAGE # 4 OF 4

60142

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Clifford Kantz
COMPANY	O'Brien & Gere
ADDRESS	37000 Grand River ave Ste 260
CITY	Farmington Hills
STATE	MI
ZIP CODE	48335
PHONE NO.	248-477-5701
FAX NO.	248-477-5962
P.O. NO.	MTL-12 96
E-MAIL ADDRESS	Clifford.Kantz@OBG.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☒ SAME
COMPANY	
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	FAX NO. / P.O. NO.

PROJECT NO./NAME	Dort Hwy Land
SAMPLER(S) - PLEASE PRINT/SIGN NAME	Todd Kane, Kevin Schneider
TURNAROUND TIME REQUIRED	☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER
DELIVERABLES REQUIRED	☐ STANDARD ☐ LEVEL II ☒ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

MERIT LAB NO.	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	PAHs	RCRA Metals	PCBs	VOCs	SVOCs	SPECIAL INSTRUCTIONS/NOTES
49562.39	8/1/11	1655	FBS-02	S	1	1							X	X	X			
.40		1710	FB-01	SD	1	1							X	X	X			
.41		1715	FBS-01	S	1	1							X	X	X			
.42		1800	SS-14	S	2	1					1			X	X	X	X	
.43		1800	SS-14 CO-LOCATED	S	2	1					1			X	X	X	X	
.44		1810	SS-13	S	2	1					1			X	X	X	X	
.45		—	TBK-01	QC	1		1									X		Trip Blank
.46	↓	—	MeOH BK-01	QC	1						1					X		Methanol Blank

RELINQUISHED BY: SIGNATURE/ORGANIZATION	OBG	DATE 8-2-11	TIME 1130
RECEIVED BY: SIGNATURE/ORGANIZATION	Merit	DATE 8-2-11	TIME 1130
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 8-2-11	TIME 1130	
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 8-2-11	TIME 1420	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES:	TEMP. ON ARRIVAL 4-7
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS		

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

APPENDIX E

Groundwater Analytical Results

Analytical Laboratory Report

Report ID: S29928.01(01)
Generated on 12/18/2006

Report to

Attention: Mr. Clifford Yantz
O'Brien & Gere Engineers
33469 West 14 Mile Road, Suite 150
Farmington Hills, MI 48331

Phone: 248-661-3745 FAX: 248-661-4057

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S29928.01-S29928.33
Project: GM MFD Grand Blanc
Collected Date: 12/07/2006 - 12/08/2006
Submitted Date/Time: 12/08/2006 16:15
Sampled by: Mike Robison
P.O. #: 10610474EST

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak
Laboratory Director

Sample Summary (33 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S29928.01	SS3-01	Soil	12/07/2006 09:15
S29928.02	SS3-01 MS	Soil	12/07/2006 09:15
S29928.03	SS3-01 MSD	Soil	12/07/2006 09:15
S29928.04	SS5-01	Soil	12/07/2006 09:30
S29928.05	Dup-07	Soil	12/07/2006
S29928.06	SS5-02	Soil	12/07/2006 09:50
S29928.07	SS5-03	Soil	12/07/2006 10:00
S29928.08	SS4-06	Soil	12/07/2006 10:15
S29928.09	SS4-07	Soil	12/07/2006 10:25
S29928.10	SS4-08	Soil	12/07/2006 10:40
S29928.11	SS2-14	Soil	12/07/2006 11:00
S29928.12	SS2-15	Soil	12/07/2006 11:10
S29928.13	SS2-16	Soil	12/07/2006 11:15
S29928.14	SS2-17	Soil	12/07/2006 11:25
S29928.15	SS2-18	Soil	12/07/2006 11:45
S29928.16	SS2-19	Soil	12/07/2006 12:00
S29928.17	Dup-08	Soil	12/07/2006
S29928.18	SS3-02	Soil	12/07/2006 12:20
S29928.19	SS3-03	Soil	12/07/2006 12:45
S29928.20	MW4-04	Groundwater	12/07/2006 14:30
S29928.21	MW2-03	Groundwater	12/07/2006 15:30
S29928.22	MW2-01	Groundwater	12/07/2006 16:30
S29928.23	MW2-02	Groundwater	12/08/2006 08:15
S29928.24	MW2-02 MS	Groundwater	12/08/2006 08:15
S29928.25	MW2-02 MSD	Groundwater	12/08/2006 08:15
S29928.26	MW4-03	Groundwater	12/08/2006 09:30
S29928.27	Dup-01	Groundwater	12/08/2006
S29928.28	MW4-01	Groundwater	12/08/2006 10:30
S29928.29	MW3-02	Groundwater	12/08/2006 11:30
S29928.30	MW4-02	Groundwater	12/08/2006 12:30
S29928.31	MW3-01	Groundwater	12/08/2006 13:30
S29928.32	MW3-03	Groundwater	12/08/2006 14:30
S29928.33	MW1-01	Groundwater	12/08/2006 15:30

Analytical Laboratory Report

Lab Sample ID: S29928.22
Sample Tag: MW2-01
Collected Date/Time: 12/07/2006 16:30
Matrix: Groundwater
COC Reference: 038911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.4	IR
1	1L Amber	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7470A	12/11/06 13:00	JRT		
Metal Digestion	Completed			3015A	12/14/06 12:00	SLS		
PNA Extraction	Completed			3510C	12/13/06 22:58	EMR		
Metals								
Arsenic, Dissolved	0.002	mg/L	0.001	200.8	12/14/06 14:30	SLS	7440-38-2	
Barium, Dissolved	0.05	mg/L	0.01	200.8	12/14/06 14:30	SLS	7440-39-3	
Cadmium, Dissolved	Not detected	mg/L	0.0005	200.8	12/14/06 14:30	SLS	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	12/14/06 14:30	SLS	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.004	200.8	12/14/06 14:30	SLS	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	200.8	12/14/06 14:30	SLS	7439-92-1	
Mercury, Dissolved	Not detected	mg/L	0.0002	245.1M	12/11/06 16:06	JRT	7439-97-6	
Selenium, Dissolved	Not detected	mg/L	0.005	200.8	12/14/06 14:30	SLS	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	200.8	12/14/06 14:30	SLS	7440-22-4	
Zinc, Dissolved	0.015	mg/L	0.005	200.8	12/14/06 14:30	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatic Hydrocarbon								
Acenaphthene	Not detected	ug/L	5	8270C	12/15/06 15:10	ARH	83-32-9	
Acenaphthylene	Not detected	ug/L	5	8270C	12/15/06 15:10	ARH	208-96-8	
Anthracene	Not detected	ug/L	5	8270C	12/15/06 15:10	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/L	5	8270C	12/15/06 15:10	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	5	8270C	12/15/06 15:10	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	5	8270C	12/15/06 15:10	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/L	5	8270C	12/15/06 15:10	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/L	5	8270C	12/15/06 15:10	ARH	191-24-2	
Chrysene	Not detected	ug/L	5	8270C	12/15/06 15:10	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/L	5	8270C	12/15/06 15:10	ARH	53-70-3	
Fluoranthene	Not detected	ug/L	5	8270C	12/15/06 15:10	ARH	206-44-0	
Fluorene	Not detected	ug/L	5	8270C	12/15/06 15:10	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	5	8270C	12/15/06 15:10	ARH	193-39-5	
Naphthalene	Not detected	ug/L	5	8270C	12/15/06 15:10	ARH	91-20-3	
Phenanthrene	Not detected	ug/L	5	8270C	12/15/06 15:10	ARH	85-01-8	
Pyrene	Not detected	ug/L	5	8270C	12/15/06 15:10	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/L	5	8270C	12/15/06 15:10	ARH	91-57-6	

Analytical Laboratory Report

Lab Sample ID: S29928.23
Sample Tag: MW2-02
Collected Date/Time: 12/08/2006 08:15
Matrix: Groundwater
COC Reference: 038911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.4	IR
1	1L Amber	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7470A	12/11/06 13:00	JRT		
Metal Digestion	Completed			3015A	12/14/06 12:00	SLS		
PNA Extraction	Completed			3510C	12/13/06 22:58	EMR		
Metals								
Arsenic, Dissolved	0.002	mg/L	0.001	200.8	12/14/06 14:40	SLS	7440-38-2	
Barium, Dissolved	0.09	mg/L	0.01	200.8	12/14/06 14:40	SLS	7440-39-3	
Cadmium, Dissolved	Not detected	mg/L	0.0005	200.8	12/14/06 14:40	SLS	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	200.8	12/14/06 14:40	SLS	7440-47-3	
Copper, Dissolved	0.007	mg/L	0.004	200.8	12/14/06 14:40	SLS	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	200.8	12/14/06 14:40	SLS	7439-92-1	
Mercury, Dissolved	Not detected	mg/L	0.0002	245.1M	12/11/06 16:21	JRT	7439-97-6	
Selenium, Dissolved	0.006	mg/L	0.005	200.8	12/14/06 14:40	SLS	7782-49-2	
Silver, Dissolved	0.0008	mg/L	0.0002	200.8	12/14/06 14:40	SLS	7440-22-4	
Zinc, Dissolved	0.013	mg/L	0.005	200.8	12/14/06 14:40	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatic Hydrocarbon								
Acenaphthene	Not detected	ug/L	5	8270C	12/15/06 15:32	ARH	83-32-9	
Acenaphthylene	Not detected	ug/L	5	8270C	12/15/06 15:32	ARH	208-96-8	
Anthracene	Not detected	ug/L	5	8270C	12/15/06 15:32	ARH	120-12-7	
Benzo(a)anthracene	Not detected	ug/L	5	8270C	12/15/06 15:32	ARH	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	5	8270C	12/15/06 15:32	ARH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	5	8270C	12/15/06 15:32	ARH	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/L	5	8270C	12/15/06 15:32	ARH	207-08-9	
Benzo(ghi)perylene	Not detected	ug/L	5	8270C	12/15/06 15:32	ARH	191-24-2	
Chrysene	Not detected	ug/L	5	8270C	12/15/06 15:32	ARH	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/L	5	8270C	12/15/06 15:32	ARH	53-70-3	
Fluoranthene	Not detected	ug/L	5	8270C	12/15/06 15:32	ARH	206-44-0	
Fluorene	Not detected	ug/L	5	8270C	12/15/06 15:32	ARH	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	5	8270C	12/15/06 15:32	ARH	193-39-5	
Naphthalene	Not detected	ug/L	5	8270C	12/15/06 15:32	ARH	91-20-3	
Phenanthrene	Not detected	ug/L	5	8270C	12/15/06 15:32	ARH	85-01-8	
Pyrene	Not detected	ug/L	5	8270C	12/15/06 15:32	ARH	129-00-0	
2-Methylnaphthalene	Not detected	ug/L	5	8270C	12/15/06 15:32	ARH	91-57-6	

Analytical Laboratory Report

Lab Sample ID: S29928.24
Sample Tag: MW2-02 MS
Collected Date/Time: 12/08/2006 08:15
Matrix: Groundwater
COC Reference: 038911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.4	IR
1	1L Amber	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7470A	12/11/06 13:00	JRT		
Metal Digestion	Completed			3015A	12/14/06 12:00	SLS		
PNA Extraction	Completed			3510C	12/13/06 22:58	EMR		
Metals								
Arsenic, Dissolved	0.266	mg/L	0.001	200.8	12/14/06 14:43	SLS	7440-38-2	
Barium, Dissolved	0.35	mg/L	0.01	200.8	12/14/06 14:43	SLS	7440-39-3	
Cadmium, Dissolved	0.2484	mg/L	0.0005	200.8	12/14/06 14:43	SLS	7440-43-9	
Chromium, Dissolved	0.265	mg/L	0.005	200.8	12/14/06 14:43	SLS	7440-47-3	
Copper, Dissolved	0.265	mg/L	0.004	200.8	12/14/06 14:43	SLS	7440-50-8	
Lead, Dissolved	0.243	mg/L	0.003	200.8	12/14/06 14:43	SLS	7439-92-1	
Mercury, Dissolved	0.0017	mg/L	0.0002	245.1M	12/11/06 16:23	JRT	7439-97-6	
Selenium, Dissolved	0.251	mg/L	0.005	200.8	12/14/06 14:43	SLS	7782-49-2	
Silver, Dissolved	0.2226	mg/L	0.0002	200.8	12/14/06 14:43	SLS	7440-22-4	
Zinc, Dissolved	0.258	mg/L	0.005	200.8	12/14/06 14:43	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatic Hydrocarbon								
Acenaphthene	26	ug/L	5	8270C	12/15/06 15:55	ARH	83-32-9	1
Acenaphthylene	26	ug/L	5	8270C	12/15/06 15:55	ARH	208-96-8	1
Anthracene	26	ug/L	5	8270C	12/15/06 15:55	ARH	120-12-7	1
Benzo(a)anthracene	21	ug/L	5	8270C	12/15/06 15:55	ARH	56-55-3	1
Benzo(a)pyrene	29	ug/L	5	8270C	12/15/06 15:55	ARH	50-32-8	1
Benzo(b)fluoranthene	31	ug/L	5	8270C	12/15/06 15:55	ARH	205-99-2	1
Benzo(k)fluoranthene	30	ug/L	5	8270C	12/15/06 15:55	ARH	207-08-9	1
Benzo(ghi)perylene	30	ug/L	5	8270C	12/15/06 15:55	ARH	191-24-2	1
Chrysene	29	ug/L	5	8270C	12/15/06 15:55	ARH	218-01-9	1
Dibenzo(ah)anthracene	31	ug/L	5	8270C	12/15/06 15:55	ARH	53-70-3	1
Fluoranthene	30	ug/L	5	8270C	12/15/06 15:55	ARH	206-44-0	1
Fluorene	28	ug/L	5	8270C	12/15/06 15:55	ARH	86-73-7	1
Indeno(1,2,3-cd)pyrene	32	ug/L	5	8270C	12/15/06 15:55	ARH	193-39-5	1
Naphthalene	24	ug/L	5	8270C	12/15/06 15:55	ARH	91-20-3	1
Phenanthrene	28	ug/L	5	8270C	12/15/06 15:55	ARH	85-01-8	1
Pyrene	28	ug/L	5	8270C	12/15/06 15:55	ARH	129-00-0	1
2-Methylnaphthalene	27	ug/L	5	8270C	12/15/06 15:55	ARH	91-57-6	1

1-Wet Weight Spike: 0.052 mg/kg

Analytical Laboratory Report

Lab Sample ID: S29928.25
Sample Tag: MW2-02 MSD
Collected Date/Time: 12/08/2006 08:15
Matrix: Groundwater
COC Reference: 038911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.4	IR
1	1L Amber	None	Yes	4.4	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7470A	12/11/06 13:00	JRT		
Metal Digestion	Completed			3015A	12/14/06 12:00	SLS		
PNA Extraction	Completed			3510C	12/13/06 22:58	EMR		
Metals								
Arsenic, Dissolved	0.267	mg/L	0.001	200.8	12/14/06 14:46	SLS	7440-38-2	
Barium, Dissolved	0.35	mg/L	0.01	200.8	12/14/06 14:46	SLS	7440-39-3	
Cadmium, Dissolved	0.2466	mg/L	0.0005	200.8	12/14/06 14:46	SLS	7440-43-9	
Chromium, Dissolved	0.261	mg/L	0.005	200.8	12/14/06 14:46	SLS	7440-47-3	
Copper, Dissolved	0.259	mg/L	0.004	200.8	12/14/06 14:46	SLS	7440-50-8	
Lead, Dissolved	0.243	mg/L	0.003	200.8	12/14/06 14:46	SLS	7439-92-1	
Mercury, Dissolved	0.0018	mg/L	0.0002	245.1M	12/11/06 16:25	JRT	7439-97-6	
Selenium, Dissolved	0.256	mg/L	0.005	200.8	12/14/06 14:46	SLS	7782-49-2	
Silver, Dissolved	0.2164	mg/L	0.0002	200.8	12/14/06 14:46	SLS	7440-22-4	
Zinc, Dissolved	0.258	mg/L	0.005	200.8	12/14/06 14:46	SLS	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatic Hydrocarbon								
Acenaphthene	25	ug/L	5	8270C	12/15/06 16:18	ARH	83-32-9	1
Acenaphthylene	25	ug/L	5	8270C	12/15/06 16:18	ARH	208-96-8	1
Anthracene	26	ug/L	5	8270C	12/15/06 16:18	ARH	120-12-7	1
Benzo(a)anthracene	20	ug/L	5	8270C	12/15/06 16:18	ARH	56-55-3	1
Benzo(a)pyrene	29	ug/L	5	8270C	12/15/06 16:18	ARH	50-32-8	1
Benzo(b)fluoranthene	29	ug/L	5	8270C	12/15/06 16:18	ARH	205-99-2	1
Benzo(k)fluoranthene	29	ug/L	5	8270C	12/15/06 16:18	ARH	207-08-9	1
Benzo(ghi)perylene	29	ug/L	5	8270C	12/15/06 16:18	ARH	191-24-2	1
Chrysene	29	ug/L	5	8270C	12/15/06 16:18	ARH	218-01-9	1
Dibenzo(ah)anthracene	30	ug/L	5	8270C	12/15/06 16:18	ARH	53-70-3	1
Fluoranthene	30	ug/L	5	8270C	12/15/06 16:18	ARH	206-44-0	1
Fluorene	27	ug/L	5	8270C	12/15/06 16:18	ARH	86-73-7	1
Indeno(1,2,3-cd)pyrene	30	ug/L	5	8270C	12/15/06 16:18	ARH	193-39-5	1
Naphthalene	22	ug/L	5	8270C	12/15/06 16:18	ARH	91-20-3	1
Phenanthrene	27	ug/L	5	8270C	12/15/06 16:18	ARH	85-01-8	1
Pyrene	28	ug/L	5	8270C	12/15/06 16:18	ARH	129-00-0	1
2-Methylnaphthalene	25	ug/L	5	8270C	12/15/06 16:18	ARH	91-57-6	1

1-Wet Weight Spike: 0.052 mg/kg

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C.O.C. PAGE # 1 OF 3

035105

CHAIN OF CUSTODY RECORD

REPORT TO		INVOICE TO	
CONTACT NAME	CLIFF YANTZ	CONTACT NAME	SAME
COMPANY	OBRIEN & GERE	COMPANY	
ADDRESS	33469 W. 14 MILE RD STE 150	ADDRESS	
CITY / STATE / ZIP CODE	FARMINGTON HILLS / MI / 48331	CITY / STATE / ZIP CODE	
PHONE NO. / FAX NO. / P.O. NO.	248 661 3745 / 248 661 4057 / 39923	PHONE NO. / FAX NO. / P.O. NO.	
E-MAIL ADDRESS / QUOTE NO.			

PROJECT NO./NAME: GM MFD GRAND BLANC
SAMPLER(S) - PLEASE PRINT/SIGN NAME: MIKE ROBISON

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STANDARD ☒ LEVEL II ☐ LEVEL III ☐ OTHER

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MATRIX CODE: GW=GROUNDWATER, WW=WASTEWATER, S=SOIL, L=LIQUID, SD=SOLID, SL=SLUDGE, O=OIL, A=AIR, W=WASTE, M=MISC

MERIT LAB NO.	DATE (2006 YEAR)	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	SVOC's PNA's	MI 10 METALS	SPECIAL INSTRUCTIONS/NOTES
29928.01	12/7	0915	SS3-01	S	1	1							X	X	0-6"
.02/.03		0915	SS3-01 MS/MSD	S	1	1							X	X	0-6"
.04		0930	SS5-01	S	1	1							X	X	0-6"
.05		←	DUP-07	S	1	1							X	X	0-6"
.06		0950	SS5-02	S	1	1							X	X	0-6"
.07		1000	SS5-03	S	1	1							X	X	0-6"
.08		1015	SS4-06	S	1	1							X	X	0-6"
.09		1025	SS4-07	S	1	1							X	X	0-6"
.10		1040	SS4-08	S	1	1							X	X	0-6"
.11		1100	SS2-14	S	1	1							X	X	0-6"
.12		1110	SS2-15	S	1	1							X	X	0-6"
.13		1115	SS2-16	S	1	1							X	X	0-6"

* SPECIAL INSTRUCTIONS/NOTES: FINE + COARSE FRACTION ANALYSIS FOR LEAD SOIL SAMPLES

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION		12/7/06	1540
RECEIVED BY: SIGNATURE/ORGANIZATION	Merit	12-7-06	1545
RELINQUISHED BY: SIGNATURE/ORGANIZATION		12-7-06	1615
RECEIVED BY: SIGNATURE/ORGANIZATION	Barbara Richardson	12-8-06	16:15
RELINQUISHED BY: SIGNATURE/ORGANIZATION			
RECEIVED BY: SIGNATURE/ORGANIZATION			

SEAL NO. / SEAL INTACT YES ☐ NO ☐ / INITIALS / NOTES: / TEMP. ON ARRIVAL 4.4

SEAL NO. / SEAL INTACT YES ☐ NO ☐ / INITIALS

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

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C.O.C. PAGE # 2 OF 3

038911

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: CLIFF YANTZ
COMPANY: OBRIEN & GERE
ADDRESS: 33469 W. 14 MILE RD STE 150
CITY: FARMINGTON HILLS STATE: MI ZIP CODE: 48331
PHONE NO.: 248 661 3745 FAX NO.: P.O. NO.: 39923
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: ✓ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: GM MFD GRAND BLANC
SAMPLER(S) PLEASE PRINT/SIGN NAME: MIKE ROBITAILLE
TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ STANDARD ☐ OTHER
DELIVERABLES REQUIRED ☐ STANDARD ☑ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	2006 YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	PNAs	MI 10 METALS	SPECIAL INSTRUCTIONS/NOTES
29928.14	12/7	1125	SS2-17	S	1	1							X	X	0-6"
.15		1145	SS2-18	S	1	1							X	X	0-6"
.16		1200	SS2-19	S	1	1							X	X	0-6"
.17		—	DUP-08	S	1	1							X	X	0-6"
.18		1220	SS3-02	S	1	1							X	X	0-6"
.19		1245	SS3-03	S	1	1							X	X	0-6"
.20		1430	MW4-04	GW	2	1		X					X	X	METALS FIELD FILTERED
.21		1530	MW2-03	GW	2	1		1					X	X	" "
.22		1630	MW2-01	GW	2	1		1					X	X	" "
.23	12/8	0815	MW2-02	GW	2	1		1					X	X	" "
.24/.25		0815	MW2-02 MS/MSD	GW	4	2		2					X	X	" "
.26		0930	MW4-03	GW	2	1		1					X	X	" "

SPECIAL INSTRUCTIONS/NOTES: FINE + COARSE FRACTION LEAD ANALYSIS FOR SOILS

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	086	12/9/06	1540
RECEIVED BY: SIGNATURE/ORGANIZATION	/Merit	12/8/06	1540
RELINQUISHED BY: SIGNATURE/ORGANIZATION	/Merit	12-8-06	1615
RECEIVED BY: SIGNATURE/ORGANIZATION	Barbara Richard T.I	12-8-06	16:15
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 1.4
DISSOLVED ANALYSIS FOR METALS WATERS

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

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C.O.C. PAGE # 3 OF 3

038994

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: CLIFF YANT 2
COMPANY: OBRIEN + GERE
ADDRESS: SAME AS PG 1
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO. 39923
E-MAIL ADDRESS: QUOTE NO.

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.

PROJECT NO./NAME: GM MFD GRAND BLANC
SAMPLER(S) - PLEASE PRINT/SIGN NAME: MIKE ROBISON

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STANDARD ☒ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	2006 YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	PNA's	MI 10 METALS	SPECIAL INSTRUCTIONS/NOTES
29928.27	12/8	—	DUP-01	GW	2	1		1					X	X	METALS FIELD FILTERED
.28		1030	MW4-01	GW	2	1		1					X	X	" "
.29		1130	MW3-02	GW	2	1		1					X	X	" "
.30		1230	MW4-02	GW	2	1		1					X	X	" "
.31		1330	MW3-01	GW	2	1		1					X	X	" "
.32		1430	MW3-03	GW	2	1		1					X	X	" "
.33	↓	1530	MW1-01	GW	2	1		1					X	X	" "

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
OBG	12/8/06	15:40
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Merit	12-8-06	15:40
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Merit	12-8-06	16:15
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Barbara Richardson	12-8-06	16:15

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4.4
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Analytical Laboratory Report

Report ID: S30158.01(01)
Generated on 12/28/2006

Report to

Attention: Mr. Clifford Yantz
O'Brien & Gere Engineers
33469 West 14 Mile Road, Suite 150
Farmington Hills, MI 48331

Phone: 248-661-3745 FAX: 248-661-4057

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S30158.01-S30158.14
Project: GM MFD Grand Blanc
Collected Date: 12/22/2006
Submitted Date/Time: 12/26/2006 12:30
Sampled by: Mike Robison
P.O. #: 10610474EST

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (14 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S30158.01	MW4-01	Groundwater	12/22/2006 08:30
S30158.02	DUP-02	Groundwater	12/22/2006
S30158.03	MW4-02	Groundwater	12/22/2006 09:15
S30158.04	MW4-04	Groundwater	12/22/2006 10:30
S30158.05	MW2-03	Groundwater	12/22/2006 11:15
S30158.06	MW2-02	Groundwater	12/22/2006 12:05
S30158.07	MW2-01	Groundwater	12/22/2006 13:00
S30158.08	MW3-03	Groundwater	12/22/2006 13:50
S30158.09	MW3-03 MS	Groundwater	12/22/2006 13:50
S30158.10	MW3-03 MSD	Groundwater	12/22/2006 13:50
S30158.11	MW3-01	Groundwater	12/22/2006 14:35
S30158.12	MW1-01	Groundwater	12/22/2006 15:25
S30158.13	MW4-03	Groundwater	12/22/2006 16:20
S30158.14	MW3-02	Groundwater	12/22/2006 17:20

Analytical Laboratory Report

Lab Sample ID: S30158.06
Sample Tag: MW2-02
Collected Date/Time: 12/22/2006 12:05
Matrix: Groundwater
COC Reference: 038412

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.9	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7470A	12/27/06 09:00	JRT		
Metal Digestion	Completed			3015A	12/27/06 12:00	SLS		
Metals								
Arsenic	0.001	mg/L	0.001	200.8	12/27/06 15:30	SLS	7440-38-2	
Barium	0.08	mg/L	0.01	200.8	12/27/06 15:30	SLS	7440-39-3	
Cadmium	Not detected	mg/L	0.0005	200.8	12/27/06 15:30	SLS	7440-43-9	
Chromium	0.005	mg/L	0.005	200.8	12/27/06 15:30	SLS	7440-47-3	
Copper	0.006	mg/L	0.004	200.8	12/27/06 15:30	SLS	7440-50-8	
Lead	Not detected	mg/L	0.003	200.8	12/27/06 15:30	SLS	7439-92-1	
Mercury	Not detected	mg/L	0.0002	245.1	12/27/06 13:07	JRT	7439-97-6	
Selenium	Not detected	mg/L	0.005	200.8	12/27/06 15:30	SLS	7782-49-2	
Silver	0.0004	mg/L	0.0002	200.8	12/27/06 15:30	SLS	7440-22-4	
Zinc	0.016	mg/L	0.005	200.8	12/27/06 15:30	SLS	7440-66-6	

Analytical Laboratory Report

Lab Sample ID: S30158.07
Sample Tag: MW2-01
Collected Date/Time: 12/22/2006 13:00
Matrix: Groundwater
COC Reference: 038412

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.9	IR

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7470A	12/27/06 09:00	JRT		
Metal Digestion	Completed			3015A	12/27/06 12:00	SLS		
Metals								
Arsenic	0.004	mg/L	0.001	200.8	12/27/06 15:33	SLS	7440-38-2	
Barium	0.06	mg/L	0.01	200.8	12/27/06 15:33	SLS	7440-39-3	
Cadmium	Not detected	mg/L	0.0005	200.8	12/27/06 15:33	SLS	7440-43-9	
Chromium	Not detected	mg/L	0.005	200.8	12/27/06 15:33	SLS	7440-47-3	
Copper	Not detected	mg/L	0.004	200.8	12/27/06 15:33	SLS	7440-50-8	
Lead	Not detected	mg/L	0.003	200.8	12/27/06 15:33	SLS	7439-92-1	
Mercury	Not detected	mg/L	0.0002	245.1	12/27/06 13:18	JRT	7439-97-6	
Selenium	Not detected	mg/L	0.005	200.8	12/27/06 15:33	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0002	200.8	12/27/06 15:33	SLS	7440-22-4	
Zinc	0.012	mg/L	0.005	200.8	12/27/06 15:33	SLS	7440-66-6	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-6333
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

038412

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	CLIFF YANTZ
COMPANY	OBRIEN & GERE
ADDRESS	33469 W. 14 MILE RD. STE 150
CITY	FARMINGTON HILLS
STATE	MI
ZIP CODE	48331
PHONE NO.	248 661 3745
FAX NO.	248 661 4057
P.O. NO.	39923
E-MAIL ADDRESS	
QUOTE NO.	

INVOICE TO

CONTACT NAME	☑ SAME
COMPANY	
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
FAX NO.	
P.O. NO.	

PROJECT NO./NAME: GM MFD GRAND BLANC

SAMPLER(S) - PLEASE PRINT/SIGN NAME: MIKE ROBISON

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☑ 72 HR ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STANDARD ☑ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

SPECIAL INSTRUCTIONS/NOTES: ANALYZE FOR TOTAL METALS (NOT FILTERED)

MERIT LAB NO. 2006	DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	MI 10 METALS
30558.01	12/12	0830	MW4-01	GW	1			1					X
.02		—	DUP-02	GW	1			1					X
.03		0915	MW4-02	GW	1			1					X
.04		1030	MW4-04	GW	1			1					X
.05		1115	MW2-03	GW	1			1					X
.06		1205	MW2-02	GW	1			1					X
.07		1300	MW2-01	GW	1			1					X
.08		1350	MW3-03	GW	1			1					X
09/10		1350	MW3-03 MS/MSD	GW	2			2					X
.11		1435	MW3-01	GW	2			2					X
.12		1525	MW1-01	GW	1			1					X
.13		1620	MW4-03	GW	1			1					X
.14		1720	MW3-02	GW	1			1					X

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME	RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE / TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME	RECEIVED BY: SIGNATURE/ORGANIZATION	DATE 12/26/06 TIME 1230
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 12/26/06	TIME 1115	SEAL NO. / SEAL INTACT YES ☐ NO ☐ / INITIALS	NOTES: TEMP. ON ARRIVAL 4.9
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 12/26/06	TIME 1115	SEAL NO. / SEAL INTACT YES ☐ NO ☐ / INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

APPENDIX F

Sampling and Analysis Plan

REPORT

SAMPLING AND ANALYSIS PLAN
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

Revitalizing Auto Communities Environmental Response Trust (RACER)
Ypsilant, MICHIGAN

AUGUST 2011

O'BRIEN & GERE
www.obg.com

14774 | 46540

Sampling and Analysis Plan
Dort Highway Land

10800 South Saginaw Street
Grand Blanc, Michigan

Prepared for: RACER Trust
Ypsilanti, Michigan

SCOTT L. CORMIER, P.E.
VICE PRESIDENT
O'Brien & Gere Engineers, Inc.

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1. Site Location Map
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APPENDICES

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1. INTRODUCTION

Revitalizing Auto Communities Environmental Response Trust (RACER), contracted O'Brien & Gere Engineers, Inc. (O'Brien & Gere) to prepare and implement this Sampling and Analysis Plan (SAP) to conduct a soil sampling and remediation (*i.e.*, excavation) activities, if necessary and appropriate at the Dort Highway Land site (Site) located in Grand Blanc, Michigan. The Dort Highway Land is immediately adjacent to the General Motors Weld Tool Center (WTC) plant located at 10800 South Saginaw Street, Grand Blanc, Michigan, and shares the same address. The location of the Dort Highway Land is depicted on **Figure 1**.

The purpose of this SAP is to provide an outline for sampling and other activities conducted at the Site, including surface soil, wood floor block, and/or groundwater sampling, excavation of impacted material and analytical activities to be performed at the Site. Sampling and/or remediation activities at the Site will be performed in accordance with the methods outlined in this SAP to assess Site conditions and potential effected media (*i.e.*, soil, floor block, and/or groundwater) quality at the Site. This SAP also includes investigative derived (IDW) waste management activities (Section 4.4), and a site-specific Quality Control Document (QCD) included in **Appendix A**.

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2. SITE BACKGROUND AND SETTING

2.1 PURPOSE AND OBJECTIVES

This SAP communicates elements associated with the planning and execution of potential soil and/or other potentially effected media (*i.e.*, floor block) sampling, excavation (*i.e.*, remediation), monitoring well installation and development, groundwater sampling, laboratory analysis, and data management activities associated with the Dort Highway Land. The scope of these activities has not been defined at this time; however, this SAP provides the framework for completing the aforementioned activities should they be implemented at the Site. The purpose and objectives of the aforementioned activities, if implemented, are the following:

- Collect surface soil and/or floor block samples to verify the Site is below Michigan Department of Environmental Quality (MDEQ) Part 201 nonresidential direct contact and/or drinking water cleanup criteria
- Locate and excavate impacted areas that are above MDEQ Part 201 nonresidential direct contact and/or drinking water cleanup criteria, **or** implement other acceptable Site exposure/risk control measures to manage the risks associated with effected media
- Installation of monitoring wells to approximate 20 feet below grade (fbg) to assess shallow groundwater flow conditions and assess water quality through sample collection
- Collect confirmatory samples for site closure, as necessary and appropriate
- Prepare documents necessary for closure of the Site, including post-closure plans, such as a due care plan, if necessary

2.2 SITE DESCRIPTION

The Dort Highway Land is located immediately adjacent to the General Motors WTC plant located at 10800 South Saginaw Street, Grand Blanc, Michigan, and shares the same address. A Site Location Map is included as **Figure 1** and a figure depicting the Dort Highway Land is included as **Figure 2**. The Dort Highway Land includes a 20.44 acre portion of what was formerly part of Area 2; an exterior area of the WTC. The GM LLC owned portion of the facility was previously known as the Metal Fabrication Division (MFD) and includes the other exterior areas of the plant (Areas 1 through 5) and the remaining portion of the plant (Area 6). Area 2 was an approximately 38.5 acre exterior area of the former plant. The Site is currently unused (*i.e.*, vacant land).

The original portion of the plant was constructed in 1942 as a tank arsenal. After World War II, the plant was leased from the government by the Buick Motor Division and was purchased by General Motors in 1951. During the Korean Emergency, Fisher Body produced Patton M-48 Medium Tanks. In 1955, the plant was converted to automotive body metal fabricating. The plant currently fabricates, as well as assembles and repairs robotic systems for automotive plants.

The Dort Highway Land fronts on Dort Highway and is located west of the GM WTC plant (see **Figures 1 and 2**). The Dort Highway Land was formerly used for die and other equipment and material storage, and also included a small shed, pump house, and water tank before the cessation of automotive body parts in 2008 and the demolition of the former Press Room beginning in 2008 and concluding in early 2010. Approximately four feet of soil on average was stripped from the Dort Highway Land and the area is currently vacant and sparsely vegetated.

The Site is presently owned by the RACER Trust, which took over responsibility of the Site following the bankruptcy of General Motors Corporation (former GM Corporation) and management by Motors Liquidation Company (MLC).

Previous investigations into the potential environmental impacts of the Dort Highway Land have been performed as summarized in the Site History and Current Conditions Report (O'Brien & Gere, 2011). A brief summary of these investigations is included in Section 2.3.

2.3 PREVIOUS SITE INVESTIGATIONS

Two Phase I Environmental Site Assessments (ESAs) were conducted of the Site (O'Brien & Gere, 2005 and 2010); one was conducted in 2005 for GM Corporation and another was conducted in 2010 for MLC. Both Phase I ESAs were conducted to evaluate the existence of recognized environmental conditions (RECs) associated with the Site because of past or present Site activities. The RECs identified in 2005 were used to guide the Phase II ESA for the Site. The 2010 Phase I ESA only identified a couple potential RECs on the Site: 1) impacted soils that may not have been removed during the soil removal activities (especially in the SS2-24 area, known as subarea B-3), and 2) unearthed wood floor blocks along the southern boundary of the Site.

The Phase II ESA was performed in 2006 and documented in 2007 (O'Brien & Gere, 2007a). The purpose of the Phase II ESA was to identify and document the environmental conditions of the Site. This included identifying and documenting the presence of substances which indicate an existing, past, or potential adverse environmental impact to the air, soil, groundwater or surface waters as a result of operations on the Site and adjacent and surrounding properties, and which indicate that further investigation may be necessary to evaluate environmental issues associated with the Site.

A Delineation Investigation was conducted to delineate the documented surface soil impacted locations identified at the Dort Highway Land, which were above the MDEQ generic nonresidential groundwater and/or direct contact criteria (O'Brien & Gere, 2007b).

For further details on the previous site investigations please refer to the Dort Highway Land – Site History & Current Conditions Report (O'Brien & Gere, 2011), which summarizes these investigations, and their findings and results.

2.4 GEOLOGIC SETTING

2.4.1 Regional Geology

The Dort Highway Land is underlain by unconsolidated glacial drift soils to depths of about 120 to 160 ft beneath the Site according to the Groundwater Resources Map Series for Grand Blanc Township (U of M – Flint, Nov. 1994). The soils at the Site consist of loam and clay loam from the Conover series with low infiltration rates (O'Brien & Gere, 2005). The native clay soils underlying the topsoil or fill soils likely extend to the top of bedrock. The Groundwater Resources Maps indicate between 80 and 90 percent of the drift soils to a depth of 100 ft consist of clay in the area of the Site.

Bedrock in the area of the Site is a stratified sequence from the Paleozoic Era. The Bedrock Geology of Michigan (MDNR, 1987) map indicates the Site is underlain by the Pennsylvanian age Saginaw Formation consisting of a fine-grained sandstone and siltstone interbedded with shale, limestone, coal and gypsum. The bedrock surface is reported to vary in elevation from about 680 to 720 ft aMSL beneath the Site and generally slopes toward the southwest.

2.4.2 Site Geology

The Site geology based on the twenty-eight soil borings installed during the Phase II ESA and Delineation Investigation generally consisted of either an asphalt, concrete, gravel or topsoil cap depending on the location of the boring underlain by a layer of damp, brown silty SAND and GRAVEL fill material to a depths of up to 8 fbg, but typically less than 4 fbg. From 4 fbg to around 7 to 10 fbg a layer of damp, brown with gray mottling, stiff silty CLAY, little gravel with a Unified Soil Classification System (USCS) symbol of CL was consistent almost throughout the Site. From about 10 to 20 fbg the soil became less mottled or was not mottled and generally consisted of a moist, medium plasticity, brown to gray, silty CLAY, trace to little gravel with a USCS symbol of CL down to at least 20 fbg (the deepest depth investigated during the Phase II ESA and Delineation Investigation), which purportedly extends to a depths of about 100 fbg in the Site area. A half inch thick sand seam was observed at 14 fbg in the boring for monitoring well MW2-1. At monitoring well MW2-2 two approximately 6 inch thick seams of wet, brown, sandy CLAY were observed from 17.5 to 18 fbg and 19.5 to 20 fbg. Figure 9 of the Site History & Current Conditions Report presents three cross-sections (A-A', B-B'-B'', and C-C') to help

illustrate the Site geology, and the relationship between the historical topography and the post-soil removal (2010) topography of the Site.

2.4.3 Regional Hydrogeology

The depth to groundwater at the Dort Highway Land is generally less than 12 ft; however, this may be indicative of perched groundwater conditions. The Groundwater Resources Map Series for Grand Blanc Township (U of M – Flint, Nov. 1994) indicates the regional groundwater table exists at elevations of about 770 to 780 ft a MSL in the area of the Site, which corresponds to depths of about 50 to 70 ft below grade (fbg). The Site is gently sloped and based on local topography, the shallow (potentially perched) groundwater flow direction is generally towards the east, east of the Site toward Thread Creek located about two thirds of a mile northeast of the Site, and towards the west on the Site toward Gibson Drain located about a quarter mile west of the Site (Figure 1). However, deeper regional groundwater flow is purported to flow towards the northwest (U of M – Flint, Nov. 1994).

2.4.4 Site Hydrogeology

The depths to groundwater on December 7, 2006 were 11.33 ft below top of casing (fbTOC) at MW2-1 and 4.95 fbTOC at MW2-2. The corresponding groundwater elevations were 820.91 ft aMSL at MW2-1 and 828.20 ft aMSL at MW2-2. On December 22, 2006, the depth to groundwater was 10.95 fbTOC at MW2-1 and 4.44 fbTOC at MW2-2, which is similar to the earlier measurements and the groundwater elevations were 821.29 ft aMSL at MW2-1 and 828.71 ft aMSL at MW2-2. Groundwater contours cannot be constructed with only two groundwater elevations; however, because the groundwater elevation is lower at MW2-1 than MW2-2, it appears that there may be a more northerly component of groundwater flow than the west local (sub-regional) flow direction discussed in Section 2.4.2. As with many shallow perched groundwater systems, the groundwater flow direction can be complex and may be affected by surface infiltration, the presence of discontinuous sand seams and other factors, and may even indicate that the groundwater elevations should not be contoured. However, a general west groundwater flow direction at the Site was predicted based on topographic and surface water information for the Site. Local shallow groundwater in the Site area may discharge to Storm Water Lagoon #2 located southwest of the Site and Gibson Drain located west of the Site.

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3. SAMPLING AND ANALYSIS COMPONENTS

3.1 WORK PLAN

This SAP contains a description of the type of tasks that may be performed at the Dort Highway Land, and will guide future activities conducted at the Site, and function as the methods and procedures for future Work Plans (*i.e.*, letter addenda). Detailed discussion on specific sample collection methods is included in Section 4. Analytical methods are described in the QCD, included in **Appendix A**.

3.2 SITE HEALTH AND SAFETY PLAN

A Site-specific HASP has been prepared in accordance with 20 CFR 1910.120 and the RACER Health and Safety Guidelines. The HASP also specifies protective measures and procedures to be followed by investigators and site visitors to minimize exposure to Site-related materials. The HASP for this project is included as Appendix G of the Site History & Current Conditions Report.

3.3 QUALITY CONTROL, DOCUMENT

A QCD has been prepared using guidance provided in the United States Environmental Protection Agency (USEPA) *Requirements for Quality Assurance Project Plans For Environmental Data Operations, EPA QA/R-5* (USEPA 2001). The QCD describes protocols necessary to achieve the Site data quality objectives. The QCD for this Site is included as **Appendix A** of this SAP.

3.4 DATA QUALITY REVIEW

Data quality and usability will be evaluated through a data quality review and/or data validation. This review or validation will be performed in accordance with the QCD, including an evaluation of selected primary quality control criteria. This review/validation does not include raw checks. The results of the data quality review and/or validation will be provided in the report summarizing the analytical data to document the data quality and overall usability of the data.

3.5 DATA MANAGEMENT

Electronic analytical data will be provided and incorporated into an EQuIS® database program. This database will be linked to a geographic information system (GIS) to allow for numerical and graphical representations of the data.

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4. FIELD SAMPLING PLAN

This section provides specific field sampling procedures to be utilized at the Dort Highway Land Site to conduct, if necessary, surface soil sampling, excavation activities, post excavation/confirmatory sampling, monitoring well installation, and/or groundwater sampling.

4. 1 SITE PREPARATION

Due to the removal of approximately 4 ft of soil from the Site by GM to fill in the basement of the former Press Room, there are few landmarks to use to locate subarea B-3 that was not completely remediated during the soil removal activities. This area will be staked out by a surveyor, or by other method, if the area needs to be located for further investigation and/or remediation.

4. 2 UTILITY CLEARANCE

Prior to performing Site investigation and/or remediation activities, an underground utility survey of the Site will be performed to assist in placing sample or excavation locations.

Field activities that penetrate the ground surface (*i.e.*, excavation/remediation and/or well installations) will have a utility clearance performed in advance of subsurface work. Prior to marking the proposed investigation and/or remediation locations/areas, information regarding underground utilities and structures will be obtained and reviewed. Using this information, the Site will be visually inspected for physical evidence of buried lines or structures. Evidence of buried utilities will be documented. The public underground locating service (MISS DIG) will be contacted to request underground utility marking around the Site, three days prior to commencing work that penetrates the ground surface.

Overhead utilities will also be observed and noted. If drilling, excavation and/or other work activities are to be performed beneath overhead utility lines, minimum clearance requirements will be evaluated.

Using the information obtained, proposed investigation and/or remediation locations/areas will be marked in the field using spray paint.

4.3 SOIL SAMPLING & ANALYSIS

Surface soil and/or wood floor block samples will be collected and analyzed for one or more of the following: volatile organic compound (VOC), semi-volatile organic compound (SVOC, including polynuclear aromatic hydrocarbon [PAH]), RCRA metals (or selected RCRA metals), and/or polychlorinated biphenyl (PCB) analyses based on Site and the purpose for the sampling event. Figure 3 provides the sample locations for the August 2011 sampling event. Furthermore, Section 3.1.1 of the Site History and Current Conditions Report provides a summary of the activities conducted during the August 2011 sampling event. Future Work Plan addenda will provide a map showing proposed sample locations.

O'Brien & Gere proposes to utilize the MDEQ *Sampling Strategies and Statistics Training Materials (S^3TM) for Part 201 Cleanup Criteria* (MDEQ, 2002) guidance document to guide confirmation sampling, if required for the Site. The Pacific Northwest National Laboratory (*i.e.*, operated by Battelle for the U.S. Department of Energy) Visual Sample Plan (VSP) software may be utilized if a systematic random sampling strategy for conducting confirmatory or other sampling is needed for the Site. This software is recommended in the MDEQ and USEPA guidance to aid in the design and visualization of statistically valid sampling grids for investigations and confirmation of remediation.

Future surface soil, floor block material and soils in contact with the floor blocks will analyzed for PAHs based on the August 2011 sampling event results.

Surface soil, floor block and soils in contact with floor block samples will be collected directly from the ground surface utilizing a shovel or hand auger. The samples will be placed directly into clean, pre-labeled, sample jars for analysis. Samples will be placed in a cooler with ice after collection and hand delivered to Merit Laboratories, Inc. of East Lansing, Michigan via the laboratory's courier service.

The samples will be submitted to the analytical laboratory for analysis using appropriate chain of custody and standard Quality assurance/quality control (QA/QC) procedures. A standard analytical data package will be prepared by the laboratory for the soil samples analyzed.

QA/QC samples will be collected in accordance with MDEQ Operational Memorandum No. 2-Attachment 5. These samples include blind duplicate samples (normal soil sample collected in duplicate and submitted to the laboratory blind), co-located samples (independent soil sample collected at same time, interval, and location as a normal sample), matrix spike (MS)/matrix spike duplicates (MSD), and equipment blanks, which will be analyzed by the same methods as the soil samples.

Areas that are above the MDEQ Part 201 nonresidential drinking water protection and/or direct contact cleanup criteria may be excavated and/or capped to limit the potential for direct contact exposure/risk and a deed restriction for the area may be filed.

4.4 SOIL EXCAVATION

It is assumed subarea B-3 and floor block area may need to be excavated due to not being removed during the soil stripping activities, and due to historical (B-3 area) or the August 2011 sampling event results. The floor blocks were not placed in the Press Room basement during the soil stripping activities. The subarea B-3 contained PAHs above the MDEQ nonresidential direct contact criteria over an area approximately 1,444 square feet (ft^2). Impacts were previously identified to depths of up to 6 feet deep in this area. Approximately 2.5 ft of soil was removed from this area during the soil stripping activities. An additional approximately 3.5 ft and up to approximately 187 in place cubic yards of soil would need to be removed to restore this area to below MDEQ Part 201 cleanup criteria.

Additional excavation (*i.e.*, remediation) activities may be needed in other areas of the Site, including the floor block area, based on the August 2011 sampling event results, which identified PAHs above the MDEQ nonresidential drinking water and direct contact criteria over an approximately 2 acre (+/-) area.

Excavation operations will be conducted by a qualified licensed contractor. Excavation will be completed by use of conventional construction equipment (*i.e.*, back- or trackhoe). The contractor will provide a Competent Person to supervise remedial and excavation activities. O'Brien & Gere will provide general oversight and documentation related to the remediation activities.

Prior to mobilization for the excavation of soils a waste profile and waste approval will be secured from a properly licensed Type II landfill.

Excavated soil will be placed directly into dump trucks (and/or roll off boxes if a small enough volume is being remediated) for offsite transport and disposal. Dump trucks will not be permitted to overnight at the Dort Highway Land.

Verification/confirmation samples will be collected from the bucket of the backhoe, if the excavations exceed 4 ft in depth, which is currently not expected; therefore, sloping the excavation sidewalls will not be needed. If the excavation is less than 4 ft deep or there is a need for the personnel or excavation equipment to enter the excavation, the excavation will be sloped in accordance with OSHA requirements to alleviate the need for shoring and one of the walls of the excavation will be sloped such that the excavation equipment and trucks can conduct work from within the excavation, and confirmatory samples in this case can be collected directly from the surface of the excavation. A maximum slope-angle of 1.5 feet horizontal to 1 foot vertical (1.5h:1.0v) is required for Type C soils and will be observed on the three other sidewalls, which will increase stability of the sidewalls. These measures should also allow for relatively unimpeded access to the excavation by walking in or out.

At the end of each workday the full perimeter of the excavation will be established with fluorescent snow fencing at a 6-foot set-back, if the excavation exceeds 4 ft; otherwise, caution tape may be utilized to alert persons entering the excavation area. Signs or caution tape that read "Caution Do Not Enter – Fall Hazard" (or equivalent) will be placed along the perimeter and will be visible from approaches to the excavation.

Although atmospheric hazards, such as elevated levels of VOCs in the breathing zone, are not anticipated during excavation work, a photoionization detector (PID) will be used at the beginning of the excavation work and periodically thereafter to evaluate the presence of potential VOC vapors in the worker's breathing zone. If an atmospheric hazard is identified, response actions will be implemented in accordance with the Site-Specific *Health & Safety Plan*.

4.5 POST EXCAVATION SOIL SAMPLING & ANALYSIS

Once the planned excavation limits have been reached, as outlined in the Work Plan Addendum, verification soil samples will be collected for analysis. The verification sampling will be conducted for the purpose of assessing whether additional removal of impacted soil from the excavation bottom and/or sidewalls is necessary, or whether the remediation objectives have been met. The sampling will be conducted in accordance with the MDEQ S^{3}TM guidance document.

S^{3}TM guidance recommends that a biased sampling approach be used when verifying remediation of small areas (*i.e.*, less than 10,890 square feet [ft^2] or ¼ acre). If excavation activities are conducted in subarea B-3, the impacted area to be excavated is approximately 1,444 square feet (ft^2), biased sampling would be conducted. Biased sampling involves collecting soil samples from areas most likely to still exceed cleanup criteria after excavation. Biased soil samples will be collected based on field observations. Field observations will include visual and olfactory evidence, and soil headspace screening using a PID. In the absence of evidence of impact (*i.e.* staining and/or PID measurements greater than 20 PPM), in accordance with S^{3}TM, unbiased sampling (*i.e.*, statistical systematic random sampling) may be performed to supplement characterization by establishing a grid interval based on the size of the area to be sampled. If unbiased sampling is necessary, samples will be taken at regular intervals resulting in at least one sample per sidewall. In accordance with S^{3}TM, a minimum of four excavation floor samples and five sidewall samples would be collected from subarea B-3, if remediated/excavated.

Post excavation sampling of other areas remediated as part of the soil excavation activities discussed in Section 4.4 will be based on the scope of work identified in the Work Plan Addendum, and in accordance with the S^{3}TM guidance document requirements.

Samples will be analyzed for the presence of PAHs, depending on the constituents being addressed in the area being remediated. Samples from the B-3 subarea will be analyzed for PAHs. Samples will be placed in a cooler with ice after collection and delivered to Merit Laboratories, Inc., of East Lansing, Michigan under routine chain-of custody protocols.

4.6 SITE STABILIZATION & RESTORATION

Once the analytical results indicate that remaining soil in the walls and base of the excavation(s) are below MDEQ Part 201 residential cleanup criteria the excavation(s) will be backfilled. Certified-clean backfill material from an offsite source will be placed in the excavation and compacted (by backhoe) to the finished grade. The O'Brien & Gere field inspector will witness and document the backfilling activities, including the compaction efforts. Field activities will be recorded in project field notes. Backfilling activities will also involve surface restoration (*i.e.*, grading) for the Dort Highway Land to repair/restore areas to improve drainage, as necessary. The amount of grading conducted at the Site will be kept to the minimal amount required to establish proper Site drainage.

Disturbed areas and areas still requiring stabilization, will be scarified and then seeded to comply with the original requirements of the now closed (by GM) sediment and erosion control permit covering the removal of the soils from the Site. The subcontractor will use a seed mixture approved by an O'Brien & Gere supervisor, which may consist of a mixture of approximately 20 to 30 percent creeping Red Fescue and 70 to 80 percent perennial Ryegrass. The grass seed will be placed on the scarified ground surface at a rate of not less than 10 pounds per 1,000 ft^2. If needed, the area may be fertilizer, and not less than 2" loose straw mulch should be applied to the seeded areas to provide erosion control.

4.7 GROUNDWATER MONITORING POINT INSTALLATION AND DEVELOPMENT

O'Brien & Gere does not believe further groundwater investigation is needed on the Site based on their Site knowledge, the results of the groundwater samples collected during the Phase II ESA, which demonstrated compliance with drinking water criteria, and the fact that the metals impacts were surficial in nature and none of the deep soil samples (> 2 feet deep) had metals exceeding the nonresidential groundwater protection criteria. Furthermore, none of the soil PAH impacts at the Site exceeded the nonresidential groundwater protection criteria (only wood floor block samples exceeded the nonresidential groundwater protection criteria, which do not appear to be leaching above the criteria based on the soil in contact with the floor block sample results). However, if a groundwater investigation would be performed at the Site, the following scope of work has been developed to address the groundwater at the Site.

O'Brien & Gere will install monitoring wells (number to be determined in Work Plan Addendum) to assess Site-specific groundwater flow conditions and potential impact to groundwater. The locations of the proposed monitoring wells will be shown in the Work Plan Addendum, and will be installed to delineate groundwater impacts. Two groundwater monitoring wells have previously been installed at the Dort Highway Land and are also depicted on **Figure 3**. Monitoring wells will also be placed to allow better triangulation of groundwater at the Site.

Groundwater monitoring wells will be installed using a Hollow Stem Auger drill rig (or other acceptable drilling method). The initial soil borings will be advanced by the drilling subcontractor utilizing hollow stem auger drilling methods and continuous sampling. The soil samples will be visually inspected and logged by an O'Brien & Gere geologist in accordance with the Unified Soil Classification System (USCS). A portion of each two foot sample interval will be retained for soil headspace screening to monitor for the presence of volatile organic vapors using a PID. Soil borings will be terminated at 20 fbg or about 5 ft below the water table.

Soil cuttings will be contained in 55-gal Department of Transportation (DOT)-approved drums and staged on Site pending final disposal. Additional discussion on waste management is included in Section 4.9.

Monitoring wells will be installed through the hollow stem augers (HSAs) that extends to the bottom of the boring. The monitoring wells will be constructed of 2-in diameter flush-joint PVC casing and a 5-ft length of 0.010-in slot PVC well screen. The well screen and riser assembly will be placed into the HSAs to the desired depth and a washed graded silica sand pack will be placed around the well screen and shall extend a minimum of one ft above the top of the screen. Coarse granular bentonite will then be added to the annular space to approximately two ft above the sand pack. The HSAs will be retracted as appropriate during sand pack and bentonite placement. A cement/bentonite grout will then be added during the extraction of the remaining HSAs to just below grade where the monitoring wells will be completed. Either a standup protective casing or flushmount roadbox will be installed over the monitoring wells. A weep hole will be drilled in the bottom of the standup protective casing to allow accumulated water to drain. The monitoring well identification will be clearly marked on the inside and the outside of the protective casing cap.

Newly installed monitoring wells will be developed to remove fine-grained materials that may have entered the well or sand pack during construction. The monitoring wells will be surged and then pumped until field parameter (*i.e.*, temperature, pH, turbidity, and specific electrical conductance) readings have stabilized to within ten percent or until the well produces relatively clear, sediment-free water, to the extent practical. Groundwater will be collected in a glass jar to evaluate relative turbidity and to measure and record temperature, pH, turbidity, and specific electrical conductance.

Prior to well development, the equipment that will enter the monitoring well will be cleaned using a laboratory grade detergent and tap water rinse, or steam cleaned. Well development water will be discharged to the ground surface near the well. Additional discussion on waste a management is included in Section 4.9.

The protective casings of monitoring wells MW2-1 and MW2-2 will be converted to stickup casings because these wells were installed as flush mounted wells, but now stick up above the ground following the soil removal activities at the Site.

Subsequent to monitoring well installation, a location and elevation survey will be performed to establish top-of-casing and grade elevations for the newly installed and existing wells.

4.8 GROUNDWATER SAMPLING – LOW FLOW PURGING

Subsequent to installation, O'Brien & Gere will collect groundwater samples from the newly installed monitoring wells (**Figure 3**) and two existing wells. Groundwater sampling will include low-flow sampling techniques. Groundwater samples will be analyzed for the presence of total metals and PAHs.

Groundwater samples will be collected using the low flow/low stress sampling technique as described in the O'Brien & Gere protocol (**Appendix B**) in this SAP. Low flow/low stress sampling techniques minimize the presence of fine grain materials in the groundwater samples.

Prior to set up, the well identification and location will be verified using location layout drawings and the condition of the well will be noted in the field logbook.

Prior to purging, a water level and total well depth will be measured and recorded. To purge the monitoring well using low flow/low stress techniques, a bladder pump/submersible variable rate pump, or a peristaltic pump will be used. The pump, safety cable, tubing, and electrical lines will be lowered into the well. Before starting the pump, the water level will be measured with the pump in the well and the measuring device will be left in the well after completing the measurement.

The well will then be purged at 100 to a maximum of 500 milliliters per minute (mL/min). During purging, the water level will be monitored every five minutes, or as necessary to maintain a steady flow rate that results in drawdown of 0.3 ft or less. Field indicator parameters (pH, temperature, conductivity, oxidation-reduction potential (ORP), dissolved oxygen (DO), and turbidity) will also be monitored approximately every five minutes. Water level and field indicator parameter measurements will be documented on the groundwater field sampling log form.

The well will be considered stabilized when the physical parameters are within ten percent for three consecutive readings for each parameter. If stabilization is not achieved for the field parameters, purging will be continued until a maximum of three well screen volumes have been purged from the well. If turbidity readings do not stabilize below readings of 20 NTUs, a dissolved metals sample will also be collected.

If drawdowns of 0.3 ft or less cannot be maintained because of the permeability of the formation at a particular well location, "ultra-low flow" purge techniques will be employed. Ultra-low flow purge rates are rates below 100 ml/min; however, if ultra-low flow purging still results in well purging "dry", the well will be allowed to recharge for the balance of the day. As a sufficient volume of water enters the well, field parameter measurements will be collected and purging will continue up to a maximum of 24 hours from the beginning of purging, at which time the groundwater sample from the well will be collected.

Groundwater samples will be collected directly from the pump and discharged directly into the appropriate sample container. Samples will be collected at a flow rate between 100 to 250 mL/min (or at ultra low flow rates where applicable) Samples will be placed in a cooler with ice after collection and hand delivered to Merit Laboratories, Inc. via the laboratory's courier service.

The groundwater samples will be submitted to the analytical laboratory for analysis using appropriate chain of custody and standard QA/QC procedures. A standard analytical data package will be prepared by the laboratory for the groundwater samples analyzed. QA/QC samples will be collected in accordance with MDEQ Operational Memorandum No. 2-Attachment 5.

Samples will be collected in the following order: PAHs, dissolved metals (if necessary), total metals.

Investigation derived wastes will be handled as described in Section 4.9.

4.9 INVESTIGATION-DERIVED WASTES

Investigation-derived waste (IDW) will consist of soil cuttings from monitoring well installation; groundwater from well development, purging and sampling activities; personal protective equipment (PPE) (*i.e.*, spent gloves, personal protection equipment); decontamination water/fluids; and disposable sampling equipment.

Soil cuttings will be contained in 55-gallon DOT-approved steel drums. Drums will be labeled with the date of generation, the source of the soils (*i.e.*, the boring or well identification number), and other information as required by the disposal facility/waste hauler. If the groundwater sample results are less than the nonresidential direct contact or drinking water criteria, then the soils will be spread on Site; otherwise, a composite soil characterization sample will be collected from the drums for off Site disposal. Analyses of the soil characterization sample will be based on the past soil and groundwater analytical sample results and the requirements of the off-Site disposal facility.

Free liquid (*i.e.*, groundwater, decontamination fluids, and development fluids) will be discharged to the ground surface.

PPE and disposable sampling equipment will be disposed as municipal trash.

Based upon receipt of waste characterization results, O'Brien & Gere will coordinate disposal with a licensed waste hauler. Wastes generated at the Site are assumed to be non-hazardous.

4.10 EQUIPMENT DECONTAMINATION

Field equipment potentially exposed to contaminants will be properly decontaminated as described in this SAP.

4.10.1 Drill Rig and Heavy Equipment

Equipment and materials associated with sampling must be cleaned before and after use at a Site and between discrete investigation locations. Items such as drill rigs, drill rods, and miscellaneous heavy equipment present potential sources of interference to environmental samples. These items will be cleaned using high-pressure steam cleaning methods.

4.10.2 Decontamination of Sampling Equipment

Decontamination procedures are designed to remove particles and compounds that could affect the integrity of samples, and thus, the interpretation of environmental sampling data. The following decontamination procedure will be followed for sampling equipment:

- Brush loose soil off equipment
- Wash equipment with laboratory grade detergent (*i.e.*, Alconox or equivalent)
- Rinse with potable water
- Allow water to evaporate before reusing equipment.

For decontamination of submersible pumps used for groundwater sampling, the following procedure will be followed:

- Remove the pump from the well and decontaminate the external casing and associated wiring.
- Pump solution (approximately five gallons) of potable water and non-phosphate detergent through the pump
- Pump clean potable water through pump
- Pump distilled water through pump
- Return the pump to a covered storage container.

4.11 DATA RECORDING – FIELD BOOKS

Field work performed will be recorded in a hardcover, bound field logbook. Typical field data will include, but will not be limited to, the following:

- General field observations
- Numeric field measurements and instrument readings
- Activity dates
- Sample locations and corresponding sample identification numbers
- Relevant comments and details pertaining to the sample collected
- Documentation of activities, procedures, and progress achieved
- Weather conditions
- A listing of personnel involved in site-related activities.

During groundwater sampling using low flow purging methods, field data will be recorded on a groundwater field-sampling log.

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5. REPORT PREPARATION

A report will be prepared to summarize the completed investigation, remediation and site conditions for submission to the USEPA. This document will include, as appropriate, investigation and confirmatory sample results, a definition of the geology and hydrogeology of the Site, an exposure pathway evaluation, description of response activities, and data to confirm that the cleanup criteria have been met for relevant pathways.

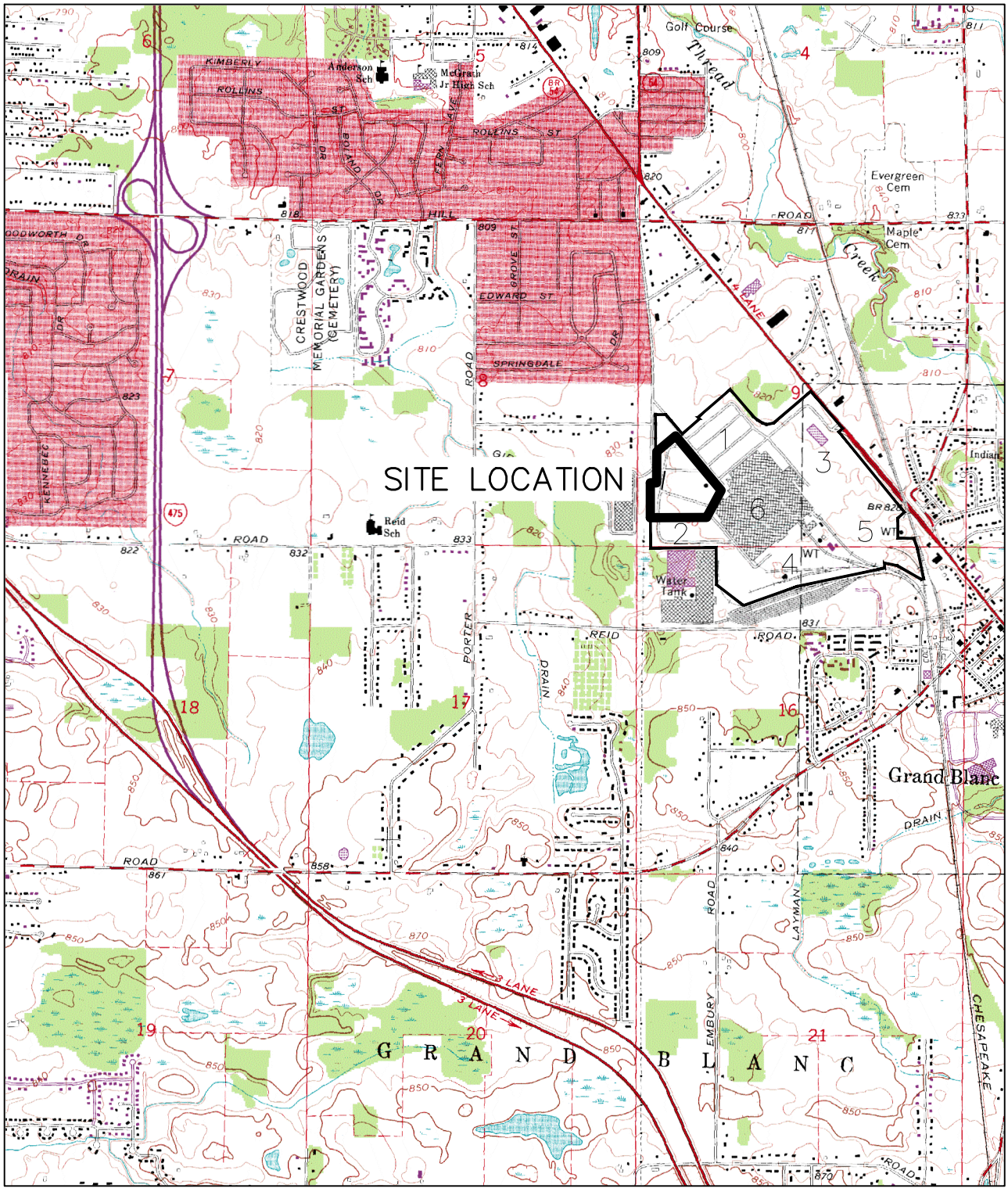
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FIGURES

FIGURE 1



MICHIGAN
QUADRANGLE LOCATION

15388/47852-001
AUGUST 2011

RACER TRUST
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

SITE LOCATION MAP

0 1
APPROXIMATE SCALE
ONE MILE

TRUE NORTH

OBRIEN & GERE
ENGINEERS INC.

I:\078\15388\47852\DOC\RPTS\HASP\001

8/22/2011 jmo

I:\PROJECTS\15388\47852\DOCS\REPORTS\HASP\002.DWG

FIGURE 2

DORT HIGHWAY

GATE LOCATION

Flooded area during site visit 03-24-2011

Permeable berm placed by GM LLC allows infiltration of ponded water onto GM property

Fence approx. location

Field observation 03-24-2011, potential wood block area

MW2-2

Monitoring well MW2-2, not observed on 03-24-2011 may have been covered with snow

MISC. EQUIPMENT & MATERIAL STORAGE AREA

Water Test For Tank (Buried)

SNOW STORAGE

FORMER ACCESS ROADS & DIE STORAGE AREA

Proposed gate location

Monitoring well MW2-1, needs stick up protective casing

MW2-1

Former Pumphouse

Pump House and tank have been demolished

CROCK SUMP

EMERGENCY EVACUATION ASSEMBLY AREA

B

TRUE NORTH

1"=120' 60 0 60

LEGEND

- MONITORING WELL LOCATION
- FIELD OBSERVATION 03-24-2011
- FLOODED AREA DURING SITE VISIT 03-24-2011
- APPROXIMATE RACER TRUST PROPERTY LINE
- FORMER TANK TEST TRACK AND DIE STORAGE ACCESS ROADS
- APPROXIMATE FENCE LOCATION
- SURFACE RUNOFF FLOW DIRECTION

SITE LAYOUT

RACER TRUST
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

15388/47852-002
AUGUST 2011

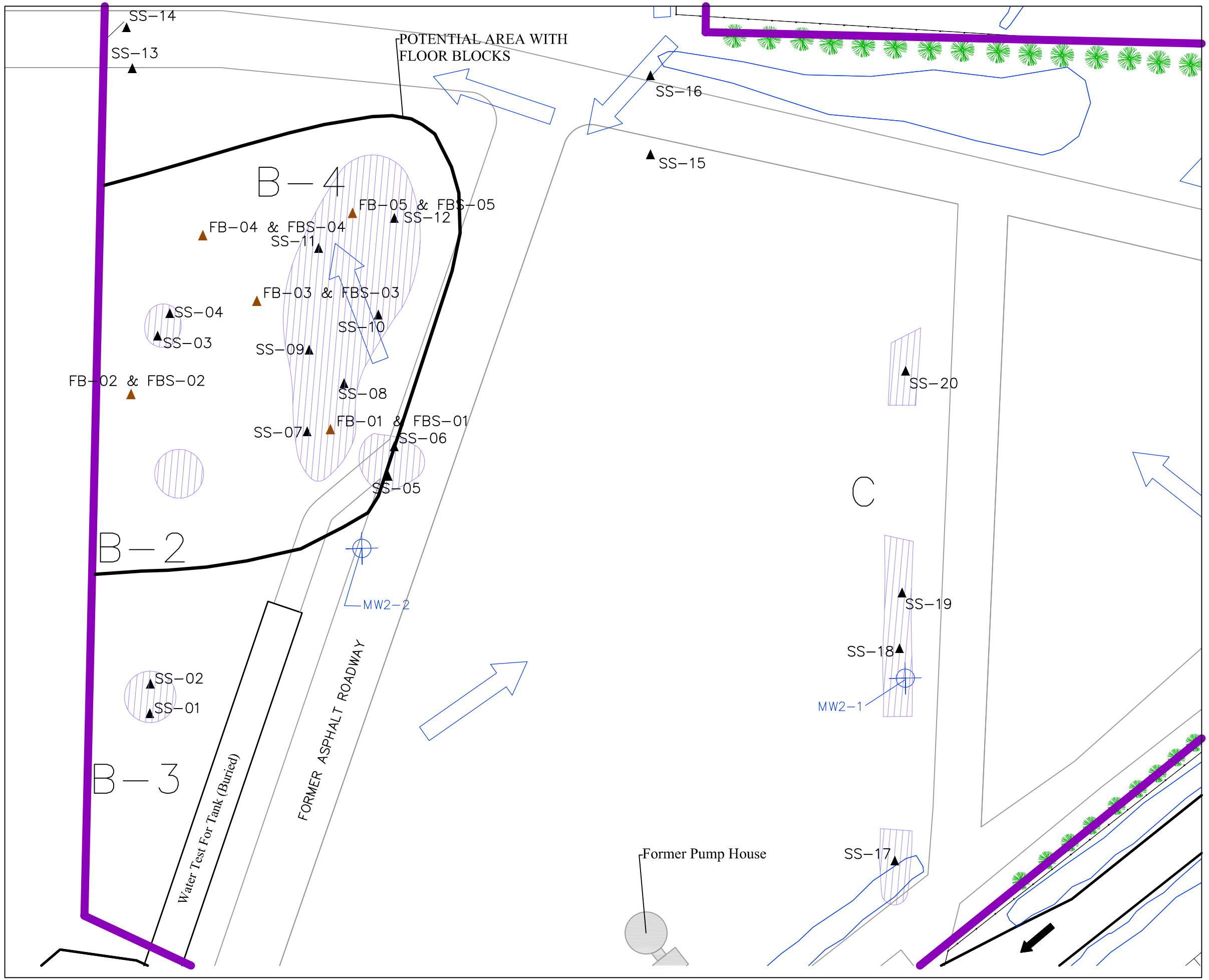
O'BRIEN & GERE ENGINEERS, INC.

PLOT DATE: 8/22/2011 jmo

I/PROJECTS/GM 4966/39923/DOC/DWG/001.DWG

PLOT DATE: 12/13/2007 078 jmo

FIGURE 3



LEGEND

- MONITORING WELL LOCATION
- AREA EXCEEDING NONRESIDENTIAL CRITERIA
- SURFACE SOIL DELINEATION/ CONFORMATION LOCATION
- FLOOR BLOCK AND ASSOCIATED SOIL SAMPLE LOCATION

RACER TRUST
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

SUB AREAS B AND C
SAMPLING LOCATIONS

80 0 80
1"=80'

14774/46540.007
August 2011

O'BRIEN & GERE
ENGINEERS INC.

APPENDIX A

Quality Control Document

REPORT

QUALITY CONTROL DOCUMENT
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

Revitalizing Auto Communities Environmental Response Trust (RACER)
Ypsilanti, MICHIGAN

AUGUST 2011

O'BRIEN & GERE
www.obg.com

14774 | 47852

Quality Control Document
Dort Highway Land

10800 South Saginaw Street
Grand Blanc, Michigan

Prepared for: RACER Trust
Ypsilanti, Michigan

SCOTT L. CORMIER, P.E.
VICE PRESIDENT
O'Brien & Gere Engineers, Inc.

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3-3 PCBs using USEPA Methods 8082 quality control requirements and corrective actions

3-4 Metals and mercury quality control requirements and corrective actions

FIGURES

1 August 2011 Sample Locations

QCD DOCUMENT DISTRIBUTION

Cliff Yantz – O'Brien & Gere

Karen Storne – O'Brien & Gere

Maya Murshak – Merit Laboratories, Inc.

1. INTRODUCTION

This Quality Control Document (QCD) has been developed by O'Brien & Gere for the Revitalizing Auto Communities Environmental Response Trust (RACER) to conduct a soil sampling and remediation (*i.e.*, excavation) activities, as necessary and appropriate, at Dort Highway Land Site located in Grand Blanc, Michigan. Furthermore, groundwater sampling may be conducted as part of the Site activities. This QCD is provided as a part of the Dort Highway Land Sampling and Analysis Plan (SAP) (O'Brien & Gere 2011).

This QCD presents the investigation objectives and quality assurance/quality control (QA/QC) activities associated with sampling and analysis of environmental samples at the Site. The procedures in this QCD will be followed by personnel participating in the field investigation and in the laboratory analyses of environmental samples.

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2. PROJECT DESCRIPTION

This section describes the general scope of work and project objectives for the activities to be performed at the Site. Additional information is presented in the SAP.

2.1 PROJECT SCOPE

The purpose of the soil sampling and remediation (*i.e.*, excavation) activities and potential groundwater investigation is to provide information as to whether there are constituents present in the soil and/or groundwater at the Dort Highway Land at concentrations that exceed the Michigan Department of Environmental Quality (MDEQ) Part 201 Nonresidential Cleanup criteria to guide the remediation, if necessary, and closure of the Site.

The soil and, if appropriate, groundwater investigations will involve the collection of soil and potentially groundwater samples at the Site to assess whether additional soil remediation activities are necessary at the Site and, if appropriate, the groundwater flow direction(s) at the Site, and the potential presence and relative concentrations of constituents in the groundwater samples. Surface soil samples will be collected directly from the surface utilizing a shovel, stainless steel scoop or hand auger. Groundwater samples, if needed, will be collected from existing and/or newly installed monitoring wells at the Site utilizing low-flow groundwater sampling techniques. Based on historical information, the constituents of concern for the investigation include the following:

- Polynuclear aromatic hydrocarbons (PAHs)
- RCRA metals (or selected RCRA metals)
- Polychlorinated biphenyls (PCBs)

The soil and, if collected, groundwater samples will be submitted to Merit Laboratories, Inc. of East Lansing, Michigan for analyses.

2.1.1 Laboratory Analysis

The soil and, if collected, groundwater samples will be submitted to the laboratory for one or more of the following analyses:

- Volatile organic compounds (VOCs)
- SVOCs, including PAHs
- RCRA metals (or selected RCRA metals)
- PCBs

Table 1 presents the analytical methods, sample collection containers and volumes, preservation, holding times and associated quality control (QC) sample frequency.

Field duplicates, matrix spike/matrix spike duplicates (MS/MSD), field blanks and equipment blanks will be collected for this investigation. In addition, co-located samples may be collected as deemed necessary and appropriate.

The target analytes are listed in Table 2.

The QC requirements and corrective actions listed in Tables 3-1, 3-2, 3-3 and 3-4, which supplement the method requirements, are to be followed by the laboratory.

The laboratory will report non-detected results to the method detection limits (MDLs). For the remaining data, results that are less than the quantitation limits (QLs) but greater that the MDLs will be reported using the "J" flag. The QLs and MDLs listed in Table 2, or the most recent MDLs and QLs, will be reported by the laboratory. The tables also present the applicable MDNRE Part 201 cleanup criteria, which will be used to evaluate the analytical data.

The laboratory will provide sample containers for the investigation, prepared in accordance with method requirements.

Communications with O'Brien & Gere will be documented by the laboratory in the data packages.

The analytical data will be reported in both hardcopy and electronic data format.

2.1.2 Documentation

Data will be managed in a relational database management system (DBMS). Laboratory analytical data will be provided in electronic disk deliverable (EDD) format for direct upload into the DBMS.

Following receipt of the laboratory data, a report will be completed. The report will include a summary discussion of the activities completed during the field investigation and the results of the analyses.

Records will be incorporated into the final project files for the samples. The field logs, data packages, and records will be included in the project files, which will be archived by O'Brien & Gere for a period of ten years.

3. DATA QUALITY OBJECTIVES AND CRITERIA

The Data Quality Objective (DQO) Process, as it has been applied to this investigation, comprises the following steps, consistent with guidance presented in the United States Environmental Protection Agency (USEPA) *Guidance for the Data Quality Objectives Process* (EPA QA/G-4), February 2006. The DQO process establishes the acceptance criteria, which serve as the basis for collecting data of sufficient quality and quantity to support the goals of the project activities.

3.1 DQO PROCESS

The process consists of the following seven iterative steps for the DQO process:

- *Step 1 – State the Problem* –The Site was historically used for the storage of stamping dies, equipment and miscellaneous materials, which impacted the Site with selected metals and PAHs based on previous investigations. However, on average approximately 4 ft of soils were removed from the Site to fill in the former Press Room basement located at the adjacent GM plant, which removed much of the impacted soils at the Site. The results from the August 2011 sampling event indicate that some areas of the Site may still be impacted with PAHs. The purpose of the soil sampling and remediation (*i.e.*, excavation) activities, if necessary, and potential groundwater sampling is to provide information as to whether there are constituents present in the soil and/or groundwater at the Site at concentrations that exceed the MDEQ Part 201 nonresidential cleanup criteria.
- *Step 2 – Identify the Goal of the Study* – The goal is to close the Site under the RCRA program by either completing the remediation of the Site and/or controlling the exposure/risks associated with remaining impacts through institutional controls (*i.e.*, deed restrictions) or barriers (*i.e.*, capping), as necessary and appropriate. The activities defined in this QCD will be utilized to identify the constituents in the soil and/or groundwater above the MDEQ Part 201 nonresidential cleanup criteria in soil and/or groundwater at the Site.
- *Step 3 – Identify Information Inputs (i.e., the data types required before project decisions can be made)* – The primary required data types will be analytical results from soil and/or groundwater samples that will be collected from the Site. The soil and wood floor block samples will be collected from surface soil and at the soil surface at the locations provided on Figure 1, with the soils in contact with the floor block samples being collected of the soils that were just beneath and in contact with the floor blocks. Subsequent (soil and wood floor block) samples will be collected in accordance with best professional judgment and, where applicable, in accordance with the MDEQ *Sampling Strategies and Statistical Training Materials for Part 201 Cleanup Criteria* (S3TM) guidance document (MDEQ, 2002). Groundwater samples may be collected from existing and/or monitoring wells installed at the Site, if deemed necessary and appropriate. The locations of the new monitoring wells, if installed, will be selected to provide information for groundwater flow and contamination at the Site.
- *Step 4 – Define the Boundaries of the Study (i.e., the spatial and temporal features pertinent for decision making)* – The Dort Highway Land is immediately adjacent to the General Motors Weld Tool Center (WTC) plant located at 10800 South Saginaw Street, Grand Blanc, Michigan and currently shares the same address. The Site is located in an industrially and commercially developed area and is bounded to the south, east and north by the GM WTC plant and Dort Highway to the west, and by other commercial developments further north, south, east and west.
- *Step 5 – Develop the Analytical Approach (i.e., how will the study results be analyzed and conclusions made from the data)* – If soil and/or wood floor block sample results exceed the MDEQ Part 201 nonresidential cleanup criteria (presented in Table 2), further sampling may be performed to investigate the extend of impacts and the impacted soils/wood floor block areas may be remediated, if necessary and appropriate. If groundwater samples are collected and exhibit concentrations that exceed MDEQ Part 201 nonresidential cleanup criteria (presented in Table 2), further investigation may be performed to investigate the extent of groundwater impacts.

- *Step 6 – Specify Performance or Acceptance Criteria (i.e., performance or acceptance criteria that the collected data will need to achieve)* – Data must be of known quality to withstand scientific and legal challenges relative to its intended purpose. Completeness is the measure of the amount of valid data obtained from a measurement system compared to the amount expected to be obtained under normal conditions. If the completeness objective of 95% is not met, additional sampling may be justified.
- *Step 7 – Develop the Plan for Obtaining Data* – The groundwater and soil samples will be collected and analyzed as described in the SAP and this QCD.

To meet the DQOs for sampling, the soil, wood floor block and/or groundwater results will be compared to the following MDEQ criteria and screening levels (presented in Table 2), where applicable:

- MDEQ Soil Nonresidential Part 201 Cleanup Criteria and Screening Levels (*i.e.*, Groundwater Protection criteria), current as of March 2011.
- MDEQ Groundwater Nonresidential Part 201 Cleanup Criteria and Screening Levels (*i.e.*, Drinking Water criteria), current as of March 2011.

If the standards are not exceeded, no further sampling is anticipated. If the standards are exceeded, additional samples may be collected and/or remediation activities may be conducted.

4. PROJECT ORGANIZATION AND RESPONSIBILITY

O'Brien & Gere will be responsible for project management and sample collection. Soil, wood floor block and/or groundwater samples will be submitted to Merit Laboratories, Inc. of East Lansing, Michigan.

4.1 O'BRIEN & GERE KEY PERSONNEL

4.1.1 O'Brien & Gere Project Officer

Scott Cormier, P.E., is the O'Brien & Gere Project Officer and has overall responsibility for meeting the stated project objectives. In addition, he is responsible for providing the O'Brien & Gere Project Manager with access to O'Brien & Gere corporate resources.

4.1.2 O'Brien & Gere Project Manager

Clifford Yantz, P.G., is the O'Brien & Gere Project Manager and is responsible for implementing the project. He has the authority to commit the resources necessary to meet project objectives and requirements. His primary function is to meet the technical, financial, and scheduling objectives and will provide direction to O'Brien & Gere Project Team.

4.1.3 O'Brien & Gere QA Officer

Karen Storne is the O'Brien & Gere QA Officer (QAO) for this project. She will manage and be responsible for QA/QC review of data generated during the investigation. The QAO will be responsible for follow-up and oversight of corrective action implementation, to the satisfaction of the client and the USEPA and/or MDEQ representative.

4.1.4 O'Brien & Gere Field Investigation Manager

The O'Brien & Gere Field Investigation Manager and will be responsible for directing and coordinating the day-to-day activities while field activities are underway.

4.1.5 Field Sampling Personnel

O'Brien & Gere field sampling personnel will be responsible for collection, packaging, preservation, and shipping of environmental samples in accordance with the SAP, QCD, and applicable USEPA and/or MDEQ requirements.

4.2 LABORATORY MANAGEMENT

The samples will be submitted to Merit Laboratories, Inc, of East Lansing, Michigan.

4.2.1 Laboratory Project Manager

The Laboratory Project Manager will be responsible for:

- Coordinating laboratory analysis
- Supervising in-house chain-of-custody
- Scheduling sample analysis
- Overseeing data review
- Overseeing preparation of analytical reports.

It will also be the responsibility of the Laboratory Project Manager to approve final analytical reports prior to submission to O'Brien & Gere.

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5. SAMPLING HANDLING AND CUSTODY

5.1 SAMPLE CUSTODY AND PROCEDURES

Chain-of-custody procedures will be instituted and followed throughout the investigation. These procedures include field custody, laboratory custody, and evidence files. Samples are physical evidence and will be handled according to strict chain-of-custody protocols. The O'Brien & Gere QAO must be prepared to produce documentation that traces the samples from the field to the laboratory and through analysis. USEPA has defined custody of evidence as follows:

- In actual possession
- In view after being in physical possession
- In a locked laboratory
- In a secure, restricted area.

5.2 SAMPLE PREPARATION

The analytical laboratory will supply appropriate sample containers for groundwater and soil samples in coolers, as well as preservatives.

QA measures for this project will begin with the sample containers; pre-cleaned containers will be purchased from a USEPA-certified manufacturer (I-Chem 200 or equivalent).

Immediately after collection, samples will be transferred to properly labeled sample containers, and properly preserved. Table 1 lists the proper sample container, sample volumes, preservation, and holding times. Samples requiring refrigeration for preservation will be promptly transferred to coolers packed with wet ice and/or ice packs. If field storage is required, the samples will be stored in a secured storage facility and a cooler temperature of 4 °C will be maintained.

5.3 FIELD CUSTODY PROCEDURES

The field sampler is personally responsible for the care and custody of the sample until transferred.

The field logbook will be used to note information regarding collection of samples and any observations. All entries will be signed and dated. Field logbooks will be waterproof and bound. The logbook will be dedicated to the project and pages will not be removed. Corrections will be made by drawing a single line through the incorrect data and initialing and dating the correction that was made to the side of the error. An initialed diagonal line will be used to indicate the end of an entry or the end of the day's activities.

The following information will be recorded in the field logbook by the field sampling team:

- Name and title of author, date, and time of site entry, and physical/environmental conditions during the field activity
- Meteorological data
- Project number, client name, and Site name
- Name and title of field crew members
- Sample media
- Sample collection method, including equipment utilized
- Number and volume of samples collected
- Description of sample locations
- Date and time of sample collection
- Diagrams of sampling process

- Sample and QA/QC identification numbers
- Sample distribution
- Field observations
- Field measurements made and equipment used
- Calculations, results, and calibration data for field sampling and measurements
- References for maps and photographs of the sample location
- Dates and method of sample shipments.

A completed sample identification label will be attached to each investigative or QC sample, and the sample placed in a shipping container. The identification on the label must be sufficient to enable cross-reference with the logbook. The sample label will be recorded using waterproof, non-erasable ink and will be attached to the sample container using adhesive.

The sample labels will contain the following information:

- Sample number identification
- Project number
- Date and time of sample collection
- Designation of the sample as a grab or composite
- Type of sample matrix
- Sample location
- Initials of the sampler
- Whether the sample is preserved or unpreserved
- Space for laboratory sample number; otherwise, the laboratory must affix a separate laboratory sample number label
- General types of analysis to be performed.

5.4 CHAIN-OF-CUSTODY PROCEDURES

Chain-of-custody records will be kept starting at the time that sample containers are placed in the coolers for transportation to the laboratory. One completed chain-of-custody record must be kept with each sample cooler at all times.

An example chain-of-custody form is provided in the laboratory's Quality Assurance Manual (QAM).

The following measures will be taken when completing a chain-of-custody record:

- Chain-of-custody forms will be completed in waterproof, non-erasable ink.
- Chain-of-custody forms will be completed neatly using printed text. If a simple mistake is made, the error will be lined out with a single line and initialed and dated.
- Each separate sample entry will be sequentially numbered.
- The use of "Ditto" or quotation marks to indicate repetitive information in columnar entries should be avoided. If numerous repetitive entries must be made in the same column, a continuous vertical arrow will be used between the first entry and the next different entry.
- When more than one chain-of-custody form is used for a single shipment, each form will be consecutively numbered using the "Page ___ of ___" format.

- If necessary, additional instructions will be placed directly onto the chain-of-custody form.
- Acronyms used on a chain-of-custody form will be defined.

The chain-of-custody form will contain the following information:

- Project identification and number
- Sample description/location
- Required analysis
- Date and time of sample collection
- Type and matrix of sample
- Number of sample containers
- Analysis requested/comments
- Sampler signature/date/time
- Date and signature of the field representative
- Date and signature of the laboratory representative
- Carrier used to ship coolers
- Air bill number (if shipped by a commercial carrier).

In the case that high concentrations are suspected to be present in the samples, a note to that effect will be included on the chain-of-custody form.

Environmental samples will be packed prior to shipment using the following procedures:

- Select a sturdy cooler in good repair and clean. Secure and tape the drain plug with fiber or duct tape.
- Air samples do not require preservation and may be shipped using alternative shipping containers.
- Be sure the lids on all bottles are tight (will not leak) and baggies are sealed.
- Where applicable, put ice that has been placed in heavy-duty polyethylene bags and properly sealed on top of or between the samples. Pack samples securely to eliminate breakage during shipment with ice packs to maintain the inside temperature at approximately 4°C.

Sampling containers will be packed with packing materials. When possible, sample container preparation and packing for shipment will be completed in a well-organized and clean area.

- Sample containers will be prepared for shipment by wiping containers clean of debris/water using paper towels. Paper towels will be disposed with the personal protective equipment (PPE).
- Place chain-of-custody record into a Ziploc plastic bag, tape the bag to the inner side of the cooler lid, and close the cooler and securely tape (preferably with fiber tape) the top of the cooler shut. Two custody seals will be affixed to the latch and lid of the cooler, if samples are shipped by commercial carrier; otherwise, chain-of-custody procedures must be maintained by the laboratory courier. The number of the security seal will be recorded on the chain-of-custody form. The custody seals will consist of adhesive-backed tape that easily rips if it is disturbed. The field sampler will initial and date the seal. The seals must be broken to open the cooler and will indicate tampering if the seal is broken before receipt at the laboratory.
- A label containing the name and address of the shipper will be placed on the outside of the container, if samples are shipped by commercial carrier.

The field sampling team will transport or ship the cooler via an overnight delivery service or will hand deliver it to the laboratory and/or laboratory courier. Prior to shipment of sample coolers, the field sampling team will contact the laboratory to notify the laboratory of the shipment.

Samples will remain in the custody of the sampler until transfer of custody is completed. Transfer consists of:

- Delivery of samples to the Laboratory Sample Custodian; and/or
- Signature of the Laboratory Sample Custodian or courier on the chain-of-custody form as receiving the samples and signature of sampler as relinquishing the samples.

The field sampling team will deliver the samples to the Laboratory courier and/or ship by commercial carrier the coolers containing environmental samples to the laboratories identified for this project. Samples will not be shipped to another laboratory without the permission of the O'Brien & Gere Project Manager.

The chain-of-custody document will be completed by the field sampler and provided for each sample cooler. When transferring the possession of samples, individuals relinquishing and receiving will sign, date, and note the time on the chain-of-custody. Custody of samples must be continuous between parties and time gaps must not be present. Each shipment of samples to the laboratory must have its own chain-of-custody record with the contents of the shipment, method of shipment, name of courier, and other pertinent information written on the record. The original record accompanies the shipment and the copies are kept with the field logbook and distributed to the O'Brien & Gere Project Manager. A copy of the chain-of-custody will be faxed to the laboratory and to the Project Manager on the same day of sample shipment. Freight bills, postal service receipts, and bills of lading will be retained as permanent documentation.

If a carrier is used to take samples between the sampler and the laboratory, the air bill number must be written on the chain-of-custody.

Samples will be shipped or transported within 24 hours of being collected and will arrive at the laboratory no later than 48 hours after sample collection.

5.5 LABORATORY CHAIN-OF-CUSTODY PROCEDURES

Laboratory custody procedures continue when the samples are received by the laboratory. When the samples arrive at the laboratory, the Laboratory Sample Custodian will sign the courier's air bill or bill of lading (unless hand-delivered) and will note the cooler temperature on the chain-of-custody form. If the cooler temperature is greater than 6 °C, the O'Brien & Gere Project Manager will be notified. If the samples were shipped, the courier's air bill number will be attached to the chain-of-custody and the air bill number will be written on the chain-of-custody form. If the cooler arrives at the laboratory after hours, an external chain-of-custody will be properly filled out and will accompany the cooler until the laboratory receives the cooler.

The Laboratory Sample Custodian's duties and responsibilities upon sample receipt will be to:

- Document receipt of samples by signing the record with the date and time of sample receipt.
- Note the cooler temperature on the chain-of-custody form.
- Inspect sample shipping containers for the presence or absence of custody seals (only if shipped via overnight courier) and for container integrity.
- Document canister pressures for air samples and notify the O'Brien & Gere Project Manager if pressure requirements are not met.
- Sign the appropriate forms or documents, verify, and record the agreement or disagreement of information on sample documents and, if there are discrepancies, record the problem and notify the O'Brien & Gere Project Manager.
- Assign a number for each sample upon receipt. That sample number will be placed on the sample label which will remain attached to the sample container.
- Log sample information into the laboratory sample tracking system.
- Label sample with a unique, sequential laboratory sample number.
- Place samples in the walk-in cooler or sample storage area that is a secure, limited-access storage.

The laboratory will immediately contact the O'Brien & Gere Project Manager if issues pertaining to sample condition or documentation are detected (*e.g.*, broken security seal; broken, open, or otherwise compromised sample containers; chain-of-custody information in disagreement with sample labels).

At the laboratory, the analysts will be required to log samples and extracts in and out of storage as the analysis proceeds.

There must not be a lapse in the custody for the sample containers and canisters and exchanges of custody must be documented on the form. Samples will be returned to secure storage at the close of business. Care must be exercised to properly complete, date, and sign records needed to generate the data package.

Procedures to be followed by the laboratory include:

- Samples will be handled by the minimum number of people possible.
- The laboratory will set aside a secured sample storage area consisting of a clean, dry, refrigerated, isolated room.
- A specific person will be designated sample custodian. Incoming samples will be received by the custodian who will indicate receipt by signing the chain-of-custody form.
- The custodian will ensure that samples which are heat-sensitive, light-sensitive, radioactive, or which require special handling in other ways, are properly stored and maintained prior to analysis.
- The analytical area will be restricted to authorized personnel only.
- After sample analyses are complete, the analytical data will be kept secured and released to authorized personnel only.

5.6 FINAL EVIDENCE FILES

The final evidence file will be the central repository for documents that constitute evidence relevant to sampling and analysis activities as described in this QCD. O'Brien & Gere is the custodian of the evidence file and maintains the contents of evidence files for the Site, including relevant records, reported, logs, field notebooks, pictures, subcontractor reports, and data reviews.

Copies of the laboratory data packages will be stored by the laboratory for incorporation into the sample file. The Laboratory Project Manager will be responsible for laboratory data packages.

Upon completion of the analyses, the Laboratory Project Manager will begin assimilating the field and laboratory data. In this way, the file for the samples will be generated. The final file for the sample will be stored at O'Brien & Gere and will consist of the following:

- Laboratory data packages, including summary and, if requested, raw data from the analysis of environmental and QC samples, chromatograms, mass spectra, calibration data, work sheets, and sample preparation log
- Chain-of-custody records
- Field notebooks and data
- Field collection report
- Pictures and drawings
- Progress and QA reports
- Contractor and subcontractor reports
- Correspondence.

The evidence file must be maintained in a secured, limited access area until submittals for the project have been reviewed and approved, and for a minimum of ten years past the submittal date of the final report.

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6. LABORATORY QA/QC PROCEDURES

A brief description of laboratory QA/QC analyses is presented in the following sections.

6.1 GC/MS TUNING

Tuning and performance criteria are established to verify mass resolution, identification, and to some degree, instrument sensitivity. These criteria are not sample specific; conformance is determined using standard materials. Therefore, these criteria should be met in all circumstances.

6.2 CALIBRATION

Compliance requirements for satisfactory instrument calibration are established to verify that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of analysis, and continuing calibration and performance checks document satisfactory maintenance and adjustment of the instrument on a day-to-day basis.

6.3 BLANKS

Corrective action procedures are implemented for blank analyses if target compounds are detected at concentrations greater than the requirements presented in corrective action Tables 3-1, 3-2, 3-3 and 3-4. The criteria for evaluation of blanks apply to any blank associated with a group of samples. If problems with a blank exist, data associated with the project must be carefully evaluated to determine whether or not there is an inherent variability in the data for the project, or if the problem is an isolated occurrence not affecting other data.

6.4 INTERNAL STANDARDS PERFORMANCE

Internal standards, which are compounds not found in environmental samples, will be spiked into samples, blanks, and laboratory control samples (LCSs) at the time of sample preparation for applicable methods. Internal standards will meet the criteria specified in the corrective action tables.

6.5 SURROGATE EVALUATION

Accuracy and matrix biases for individual samples are monitored for organic analyses using surrogate additions for applicable methods. Surrogates are compounds similar in nature to the target analytes; the surrogates are spiked into environmental samples, blanks, and quality control samples prior to sample preparation for organic analyses. The evaluation of the results of these surrogate spikes is not necessarily straightforward. The sample itself may produce effects due to such factors as interferences and high concentrations of analytes. Since the effects of the sample matrix are frequently outside the control of the laboratory and may present relatively unique problems, the review and validation of data based on specific sample results is frequently subjective.

6.6 LABORATORY CONTROL SAMPLES

LCSs are standard solutions that consist of known concentrations of the complete list of target analytes spiked into laboratory analyte-free matrix. They are prepared or purchased from a certified manufacturer from a source independent from the calibration standards to provide an independent verification of the calibration procedure. These QC samples are then prepared and analyzed following the same procedures employed for environmental sample analysis to assess method accuracy independently of sample matrix effects. The laboratory prepares and analyzes a LCS with each group of twenty samples of similar matrix that are extracted, digested, or analyzed at the same time. Percentage recoveries are evaluated to assess the efficiency of the preparation and analysis method independent of environmental sample matrix effects.

6.7 ANALYTE IDENTIFICATION AND QUANTITATION

The objective of the qualitative criteria is to minimize the number of erroneous identifications of compounds. An erroneous identification can either be a false positive (reporting a compound present when it is not) or a false negative (not reporting a compound that is present). The identification criteria can be applied much more easily in detecting false positives than false negatives. Negatives, or non-detected compounds, on the other hand

represent an absence of data and are, therefore, much more difficult to assess. The objective for quantitative requirements is to maximize the accuracy of data and sensitivity of the instrument. Unless sample screening indicates the presence of high concentration target analytes, samples are analyzed undiluted to maximize sensitivity. Samples are reanalyzed at the appropriate dilution when concentrations exceed the linear calibration range to maximize accuracy.

Interferences are identified and documented. Samples are diluted only if analytes of concern generate responses in excess of the linear range of the instrument.

6.8 CORRECTIVE ACTION

Generally, the following corrective actions are taken by the laboratory. When calibration, instrument performance, and blank criteria are not met, the cause of the problem is located and corrected. The analytical system is then recalibrated. Sample analysis does not begin until calibration, instrument performance, and blank criteria are met. When reference standard analyses are out of control, the analyses of these samples are investigated. Depending on the results of the overall QC program for the sample set, the data may be accepted, accepted with qualification, or determined to be unusable.

6.9 PREVENTIVE MAINTENANCE

Preventative maintenance procedures are carried out on laboratory equipment in accordance with the laboratory procedures. Maintenance activities involving are recorded in laboratory documents.

7. FIELD QA/QC PROCEDURES

A brief description of field QA/QC samples is presented in the following sections.

7.1 MATRIX SPIKE/MATRIX SPIKE DUPLICATES

MS and MSD samples are collected from the same location as the parent sample and are analyzed for the same parameters as the parent sample. Each sample will be labeled with the sample number as the original sample, designated as MS or MSD samples, and submitted to the laboratory for the appropriate analyses. One MS/MSD sample set will be collected for every twenty samples submitted to the laboratory or one MS/MSD for less than twenty samples for each matrix type.

7.2 FIELD DUPLICATE (REPLICATE) SAMPLES

Collection of field duplicate or replicate samples provides for the evaluation of the laboratory's performance by comparing analytical results of two samples from the same location. Field duplicate samples are also collected to evaluate field sample collection procedures. Field duplicate samples are samples that have been divided into two portions and will be analyzed for the same parameters. The field duplicate will be labeled with fictitious identification locations and times, and submitted to the laboratory as regular samples. The actual identification of the field duplicate sample will be recorded in the field logbook. One field duplicate sample will be collected for each analytical group or one per matrix type each day of sample collection.

7.3 CO-LOCATED SAMPLES

Co-located samples are independent samples collected from the same location using the same sample collection method as was used for the environmental sample. Co-located samples are not mixed together and then split into two samples. The primary purpose of co-located samples is to evaluate the precision for the entire measurement system, including variability due to the site, the sampling procedures, and the laboratory process. When evaluated with other controls, it is useful to evaluate the potential for sampling error and possibly isolate the cause of unacceptable variability. One co-located sample will be collected for every ten environmental samples or one for each matrix type.

7.4 FIELD BLANKS (CONTAINER BLANKS)

Field blanks are created by pouring analyte-free water directly into sample containers in the area where sample handing and preservation operations occur. Field blanks undergo shipment from the sampling site to the laboratory in coolers with the environmental samples and will be handled in the same manner as environmental samples. Field blanks are analyzed to evaluate sample handling, preservation and shipping procedures. One field blank will be collected for every twenty samples or for each matrix type.

7.5 EQUIPMENT BLANKS (RINSATE BLANKS)

Equipment blanks are created by pouring analyte-free water through or over a piece of sampling equipment and collecting rinsate in a sample container. The Equipment blank undergoes shipment from the sampling site to the laboratory in coolers with the environmental samples. Equipment blanks will be handled in the same manner as environmental samples. Equipment blanks are analyzed to assess potential contamination introduced during field decontamination procedures and sample shipment. An equipment blank will not be required if clean disposable equipment is used for sample collection. One equipment blank will be collected for every ten samples or one per day for each matrix type.

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8. DATA VALIDATION AND USABILITY

At a minimum, data quality and usability will be evaluated through a data quality review for the samples collected during the investigation. This review will include an evaluation of selected primary quality control criteria. This review does not include raw checks. The results of the data quality review will be provided in the report summarizing the analytical data to document the data quality and overall usability of the data. The data quality review will be performed by the O'Brien & Gere Project Manager, or at their discretion, the QAO or other designee.

However, should full data validation be required, it will be performed on the data from the samples collected for the investigation. In this case, data validators from O'Brien & Gere will provide these data validation services.

Upon request by the O'Brien & Gere Project Manager or data validator, the laboratory will provide additional or supplemental information within three working days of the request.

8.1 DATA QUALITY REVIEW PROCEDURES

Data quality review will be performed on the samples submitted for VOC, SVOC (including PAH), PCB and metal analyses as defined below.

Data will be evaluated during data quality review using the QA/QC criteria established in the analytical methods utilized by the laboratory, the quality control requirements and corrective actions listed in Tables 3-1, 3-2, 3-3 and 3-4, and laboratory established control limits.

Data quality review consists of a review of only analytical QC summary reports and forms that are included in the data package. The reports, forms and the information contained on the reports and forms are not evaluated for accuracy or completeness during the data quality review process. Raw data evaluation and calculation checks will not be performed as part of this data quality review approach.

The following QA/QC information will be included in the data quality review, where applicable:

- Chain-of-custody record
- Sample collection
- Sample preservation
- Holding times
- Blank analysis
- MS/MSD analysis
- Laboratory control sample (LCS) analysis
- Field duplicate and co-located analyses
- Surrogate recovery (organics)
- Laboratory duplicate analysis (metals)

Should validation be required at some time in the future, then data validation would be conducted in accordance with Sections 8.2 and 8.5. Otherwise, the applicable portions of Sections 8.3 and 8.4 will be applied to the data quality review and Sections 8.2 and 8.5 will not be conducted.

8.2 VALIDATION PROCEDURES

Partial data validation will be performed on the samples submitted for VOC, SVOC, PCB and metal

analyses as defined below.

Data will be evaluated during validation using the QA/QC criteria established in the analytical methods utilized by the laboratory, the quality control requirements and corrective actions listed in Tables 3-1, 3-2, 3-3 and 3-4, and laboratory established control limits.

Partial validation consists of a review of only analytical QC summary forms that are included in the data package. The forms and the information contained on the forms are not evaluated for accuracy or completeness during the partial validation process. Raw data evaluation and calculation checks will not be performed as part of this validation approach.

The following QA/QC information will be included in the partial validation, where applicable:

- Chain-of-custody record
- Sample collection
- Sample preservation
- Holding times
- Blank analysis
- MS/MSD analysis
- Laboratory control sample (LCS) analysis
- Field duplicate and co-located analyses
- Surrogate recovery (organics)
- Internal standards performance (organics and metals)
- ICP serial dilution analysis (metals)
- Laboratory duplicate analysis (metals)

8.3 ASSIGNMENT OF QUALIFIERS

Data affected by excursions from the previously described QA/QC criteria will be qualified using the following data validation guidance documents, or the most current documents, and professional judgment:

- USEPA. 1999. USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, EPA-540/R-99-008. Washington D.C.
- USEPA. 2004. USEPA Contract Laboratory Program National Functional Guidelines For Inorganic Data Review, EPA 540/R-04-004. Washington D.C.

The application of these validation guidelines will be modified to reflect method and QCD requirements, where applicable.

The validation approach to be taken by O'Brien & Gere will be a conservative one. Qualifiers will be applied to sample data to indicate minor excursions detected in comparison to method and validation criteria. In this way, data associated with excursion identified during the partial validation will be identified to the data user. Major excursions will result in data being rejected, indicating that the data are considered unusable for either quantitative or qualitative purposes. Minor excursions will result in sample data being qualified as approximate.

In accordance with validation guidance, and using professional judgment, data qualifiers may include the following:

1) U – Indicates that the analyte was analyzed for, but was not detected. The associated value indicates approximate sample concentration necessary to be detected. The sample QL is presented and adjusted for dilution.

2) J – Indicates that the detected analyte is present but the reported value may not be accurate or precise. The result should be considered approximate based on excursions from QA/QC criteria.

3) UJ – Indicates that the analyte was not detected and the result should be considered approximate based on excursions from QA/QC criteria.

4) R – Indicates that the QL or sample result is unreliable and has been rejected due to a major excursion from QA/QC criteria. The analyte may or may not be present in the sample. The data should not be used for qualitative or quantitative purposes.

8.4 DATA USABILITY EVALUATION

Data usability with respect to the DQOs and data uses will be compared to the project requirements. In the event that the completeness objective of 95% is not achieved, samples may be recollected at the discretion of the O'Brien & Gere Project Manager.

Based on the QA/QC information review and the qualifiers assigned to the analytical data, an overall evaluation of the data's usability will be performed. Data usability is defined as the percentage of data that remains unqualified or is qualified as approximate or non-detected due to blank contamination, divided by the data reported by the laboratory times 100.

8.5 DATA VALIDATION REPORT

The data validation report will contain separate QA sections in which data quality information collected during the investigation is summarized. The validation report will include the following:

- Guidelines used to evaluate the data
- Data qualifiers applied to sample results
- Summary of samples collected and analyses performed
- Narrative that identifies major and minor analysis excursions detected for each parameter evaluated for each analysis
- Additional issues and information that may be beneficial to the data user
- Data summary forms.

The data validation report will be prepared under the direction of the QAO and will include the report on the usability of the data.

Limitations of the data usability will be reported through the data validation report. The data validation report will describe the reasons for data qualification and the investigation report will summarize the impact of the qualified data on the data usage.

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USEPA. 1999. *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, EPA-540/R-99-008.* Washington D.C.

USEPA. 2004a. USEPA *Contract Laboratory Program National Functional Guidelines For Inorganic Data Review, EPA 540/R-04-004.* Washington D.C.

USEPA. 2004b. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846, 3rd Edition, Update IIIB.* Washington D.C.

TABLES

Table 1. *Field Sampling Summary*

Parameter (Method)	Matrix	Sample Containers and Volumes	Preservation	Holding Times	Number of Investigative Samples	QC sample frequency					
						Co-Located Sample	Field Duplicate	Trip Blank	MS/MSD*	Equipment (Rinsate) Blank**	Field (Container) Blank
VOCs (USEPA Methods 5035/8000C/8260B)[1]	Medium Level Soil	1-40 milliliter glass vials with Teflon® lined septum caps, with 10 milliliters of methanol for air-tight and headspace free seal in accordance with USEPA Method 5035A. 10 grams sample volume required.	<6°C Sealed and Headspace Free	Prepare in accordance with USEPA Method 5035A. 14 days from collection to analysis	4 (Future samples: TBD)	One per 10 samples or one per matrix type	One per each analytical group or one per matrix for each day of sampling	1 each in cooler with VOC samples	One per 20 samples or one per matrix (for less than 20 samples)	One per 10 samples or one per day for each matrix	One per 20 samples or for each matrix
VOCs (USEPA Methods 5030B/8000C/ 8260B)[1]	Groundwater	3 40-milliliter glass vials with Teflon® lined septum caps	<6°C HCL to pH≤2 FC Sealed and Headspace Free	Analysis within 14 days from collection for preserved samples.	TBD	One per 10 samples or one per matrix type	One per each analytical group or one per matrix for each day of sampling	1 each in cooler with VOC samples	One per 20 samples or one per matrix (for less than 20 samples)	One per 10 samples or one per day for each matrix	One per 20 samples or for each matrix
SVOCS/ PAHs (USEPA Methods 3550B/8000C/ 8270C)[1]	Soil	250 milliliter wide mouth glass container with Teflon® lined lid. 100 grams sample volume required	<6°C	Extract within 14 days from collection. Analysis within 40 days from extraction.	24 (Future samples: TBD)	One per 10 samples or one per matrix type	One per each analytical group or one per matrix for each day of sampling	N/A	One per 20 samples or one per matrix (for less than 20 samples)	One per 10 samples or one per day for each matrix	One per 20 samples or for each matrix
SVOCs/PAHs (USEPA Methods 3510C/8000C/8270C)[1]	Groundwater	1-1L amber glass container with Teflon® lined cap	<6°C	Extract within 7 days from collection. Analysis within 40 days from extraction.	TBD	One per 10 samples or one per matrix type	One per each analytical group or one per matrix for each day of sampling	N/A	One per 20 samples or one per matrix (for less than 20 samples)	One per 10 samples or one per day for each matrix	One per 20 samples or for each matrix

Table 1. *Field Sampling Summary*

Parameter (Method)	Matrix	Sample Containers and Volumes	Preservation	Holding Times	Number of Investigative Samples	QC sample frequency					
						Co-Located Sample	Field Duplicate	Trip Blank	MS/MSD*	Equipment (Rinsate) Blank**	Field (Container) Blank
PCBs (USEPA Methods 3550B/8082)[1]	Soil	250 milliliter wide mouth glass container with Teflon® lined lid. 100 grams sample volume required	<6°C	Extract within 14 days from collection. Analysis within 40 days from extraction.	14 (Future samples: TBD)	One per 10 samples or one per matrix for each day	One per each analytical group or one per matrix for each day	N/A	One per 20 samples or one per matrix (for less than 20 samples)	One per 10 samples or one per day for each matrix	One per 20 samples or one per day for each matrix
Metals (USEPA Methods 3050B/6020)[1]	Soil	4 ounce wide mouth polyethylene or fluorocarbon (TFE or PFA) container. 50 grams sample volume required.	<6°C	180 days from collection to analysis	20 (Future samples: TBD)	One per 10 samples or one per matrix for each day	One per each analytical group or one per matrix for each day	N/A	One per 20 samples or one per matrix (for less than 20 samples)	One per 10 samples or one per day for each matrix	One per 20 samples or one per day for each matrix
Metals (USEPA Methods 3050B/6020)[1]	Groundwater	1-250 milliliter polyethylene or fluorocarbon (TFE or PFA) container. 100 milliliters sample volume required.	<6°C HNO_3 to pH<2	180 days from collection to analysis	TBD	One per 10 samples or one per matrix for each day	One per each analytical group or one per matrix for each day	N/A	One per 20 samples or one per matrix (for less than 20 samples)	One per 10 samples or one per day for each matrix	One per 20 samples or one per day for each matrix
Mercury (USEPA Method 7471A)[1]	Soil	4 ounce wide mouth polyethylene or fluorocarbon (TFE or PFA) container. 50 grams sample volume required.	<6°C	28 days from collection to analysis	20 (Future samples: TBD)	One per 10 samples or one per matrix for each day	One per each analytical group or one per matrix for each day	N/A	One per 20 samples or one per matrix (for less than 20 samples)	One per 10 samples or one per day for each matrix	One per 20 samples or one per day for each matrix
Mercury (USEPA Method 7470A)[1]	Groundwater	1-250 milliliter polyethylene or fluorocarbon (TFE or PFA) container. 200 milliliters sample volume required.	<6°C HNO_3 to pH<2	28 days from collection to analysis	TBD	One per 10 samples or one per matrix for each day	One per each analytical group or one per matrix for each day	N/A	One per 20 samples or one per matrix (for less than 20 samples)	One per 10 samples or one per day for each matrix	One per 20 samples or one per day for each matrix

Table 1. *Field Sampling Summary*

Parameter (Method)	Matrix	Sample Containers and Volumes	Preservation	Holding Times	Number of Investigative Samples	QC sample frequency					
						Co-Located Sample	Field Duplicate	Trip Blank	MS/MSD*	Equipment (Rinsate) Blank**	Field (Container) Blank

NOTES:
VOCs indicates volatile organic compounds.
SVOCs indicates semivolatile organic compounds.
PAHs indicate polynuclear Aromatic Hydrocarbons
PCBs indicates polychlorinated biphenyls.

*MS/MSD indicates matrix spike/matrix spike duplicate sample for organic analyses. Spike duplicate may be performed for inorganic analyses.
** Equipment blank is not required if disposable equipment is used.
FC indicates that if free chlorine is present in samples, it must be removed by the appropriate addition of sodium thiosulfate or ascorbic acid.
Method Reference:
1. United States Environmental Protection Agency (USEPA). 2004. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846*, 3rd Edition, Update IIIB. Washington D.C.

Source: O'Brien & Gere

Table 2. Laboratory MDLs, QLs and regulatory criteria for VOCs, SVOCs (including PAHs), PCBs and metals in soil and groundwater

Target Analyte	Method Reference	Aqueous QL (ug/L)	Aqueous MDL (ug/L)	MDEQ Nonresidential Drinking Water Critiera & RBSLs (ug/L)[1]	MDEQ Nonresidential Groundwater Direct Contact Critiera & RBSLs (ug/L)[1]	Soil QL (ugkg)	Soil MDL (ug/kg)	MDEQ Nonresidential Drinking Water Protection Critiera & RBSLs (ug/Kg)[2]	MDEQ Nonresidential Direct Contact Critiera & RBSLs (ug/Kg)[2]
VOCs:									
Diethyl ether	8260B (1)	10	0.214	10	3.50E+07	300	0.382	200	7.40E+06
Acetone	8260B (1)	50	6.9	2100	3.10E+07	1000	0.857	42000	7.30E+07
Methyl iodide	8260B (1)	1	0.066	NA	NA	100	0.092	NA	NA
Carbon disulfide	8260B (1)	5	0.064	2300	1.20E+06	300	0.087	46000	2.80E+05
tert-Methyl butyl ether (MTBE)	8260B (1)	5	0.093	40	6.10E+05	300	0.144	800	5.90E+06
Acrylonitrile	8260B (1)	2	0.772	11	14000	100	0.268	220	74000
2-Butanone (MEK)	8260B (1)	25	0.497	38000	2.40E+08	1000	0.423	7.60E+05	2.70E+07
Dichlorodifluoromethane	8260B (1)	5	0.124	4800	3.00E+05	300	0.192	2.70E+05	1.00E+06
Chloromethane	8260B (1)	5	0.089	1100	4.90E+05	300	0.100	22000	1.10E+06
Vinyl chloride	8260B (1)	1	0.126	2	1000	70	0.124	40	34000
Bromomethane	8260B (1)	5	0.113	29	70000	300	0.208	580	1.00E+06
Chloroethane	8260B (1)	5	0.119	1700	4.40E+05	300	0.340	34000	9.50E+05
Trichlorofluoromethane	8260B (1)	1	0.091	7,300	1.10E+06	100	0.143	1.50E+05	5.60E+05
1,1-Dichloroethene	8260B (1)	1	0.098	7	11000	70	0.123	140	5.70E+05
Methylene chloride	8260B (1)	5	0.132	5	2.20E+05	100	0.088	100	2.30E+06
trans-1,2-Dichloroethene	8260B (1)	1	0.060	100	2.20E+05	70	0.140	2000	1.40E+06
1,1-Dichloroethane	8260B (1)	1	0.067	2500	2.40E+06	70	0.119	50000	8.90E+05
cis-1,2-Dichloroethene	8260B (1)	1	0.152	70	2.00E+05	70	0.109	1400	6.40E+05
Tetrahydrofuran	8260B (1)	90	2.047	270	1.60E+06	1000	2.039	5400	9.50E+06
Chloroform	8260B (1)	1	0.083	80	1.50E+05	70	0.111	1600	1.50E+06
Bromochloromethane	8260B (1)	1	0.130	80	18000	100	0.147	NA	NA
1,1,1-Trichloroethane	8260B (1)	1	0.054	200	1.30E+06	70	0.083	4000	4.60E+05
4-Methyl-2-pentanone (MIBK)	8260B (1)	50	0.266	5200	1.30E+07	3000	0.245	1.00E+05	2.70E+06
2-Hexanone	8260B (1)	50	0.390	2900	5.20E+06	3000	0.235	58000	2.50E+06
Carbon tetrachloride	8260B (1)	1	0.097	5	4600	70	0.126	100	3.90E+05
Benzene	8260B (1)	1	0.077	5	11000	70	0.036	100	4.00E+05
1,2-Dichloroethane	8260B (1)	1	0.165	5	19000	70	0.130	100	4.20E+05
Trichloroethene	8260B (1)	1	0.086	5	22000	70	0.127	100	5.00E+05
1,2-Dichloropropane	8260B (1)	1	0.143	5	16000	70	0.096	100	5.50E+05
Bromodichloromethane	8260B (1)	1	0.122	80	14000	100	0.078	1600	4.90E+05
Dibromomethane	8260B (1)	5	0.190	230	5.30E+05	300	0.108	4600	2.00E+06
cis-1,3-Dichloropropene	8260B (1)	1	0.065	NA	NA	70	0.090	NA	NA
Toluene	8260B (1)	1	0.078	790	5.30E+05	100	0.059	16000	2.50E+05
trans-1,3-Dichloropropene	8260B (1)	1	0.130	NA	NA	70	0.117	NA	NA
1,1,2-Trichloroethane	8260B (1)	1	0.141	5	21000	70	0.145	100	8.40E+05
Tetrachloroethene	8260B (1)	1	0.092	5	12000	70	0.139	100	88000
trans-1,4-Dichloro-2-butene	8260B (1)	1	0.381	NA	NA	70	0.263	NA	NA
Dibromochloromethane	8260B (1)	5	0.066	80	18000	100	0.086	1600	5.00E+05
1,2-Dibromoethane	8260B (1)	1	0.127	NA	NA	30	0.168	NA	NA
Chlorobenzene	8260B (1)	1	0.077	100	86000	70	0.063	2000	2.60E+05
1,1,1,2-Tetrachloroethane	8260B (1)	1	0.085	320	30000	100	0.182	6400	4.40E+05
Ethylbenzene	8260B (1)	1	0.088	74	1.70E+05	70	0.074	1500	1.40E+05
p,m-Xylene	8260B (1)	2	0.102	280	1.90E+05	100	0.150	5600	1.50E+05
o-Xylene	8260B (1)	1	0.080	280	1.90E+05	70	0.062	5600	1.50E+05
Styrene	8260B (1)	1	0.059	100	9700	70	0.108	2700	5.20E+05
Isopropylbenzene	8260B (1)	5	0.073	2300	56000	300	0.106	2.60E+05	3.90E+05
Bromoform	8260B (1)	1	0.101	80	1.40E+05	100	0.155	1600	8.70E+05
1,1,2,2-Tetrachloroethane	8260B (1)	1	0.101	35	4700	70	0.147	700	2.40E+05
1,2,3-Trichloropropane	8260B (1)	1	0.310	120	84000	100	0.309	2400	8.30E+05
n-Propylbenzene	8260B (1)	1	0.069	230	15000	100	0.076	4600	8.00E+06
Bromobenzene	8260B (1)	1	0.082	50	12000	100	0.106	1500	7.60E+05
1,3,5-Trimethylbenzene	8260B (1)	1	0.063	72	61000	100	0.116	1800	94,000
tert-Butylbenzene	8260B (1)	1	0.080	230	8900	70	0.078	4600	8.00E+06
1,2,4-Trimethylbenzene	8260B (1)	1	0.053	63	56000	100	0.074	2100	1.10E+05
sec-Butylbenzene	8260B (1)	1	0.092	230	4400	70	0.116	4600	8.00E+06

Table 2. Laboratory MDLs, QLs and regulatory criteria for VOCs, SVOCs (including PAHs), PCBs and metals in soil and groundwater

Target Analyte	Method Reference	Aqueous QL (ug/L)	Aqueous MDL (ug/L)	MDEQ Nonresidential Drinking Water Critiera & RBSLs (ug/L)[1]	MDEQ Nonresidential Groundwater Direct Contact Critiera & RBSLs (ug/L)[1]	Soil QL (ugkg)	Soil MDL (ug/kg)	MDEQ Nonresidential Drinking Water Protection Critiera & RBSLs (ug/Kg)[2]	MDEQ Nonresidential Direct Contact Critiera & RBSLs (ug/Kg)[2]
p-Isopropyltoluene	8260B (1)	5	0.095	NA	NA	100	0.128	NA	NA
1,3-Dichlorobenzene	8260B (1)	1	0.038	19	2000	100	0.137	480	1.70E+05
1,4-Dichlorobenzene	8260B (1)	1	0.055	75	6400	100	0.144	1700	1.90E+06
1,2-Dichlorobenzene	8260B (1)	1	0.048	600	1.60E+05	100	0.079	14000	2.10E+05
1,2,3-Trimethylbenzene	8260B (1)	1	0.073	NA	NA	100	0.057	NA	NA
n-Butylbenzene	8260B (1)	1	0.057	230	5900	70	0.204	4600	8.00E+06
Hexachloroethane	8260B (1)	5	0.097	21	1900	400	0.224	1200	7.30E+05
1,2-Dibromo-3-chloropropane	8260B (1)	5	0.339	NA	NA	300	0.139	NA	NA
1,2,4-Trichlorobenzene	8260B (1)	5	0.099	70	19000	450	0.160	4200	1.10E+06
1,2,3-Trichlorobenzene	8260B (1)	5	0.135	NA	NA	450	0.217	NA	NA
Naphthalene	8260B (1)	5	0.084	1500	31000	450	0.129	1.00E+05	5.2E+07
2-Methylnaphthalene	8260B (1)	5	0.130	750	25000	450	0.142	1.70E+05	2.6E+07
SVOCs:									
Acenaphthene	8270C (1)	5	86	3800	4200	330	59	8.8E+05	1.3E+08
Acenaphthylene	8270C (1)	5	96	150	3900	330	68	17000	5.2E+06
Anthracene	8270C (1)	5	133	43	43	330	68	41000	7.3E+08
Benzo(a)anthracene	8270C (1)	1	96	8.5	9.4	330	79	NLL	80000
Benzo(b)fluoranthene	8270C (1)	1	184	1.5	1.5	330	152	NLL	80000
Benzo(k)fluoranthene	8270C (1)	1	174	1.0; 0.8	1.0; 0.8	330	118	NLL	8.0E+05
Benzo(ghi)perylene	8270C (1)	1	112	1.0; 0.26	1.0; 0.26	330	76	NLL	7.0E+06
Benzo(a)pyrene	8270C (1)	1	133	5	1.0; 0.64	330	68	NLL	8000
bis(2-Chloroethoxy)methane	8270C (1)	5	0.042	NA	NA	330	1.4	NA	NA
bis(2-Chloroethyl)ether	8270C (1)	5	0.216	8.3	5700	330	8.0	170	58000
bis(2-Chloroisopropyl)ether	8270C (1)	5	0.210	NA	NA	330	0.6	NA	NA
bis(2-Ethylhexyl)phthalate	8270C (1)	5	0.638	6	320	330	3.2	NLL	1.00E+07
4-Bromophenyl phenyl ether	8270C (1)	5	0.258	NA	NA	330	1.5	NA	NA
Butyl benzyl phthalate	8270C (1)	5	0.184	2700	2700	330	4.3	3.10E+05	3.10E+05
4-Chloroaniline	8270C (1)	10	0.650	NA	NA	330	1.5	NA	NA
2-Chloronaphthalene	8270C (1)	5	0.225	NA	NA	330	0.8	NA	NA
4-Chloro-3-methylphenol	8270C (1)	5	0.126	420	79000	280	2.5	16000	1.50E+07
2-Chlorophenol	8270C (1)	10	0.171	130	94000	330	1.3	2600	4.50E+06
4-Chlorophenyl phenyl ether	8270C (1)	5	0.254	NA	NA	330	1.0	NA	NA
Chrysene	8270C (1)	1	124	1.6	1.6	330	91	NLL	8.0E+06
p,m-Cresol	8270C (1)	20	0.021	NA	NA	330	1.9	NA	NA
o-Cresol	8270C (1)	10	0.022	NA	NA	330	1.5	NA	NA
Dibenzo(ah)anthracene	8270C (1)	2	82	2	2; 0.31	330	56	NLL	8000
Dibenzofuran	8270C (1)	4	0.243	ID	ID	330	0.9	ID	ID
di-n-Butyl phthalate	8270C (1)	5	0.441	2500	11000	330	1.8	7.60E+05	7.60E+05
1,2-Dichlorobenzene	8270C (1)	1	0.048	600	1.60E+05	330	0.079	14000	2.10E+05
1,3-Dichlorobenzene	8270C (1)	1	0.038	19	2000	330	0.137	480	1.70E+05
1,4-Dichlorobenzene	8270C (1)	1	0.055	75	6400	330	0.144	1700	1.90E+06
3,3'-Dichlorobenzidine	8270C (1)	5	0.669	4.3	180	2000	5.8	2000; 110	30000
2,4-Dichlorophenol	8270C (1)	10	0.216	210	48000	330	2.0	4200	1.80E+06
Diethyl phthalate	8270C (1)	5	0.153	16000	1.10E+06	330	1.2	3.20E+05	7.40E+05
2,4-Dimethylphenol	8270C (1)	5	0.144	1000	5.20E+05	330	1.7	20000	3.60E+07
Dimethyl phthalate	8270C (1)	5	0.995	2.10E+05	4.20E+06	330	1.5	7.90E+05	7.90E+05
4,6-Dinitro-2-methylphenol	8270C (1)	20	0.073	NA	NA	830	1.7	NA	NA
2,4-Dinitrophenol	8270C (1)	25	0.216	NA	NA	830	2.6	NA	NA
2,4-Dinitrotoluene	8270C (1)	5	0.264	NA	NA	330	2.2	NA	NA
2,6-Dinitrotoluene	8270C (1)	5	0.133	NA	NA	330	2.6	NA	NA
1,2-Diphenylhydrazine	8270C (1)	5	0.207	NA	NA	330	1.4	NA	NA
di-n-Octyl phthalate	8270C (1)	5	0.137	380	400	330	5.5	1.40E+08	2.00E+07
Fluoranthene	8270C (1)	1	121	210	210	330	83	7.30E+05	1.3E+08
Fluorene	8270C (1)	5	83	2000	2000	330	59	8.9E+05	8.7E+07
Hexachlorobenzene	8270C (1)	5	0.207	1	4.6	330	2.4	NA	NA
Hexachlorobutadiene	8270C (1)	10	0.114	42	400	330	0.112	72000	3.50E+05

Table 2. Laboratory MDLs, QLs and regulatory criteria for VOCs, SVOCs (including PAHs), PCBs and metals in soil and groundwater

Target Analyte	Method Reference	Aqueous QL (ug/L)	Aqueous MDL (ug/L)	MDEQ Nonresidential Drinking Water Critiera & RBSLs (ug/L)[1]	MDEQ Nonresidential Groundwater Direct Contact Critiera & RBSLs (ug/L)[1]	Soil QL (ugkg)	Soil MDL (ug/kg)	MDEQ Nonresidential Drinking Water Protection Critiera & RBSLs (ug/Kg)[2]	MDEQ Nonresidential Direct Contact Critiera & RBSLs (ug/Kg)[2]
Hexachlorocyclopentadiene	8270C (1)	5	0.225	50	1600	330	2.7	3.20E+05	7.20E+05
Hexachloroethane	8270C (1)	5	0.097	21	1900	330	0.224	1200	7.30E+05
Indeno(1,2,3-cd)pyrene	8270C (1)	2	95	2.0; 0.022	2.0; 0.022	330	60	NLL	80000
Isophorone	8270C (1)	5	0.258	3100	9.90E+05	330	1.8	62000	2.40E+06
2-Methylnaphthalene	8270C (1)	5	0.130	750	25000	330	0.142	1.70E+05	2.6E+07
Naphthalene	8270C (1)	5	0.084	1500	31000	330	0.129	1.00E+05	5.2E+07
2-Nitroaniline	8270C (1)	25	0.181	NA	NA	830	3.5	NA	NA
3-Nitroaniline	8270C (1)	25	0.481	NA	NA	830	3.0	NA	NA
4-Nitroaniline	8270C (1)	25	0.395	NA	NA	830	3.6	NA	NA
Nitrobenzene	8270C (1)	5	0.252	9.6	11000	330	2.3	330; 190	3.40E+05
2-Nitrophenol	8270C (1)	5	0.248	58	79000	330	2.2	1200	2.00E+06
4-Nitrophenol	8270C (1)	25	0.280	NA	NA	830	3.8	NA	NA
N-Nitrosodiphenylamine	8270C (1)	5	0.058	1100	35000	330	0.06	22000	7.80E+06
N-Nitrosodi-n-propylamine	8270C (1)	5	0.144	NA	NA	330	1.8	330; 100	5400
Pentachlorophenol	8270C (1)	5	0.134	1	200	330	2.2	22	3.20E+05
Phenanthrene	8270C (1)	2	99	150	1000	330	60	1.60E+05	5.2E+06
Phenol	8270C (1)	5	0.220	13000	2.90E+07	330	1.5	2.60E+05	1.20E+07
Pyrene	8270C (1)	5	113	140	140	330	74	4.8E+05	8.4E+07
1,2,4-Trichlorobenzene	8270C (1)	5	0.099	70	19000	330	0.160	4200	1.10E+06
2,4,5-Trichlorophenol	8270C (1)	5	0.175	2100	1.70E+05	330	2.6	1.10E+05	7.30E+07
2,4,6-Trichlorophenol	8270C (1)	4	0.170	470	10000	330	2.3	9400	3.30E+06
PCBs:									
PCB-1016	8082 (1)	0.1	0.0719	0.5	3.3	330	2.943	NLL	(T)
PCB-1242	8082 (1)	0.1	0.0729	0.5	3.3	330	4.625	NLL	(T)
PCB-1221	8082 (1)	0.1	0.0712	0.5	3.3	330	3.142	NLL	(T)
PCB-1232	8082 (1)	0.1	0.0810	0.5	3.3	330	3.664	NLL	(T)
PCB-1248	8082 (1)	0.1	0.0841	0.5	3.3	330	4.518	NLL	(T)
PCB-1254	8082 (1)	0.1	0.0584	0.5	3.3	330	5.706	NLL	(T)
PCB-1260	8082 (1)	0.1	0.0721	0.5	3.3	330	2.183	NLL	(T)
RCRA Metals:									
Arsenic	6020 (1)	1	0.052	10	4300	500	30	4600	37000
Barium	6020 (1)	10	0.22	2000	1.40E+07	1000	161	1.30E+06	1.30E+08
Cadmium	6020 (1)	0.5	0.067	5	1.90E+05	50	12	6000	2.10E+06
Chromium	6020 (1)	10	0.13	100	4.60E+05	1000	11	30000	9.20E+06
Lead	6020 (1)	3	0.043	4	ID	1000	20	7.00E+05	9.00E+05
Mercury	7470A/7471A (1)	0.2	0.008	2	56	50	0.4	1700	5.80E+05
Selenium	6020 (1)	5	0.27	50	9.70E+05	500	50	4000	9.60E+06
Silver	6020 (1)	0.2	0.018	98	1.50E+06	200	12	4500	9.00E+06

Notes:

QL indicates quantization limit.

MDL indicates method detection limit.

NA indicates not applicable.

MDLs and QLs were provided by Merit Laboratories of East Lansing, Michigan and are current as of August 2011.

Laboratory detection limits and control limits are updated annually. The detection limits and control limits which are current at the time of analysis and reporting will be utilized by the laboratory.

Target Analyte resources - Project lists

Method Reference:

1- USEPA. 2004. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846, 3rd Edition, Update IIIB. Washington D.C.

Regulatory References:

1- MDEQ: Attachment 1, Table 1 Groundwater: Residential and Nonresidential Part 201 Generic Cleanup Criteria and Sceening Levels (Columns #2 and #6).

2- MDEQ: Attachment 1, Table 3 Soil: Nonresidential Part 201 Generic Cleanup Criteria and Screening Levels (Columns #21 and #27).

Source: O'Brien & Gere

Table 3-1. *VOCs using USEPA Method 8260B quality control requirements and corrective actions.*

Audit	Frequency	Control Limits	Corrective Action
Holding times	Samples must be analyzed within holding time.	Analyze within 7 days from collection for unpreserved aqueous samples and for vinyl chloride and styrene, and 14 days from collection for preserved aqueous samples.	1. If holding times are exceeded for initial or any re-analyses required due to quality control (QC) excursions. 2. Notify QAO since re-sampling may be required. 3. Document corrective action in the case narrative.
GC/MS Instrument Performance Check	Once every 12 hours prior to initial calibration and calibration verifications. Analytical sequence must be completed within 12 hours of the GC/MS Instrument Performance Check	1. Bromofluorobenzene (BFB) key ions and abundance criteria listed in the method must be met for all 9 ions and analyses must be performed within 12 hours of injection of the BFB. 2. Part of the BFB peak will not be background subtracted to meet tune criteria. 3. Documentation of all bromofluorobenzene analyses and evaluation must be included in the data packages.	1. Tune the mass spectrometer. 2. Document corrective action in the case narrative. 3. Samples cannot be analyzed until control limit criteria have been met.

Table 3-1. *VOCs using USEPA Method 8260B quality control requirements and corrective actions.*

Audit	Frequency	Control Limits	Corrective Action
Initial Calibration	Prior to sample analysis and when calibration verifications criteria are not met. Initial calibration will contain all target analytes in each standard. Quantitation of analyses will utilize the initial calibration results.	1. Five concentrations bracketing expected concentration range for all compounds of interest. 2. One second-source standard must be analyzed immediately following the initial calibration at the mid-calibration concentration. This standard must be within 30% recovery or within laboratory control limits. It is also recommended that a separate standard at the MDL level be analyzed after calibration is complete to check sensitivity. 3. Minimum average response factor (RF) as listed in Method 8260B, with remaining min. avg. RFs factor ≥ 0.050 except for ketones with allowable min. avg. response factor ≥ 0.010. 4. For compound with %RSD >15, quantitation must be performed using a separate calibration curve and the Coefficient of Determination (COD) must be ≥ 0.990.	1. Identify and correct problem. 2. If criteria are still not met, recalibrate. 3. Document corrective action in the case narrative. 4. Samples should not be analyzed until calibration control limit criteria are met. 5. Contact QAO to discuss problem target analytes before proceeding with analysis.
Calibration Verification	Every 12 hours, following BFB. The calibration verification will contain all target analytes in each standard at a concentration that is representative of the midpoint of the initial calibration.	1. Within percent drift or percent difference (%D) of ≤ 20 for CCCs and ≤ 50% for all non-CCC compounds. RF requirements are the same as listed in the initial calibration. 2. The internal standards areas and retention times must meet the method criteria.	1. Reanalyze. 2. If criteria are still not met, identify and correct problem, recalibrate. 3. Document corrective action in the case narrative; samples should not be analyzed until calibration control limit criteria are met.
Preparation Blank Analysis	Every 12 hours, following calibration verification	Methylene chloride less than 3 times QL, 2-butanone and acetone less than 5 times QL. Remaining analytes less than QL. QLs and MDLs will be provided along with the preparation blank results.	1. Reanalyze blank. 2. If limits are still exceeded, clean instrument, recalibrate analytical system, and reanalyze all samples if detected for same compounds as in blank. 3. Document corrective action in the case narrative - samples cannot be analyzed until blank criteria have been met.
Field/Equipment Blank Analysis	Collected one per sampling event, or one per 10 samples or one per matrix (for less than 20 samples)	Methylene chloride less than 3 times QL, 2-butanone and acetone less than 5 times QL. Remaining analytes less than QL. QLs and MDLs will be provided along with the preparation blank results.	1. Report results .

Table 3-1. *VOCs using USEPA Method 8260B quality control requirements and corrective actions.*

Audit	Frequency	Control Limits	Corrective Action
Trip Blank	1 per cooler containing VOC samples.	Methylene chloride less than 3 times QL, 2-butanone and acetone less than 5 times QL. Remaining analytes less than QL. QLs and MDLs will be provided along with the preparation blank results.	1. Report results .
Laboratory Control Sample Analysis	Each analytical batch (every 12 hours). Prepared independently from calibration standards. Spike must contain all target analytes and should be at a concentration, which is in the lower 1/2 of the calibration curve.	Recovery within laboratory control limits. For compounds without established laboratory control limits, 70-130% recovery will be used. The lowest acceptable control limits for recovery will be 10%.	1. If recovery failures are above control limits and these compounds are not detected in the associated samples, corrective action is not required. 2. If recovery failures are below control limits, reanalyze LCS and examine results of other QC analyses. 3. If other QC criteria have not been met, stop analysis, locate and correct problem, recalibrate instrument and reanalyze samples since last satisfactory LCS. 4. Document corrective action in the case narrative.
Internal Standards	All samples and blanks (including MS/MSD)	1. Response -50% - +200% of internal standards from continuing calibration of the day. 2. RT must be ± 30 sec. from associated calibration verification standard of that sequence.	1. Reanalyze. 2. If still outside of the limits, report both analyses. 3. Document corrective action in the case narrative.
Surrogate Spike	All samples and blanks (including MS/MSD)	Recovery within laboratory control limits. The lowest acceptable control limits for recovery will be 10%.	1. Reanalyze any environmental or QC sample with surrogates that exceed control limits. 2. If still outside of the limits, report both analyses. 3. Document corrective action in the case narrative.

Table 3-1. *VOCs using USEPA Method 8260B quality control requirements and corrective actions.*

Audit	Frequency	Control Limits	Corrective Action
Matrix Spike/ Matrix Spike Dup. (MS/MSD) Analysis	Collected one per 20 samples or one per matrix (for less than 20 samples) Samples from the investigation must be used for MS/MSD analysis. If samples were not designated as MS/MSD samples, contact Project Manager upon receipt of samples at the laboratory. Spike must contain complete list of target analytes.	Recovery and RPD within laboratory control limits. For compounds without established laboratory control limits, 70-130% recovery will be used. The lowest acceptable control limits for recovery will be 10%.	1. If LCS criteria are met, document in case narrative; no additional corrective action required. 2. If LCS criteria are exceeded also, examine other QC data for source of problem; *i.e.,* surrogate recoveries for extraction efficiency and calibration data for instrument performance issues. 3. Reanalyze samples and associated MS/MSD and LCSs as required. 4. Document corrective action in the case narrative
Field Duplicate Analysis	Collected one per each analytical group or one per matrix for each day of sampling Field duplicate will not be identified to the laboratory.	Validation criteria: 50% RPD for waters. For sample results that are less than or equal to five times the QL, the criterion of plus or minus two times the QL will be applied to evaluate field duplicates.	No corrective action required of the laboratory since the laboratory will not know the identity of the field duplicate samples. If these criteria are not met, sample results will be evaluated on a case-by-case basis.

Table 3-1. *VOCs using USEPA Method 8260B quality control requirements and corrective actions.*

Audit	Frequency	Control Limits	Corrective Action
Target Analyte Identification	As required for identification of target analytes	1. The intensities of the characteristic ions of a compound maximize in the same scan or within one scan of each other. Selection of a peak by a data system target compound search routine where the search is based on the presence of a target chromatographic peak containing ions specific for the target compound at a compound-specific retention time will be accepted as meeting this criterion. 2. The relative retention time (RRT) of the sample component is within ± 0.06 RRT units of the RRT of the standard component. 3. The relative intensities of the characteristic ions agree within 30% of the relative intensities of these ions in the reference spectrum. (Example: For an ion with an abundance of 50% in the reference spectrum, the corresponding abundance in a sample spectrum can range between 20% and 80%.) 4. Structural isomers that produce very similar mass spectra should be identified as individual isomers if they have sufficiently different GC retention times 5. Identification is hampered when sample components are not resolved chromatographically and produce mass spectra containing ions contributed by more than one analyte. When gas chromatographic peaks obviously represent more than one sample component (i.e., a broadened peak with shoulder(s) or a valley between two or more maxima), appropriate selection of analyte spectra and background spectra is important.	Not applicable

Table 3-1. *VOCs using USEPA Method 8260B quality control requirements and corrective actions.*

Audit	Frequency	Control Limits	Corrective Action
Target Analyte Identification	As required for identification of target analytes	Examination of extracted ion current profiles of appropriate ions can aid in the selection of spectra, and in qualitative identification of compounds. When analytes co-elute (i.e., only one chromatographic peak is apparent), the identification criteria may be met, but each analyte spectrum will contain extraneous ions contributed by the coeluting compound.	Not applicable
Tentatively Identified Compound	If required, perform for each sample and blank analysis. Non-target compounds will be reported using a Mass Spectral Library search.	Not applicable	Not applicable
Dilutions	1. When target analyte concentration exceeds upper limit of calibration curve. 2. When matrix interference is demonstrated by the lab and documented in the case narrative (highly viscous samples or a large number of nontarget peaks on the chromatogram). 3. It is recommended that a reagent blank be analyzed if an analyte saturates the detector or if highly concentrated analytes are detected. Otherwise data impacted from carryover cannot be used. 4. Laboratory will note in the data deliverables which analytical runs were reported.	1. The reagent blank will meet the method blank criteria.	1. Reanalyze reagent blank until method blank criteria are met. 2. Document corrective action in the case narrative.
pH Determination	Once sample analysis is complete, the pH of water samples must be determined.	Record pH and report in the case narrative.	Not applicable
Sample Batching	The laboratory will batch project samples together along with QC samples specified from the project. Non-project information will not be included in the data packages.	Not applicable	Not applicable
Laboratory control limits	Generated with results for an analyte from a minimum of 20 sample analyses. The average of the sample results and the standard deviation are calculated. The internal warning limits are established at 2 times the standard deviation and the control limits are established at 3 times the standard deviation. The control limits are updated annually.	Not applicable	Not applicable

Table 3-1. *VOCs using USEPA Method 8260B quality control requirements and corrective actions.*

Audit	Frequency	Control Limits	Corrective Action
Deliverables	1. Full deliverables must be provided to document each audit item for easy reference and inspection. 2. The calculation formula will be provided for each analysis, for each type of matrix in the data package. 3. Any laboratory abbreviations or notations presented in the raw data or summary information will be explained or referenced in the case narrative. 4. Final spiking concentrations will be presented in summary form. 5. Cooler temperatures and any observations of bubbles in sample containers will be provided in the data packages. 6. Run logs will be provided in the data packages.	Not applicable	Provide missing or additional deliverables for validation purposes.
Method and QC Document requirements	The laboratory will perform the method as presented in this QC Document and will adhere to the QC Document requirements presented herein. Otherwise the laboratory will specifically note any procedures that differ from the method or the QC Document in the data package case narrative.	Not applicable	Not applicable

Notes:
Data validation will be performed in accordance with QA/QC criteria established in these tables and the analytical methods. Excursions from QA/QC criteria will be qualified based on guidance provided in this QCD.
Communications with the QAO will be documented and included in the data packages.
Source: O'Brien & Gere

Table 3-2. *SVOCs using USEPA Method 8270C quality control requirements and corrective actions*

Audit	Frequency	Control Limits	Corrective Action
Holding Times	Samples must be extracted and analyzed within holding time.	Extract within 7 days from collection for aqueous samples; 14 days for soil samples. Analyze extracts within 40 days of extraction.	If holding times are exceeded for initial or any re-analyses required due to QC excursions, notify the Quality Assurance Officer (QAO) since re-sampling may be required.
GC/MS Instrument Performance Check	Once every 12 hours prior to initial calibration and calibration verification. Must contain 50ng/uL of 4,4-DDT, pentachlorophenol, and benzidine. Analytical sequence must be completed within 12 hours of the GC/MS Instrument Performance Check	1. Decafluorotriphenylphosphine (DFTPP) key ions and abundance criteria listed in the method must be met for all 13 ions and analyses must be performed within 12 hours of injection of the DFTPP. 2. Part of the DFTPP peak will not be background subtracted to meet tune criteria. 3. Documentation of all DFTPP analyses and evaluations must be included in the data packages. 4. Degradation of 4,4-DDT <20%. Peak tailing must not be evident.	1. Tune the mass spectrometer. 2. Document corrective action in the case narrative - samples cannot be analyzed until control limit criteria have been met.
Initial Calibration	Prior to sample analysis and when calibration verification criteria are not met. Initial calibration will contain all target analytes in each standard. Quantitation of analyses will utilize the initial calibration results. .	1. Five concentrations bracketing expected concentration range for all compounds of interest. 2. One second-source standard must be analyzed immediately following the initial calibration at the mid-calibration concentration. This standard must be within 30% recovery or within laboratory control limits. It is also recommended that a separate standard at the MDL level be analyzed after calibration is complete to check sensitivity. 3. Response factors must meet criteria listed in Method 8270C with the remaining RFs 0.05 with allowable response factor for n-nitroso-di-n-propylamine and 2,4-dimethylphenol of 0.01. 4. For compounds with %RSD >15, quantification must be performed using a separate calibration curve and the COD must be ≥ 0.990.	1. Identify and correct problem. 2. If criteria are still not met, recalibrate. 3. Document corrective action in the case narrative - samples should not be analyzed until calibration control limit criteria are met.

Table 3-2. *SVOCs using USEPA Method 8270C quality control requirements and corrective actions*

Audit	Frequency	Control Limits	Corrective Action
Calibration Verification	Every 12 hours, following DFTPP. Calibration verification will contain all target analytes in each standard at a concentration that is representative of the midpoint of the initial calibration.	1. Within method specified criteria, percent drift or percent difference (%D) ≤ 20 for all compounds. Response factor requirements as listed in initial calibration. 2. The internal standards areas and retention times must meet the method criteria.	1. Reanalyze. 2. If criteria are still not met, identify and correct problem, recalibrate. 3. Document corrective action in the case narrative - samples should not be analyzed until calibration control limit criteria are met.
Preparation Blank Analysis	Prepared with each extraction batch of no more than 20 analytical samples.	1. Common laboratory contaminants (phthalate) less than 5 x QL. Remaining analytes less than QL. 2. QLs and MDLs will be provided along with the preparation blank results.	1. Reanalyze blank. 2. If limits are still exceeded, clean instrument, recalibrate analytical system and re-extract and reanalyze all samples if detected for same compounds as in the blank. 3. Document corrective action in the case narrative - samples should not be analyzed until blank criteria have been met.
Field/ Equipment Blank Analysis	Collected per project requirements.	1. Common laboratory contaminants (phthalate) less than 5 x QL. Remaining analytes less than QL. 2. QLs and MDLS will be provided along with the blank results.	1. Investigate problem. 2. Document in the case narrative.

Table 3-2. *SVOCs using USEPA Method 8270C quality control requirements and corrective actions*

Audit	Frequency	Control Limits	Corrective Action
Laboratory Control Sample (LCS) or Matrix Spike Blank (MSB) Analysis	Prepared with each extraction batch, of no more than 20 analytical samples. Prepared independently from calibration standards. LCS or MSB must contain all target compounds and should be at a concentration that is approximately in the lower 1/2 of the calibration curve.	Recovery within laboratory control limits. For compounds without established laboratory control limits, 70 to 130% recovery will be used. The lowest acceptable control limits for recovery will be 10%.	1. If recovery failures are above control limits and these compounds are not detected in the associated samples, no corrective action is required. 2. If recovery failures are below the control limits, reanalyze LCS and examine results of other QC analyses. 3. If other QC criteria have not been met, stop analysis, locate and correct problem, recalibrate instrument and reanalyze samples since last satisfactory LCS. 4. Document corrective action in the case narrative.
Internal Standards	All samples and blanks (including MS/MSD).	1. Response -50% - +200% of the internal standards from the continuing cal of the day. 2. RT must be ± 30 sec. from calibration verification of that sequence.	1. Reanalyze. 2. If recovery is still outside criteria, report both analyses. 3. Document corrective action in the case narrative.
Surrogate Spike	All samples and blanks (including MS/MSD).	Recovery within laboratory control limits. The lowest acceptable control limits for recovery will be 10%.	1. Reanalyze if more than 1 AE or 1 BN fails, or if any one surrogate recovery is < 10%. 2. If recovery meets criteria, report both analyses. 3. If re-analysis recovery fails and if the recovery is <10%, re-extract sample if within holding time and re-analyze. 4. If re-analysis recovery fails and if the recovery is >10%, report both analyses. 5. Document corrective action in the case narrative.

Table 3-2. *SVOCs using USEPA Method 8270C quality control requirements and corrective actions*

Audit	Frequency	Control Limits	Corrective Action
Matrix Spike/ Matrix Spike Dup. (MS/MSD) Analysis	Collected per project requirements. Samples from the investigation must be used for MS/MSD analysis. Spike must contain complete list of target analytes.	Recovery and RPD within laboratory control limits. For compounds without established laboratory control limits, 70-130% recovery will be used. The lowest acceptable control limits for recovery will be 10%.	1. Reanalyze if <10%. 2. If reanalysis is < 10%, report both analyses and document in the case narrative. 3. If reanalysis is >10%, and LCS criteria are met, document in the case narrative. 4. If LCS criteria are exceeded also, examine other QC data for source of problem; i.e. surrogate recoveries for extraction efficiency and calibration data for instrument performance issues; re-extract or reanalyze samples and associated MS/MSD and LCSs as required.
Field Dup. Analysis	Collected per project requirements. Field duplicate will not be identified to the laboratory.	Validation criteria: 50% RPD for waters, 100% RPD for solids. For sample results that are less than or equal to five times the QL, the criterion of plus or minus two times the QL will be applied to evaluate field duplicates.	No corrective action required of the laboratory since the laboratory will not know the identity of the field duplicate samples. If these criteria are not met, sample results will be evaluated on a case-by-case basis.

Table 3-2. *SVOCs using USEPA Method 8270C quality control requirements and corrective actions*

Audit	Frequency	Control Limits	Corrective Action
Target Analyte Identification	As required for identification of target analytes	1. The intensities of the characteristic ions of a compound maximize in the same scan or within one scan of each other. Selection of a peak by a data system target compound search routine where the search is based on the presence of a target chromatographic peak containing ions specific for the target compound at a compound-specific retention time will be accepted as meeting this criterion. 2. The relative retention time (RRT) of the sample component is within ± 0.06 RRT units of the RRT of the standard component. 3. The relative intensities of the characteristic ions agree within 30% of the relative intensities of these ions in the reference spectrum. (Example: For an ion with an abundance of 50% in the reference spectrum, the corresponding abundance in a sample spectrum can range between 20% and 80%.) 4. Structural isomers that produce very similar mass spectra should be identified as individual isomers if they have sufficiently different GC retention times. 5. Identification is hampered when sample components are not resolved chromatographically and produce mass spectra containing ions contributed by more than one analyte. When gas chromatographic peaks obviously represent more than one sample component (i.e., a broadened peak with shoulder(s) or a valley between two or more maxima), appropriate selection of analyte spectra and background spectra is important. 6. Examination of extracted ion current profiles of appropriate ions can aid in the selection of spectra, and in qualitative identification of compounds. When analytes co-elute (*i.e.*, only one chromatographic peak is apparent), the identification criteria may be met, but each analyte spectrum will contain extraneous ions contributed by the co-eluting compound.	Not applicable

Table 3-2. *SVOCs using USEPA Method 8270C quality control requirements and corrective actions*

Audit	Frequency	Control Limits	Corrective Action
Cleanup	Gel permeation chromatography should be performed for water extracts with high molecular weight contaminants.	Calibrate according to method. Criteria must be met as listed in method for calibration and blank analysis.	Clean GPC column or replace.
Tentatively Identified Compound (where applicable)	Report 18 PAHs (SVOCs) for each sample and blank analysis. Non-target compounds will be reported using a Mass Spectral Library search.	Not applicable	Not applicable
Sample Batching	The laboratory will batch project samples together along with QC samples specified from the project. Non-project information will not be included in the data packages.	Not applicable	Not applicable
Percent solids	For solid samples, the percent solids will be determined and sample results will be corrected for percent solids.	Not applicable	Not applicable
Dilutions	1. When target analyte concentration exceed upper limit of calibration curve. 2. When matrix interference demonstrated by lab and documented in the case narrative (highly viscous samples or a large number of non-target peaks on the chromatogram). 3. Samples should be cleaned up during sample preparation/extraction procedure using appropriate methods when matrix interference is present. 4. Laboratory will note in the data deliverables which analytical runs were reported.	Not applicable	Not applicable
Laboratory control limits	1. Generated with results for an analyte from a minimum of 20 sample analyses. The average of the sample results and the standard deviation are calculated. The internal warning limits are established at 2 times the standard deviation and the control limits are established at 3 times the standard deviation. The control limits are updated annually.	Not applicable	Not applicable

Table 3-2. *SVOCs using USEPA Method 8270C quality control requirements and corrective actions*

Audit	Frequency	Control Limits	Corrective Action
Deliverables	1. Full deliverables must be provided to document each audit item for easy reference and inspection. 2. An example calculation will be provided for each analysis, for each type of matrix in the data package using samples from the project. 3. Any laboratory abbreviations or notations presented in the raw data or summary information will be explained or referenced in the case narrative. 4. Final spiking concentrations will be presented in summary form. 5. Standard tracing information will be provided. 6. Cooler temperatures will be provided in the data packages. 7. Run logs will be provided in the data packages.	Not applicable	Provide missing or additional deliverables for validation purposes.
Method and QCD requirements	The laboratory will perform the method as presented in this QCD and will adhere to the QCD requirements presented herein. Otherwise the laboratory will specifically note any procedures that differ from the method or the QCD in the data package case narrative.	Not applicable	Not applicable

Notes:
Laboratory analysis and any data validation will be performed in accordance with QA/QC criteria established in these tables and the analytical methods. Excursions from QA/QC criteria will be qualified based on guidance provided in this QCD.
Communications with O'Brien & Gere will be documented and included in the data packages.
Source: O'Brien & Gere

Table 3-3. PCBs using USEPA Method 8082 quality control requirements and corrective actions.

Audit	Frequency (Applies to both primary and confirmation columns)	Control Limits (Applies to both primary and confirmation columns)	Laboratory Corrective Action (Applies to both primary and confirmation columns)
Holding Times	Samples must be extracted and analyzed within holding time.	Extract within 7 days from collection for aqueous samples and 14 days from collection for solid samples. Analyze extracts within 40 days of extraction.	1. If holding times are exceeded for initial or any re-analyses required due to QC excursions, notify the Quality Assurance Officer (QAO) immediately since re-sampling may be required. 2. Document any observations and corrective action in the case narrative.
Initial Calibration	Prior to start up and when criteria are exceeded for continuing calibration. Calibrations must contain all target analytes. Quantitation of analyses will utilize the initial calibration results.	1. Minimally five concentrations for Aroclor 1016/1260 (one point calibration for the remaining Aroclors), one calibration standard must be at concentration less than or equal to the QL. 2. Recommended that if results are reported below the QL, a separate standard at the MDL level analyzed after calibration is complete to check sensitivity. 3. If RSD ≤20%, the average relative response factor (internal calibration) or average calibration factor (external calibration) is used for quantitation. If RSD >20%, a linear regression calibration that does not pass through the origin with a correlation coefficient (r) ≥0.990 is used for quantitation; or a nonlinear first or second order calibration curve with a coefficient of determination (COD) of ≥0.990 is used for quantitation.	1. Identify and correct problem. 2. Recalibrate instrument; samples should not be analyzed until initial calibration criteria are met. 3. Document any observations and corrective action in the case narrative.

Table 3-3. PCBs using USEPA Method 8082 quality control requirements and corrective actions.

Audit	Frequency (Applies to both primary and confirmation columns)	Control Limits (Applies to both primary and confirmation columns)	Laboratory Corrective Action (Applies to both primary and confirmation columns)
Calibration Verification	Calibration standards must contain Aroclor 1016/1260 at the mid-range concentration. Calibration verification standards must be analyzed every 20 samples and must bracket each end of the sample sequence. In the case that Aroclors are detected above the MDL concentration in the associated samples, the identified Aroclor must be analyzed within the same 48 hour period as the sample in a valid analytical sequence.	Calibration verification response (% difference) or concentration (% drift) ≤ 15%. RT for each target analyte must be within established RT windows.	1. Reanalyze. 2. If criteria are still not met, identify and correct problem, recalibrate; reanalyze samples back to last compliant calibration standard. Samples must be bracketed by compliant calibration standards. 3. Document any observations and corrective action in the case narrative.
Retention Time Windows	Retention time windows (absolute retention time) must be established in accordance with USEPA Method 8000B/8000C or relative retention times must be used if internal standards are employed.	Compounds must be within established retention time windows or within laboratory established relative retention time criteria for the succeeding calibration standards. Retention time windows must be provided for each calibration verification. Retention times for each surrogate analyzed for samples and QC samples must be provided on a summary form.	1. Reanalyze. 2. If criteria are still not met, identify and correct problem, recalibrate; reanalyze samples back to last compliant calibration standard. 3. Document any observations and corrective action in the case narrative.
Method Blank Analysis	Method Blank : 1 per 20 samples of similar matrix extracted at the same time and undergo same cleanup procedures as samples or a separate cleanup blank must be prepared and analyzed.	Compound concentrations must be <QL.	1. Reanalyze. 2. If limits are still exceeded, re-extract and reanalyze method blank and associated samples. Samples must not be analyzed until method blank criteria are met. 3. Document any observations and corrective action in the case narrative.
Instrument Blank Analysis	Instrument blank: Must be analyzed at the beginning of 12 hour sequence, following the initial calibration verification standard.	Compound concentrations must be <QL.	1. Reanalyze. 2. If limits are still exceeded, re-extract and reanalyze method blank and associated samples. Samples must not be analyzed until method blank criteria are met. 3. Document any observations and corrective action in the case narrative.

Table 3-3. PCBs using USEPA Method 8082 quality control requirements and corrective actions.

Audit	Frequency (Applies to both primary and confirmation columns)	Control Limits (Applies to both primary and confirmation columns)	Laboratory Corrective Action (Applies to both primary and confirmation columns)
Laboratory Control Sample Or Matrix Spike Blank Analysis	1 per 20 samples of similar matrix extracted at the same times. LCS must be spiked with the Aroclor suspected to be at the site at concentrations near the low end of the calibration curve. Otherwise, Aroclor 1016/1260 or other Aroclors may be used in the LCS analysis.	Percent recoveries must be within laboratory control limits. For compounds without established laboratory control limits, 70-130% recovery will be used. The lowest acceptable control limits for recovery will be 10%.	1. Reanalyze and examine results of other QC analyses. 2. If the percent recovery is above laboratory control limits and the affected compound is not detected in the associated samples, corrective action is not required; document in case narrative. 3. If percent recovery is below laboratory control limits or <10%, reanalyze LCS. If recoveries remain below limits and other QC criteria have been met, report both analyses and document in case narrative report. 4. If recoveries are below laboratory control limits and additional QC excursions are observed, locate and correct problem, recalibrate instrument and re-extract and/or re-analyze samples since last satisfactory LCS. 5. Document any observations and corrective action in the case narrative.
Matrix spike/ Matrix spike duplicate (MS/MSD) Analysis	Collected per project requirements. MS/MSDs must be spiked with the Aroclor suspected to be at the site at concentrations near the low end of the calibration curve. Otherwise, Aroclor 1016/1260 or other Aroclors may be used. Samples from the investigation must be used for MS/MSD analysis.	Recovery and RPD within laboratory control limits. For compounds without established laboratory control limits, 70-130% recovery will be used. The lowest acceptable control limits for recovery will be 10%.	1. Reanalyze if <10%. 2. If reanalysis is still <10%, report both analyses and document in the case narrative. 3. If re-analysis is >10% and LCS criteria are met, document in case narrative; no additional corrective action required. 4. If LCS criteria are exceeded also, examine other QC data for source of problem; *i.e.,* surrogate recoveries for extraction efficiency and calibration data for instrument performance issues. 5. Re-extract or reanalyze samples and associated MS/MSD and LCSs as required. 6. Document any observations and corrective action in the case narrative.

Table 3-3. PCBs using USEPA Method 8082 quality control requirements and corrective actions.

Audit	Frequency (Applies to both primary and confirmation columns)	Control Limits (Applies to both primary and confirmation columns)	Laboratory Corrective Action (Applies to both primary and confirmation columns)
Surrogate Spike	Samples, blanks, MS/MSDs, and LCSs must be spiked with method specified surrogate compounds on each column used in the analysis.	Recovery within laboratory control limits. Corrective action is not required if one of the four surrogates (for two columns) has recovery outside of control limits if the recovery is >10% and the remaining three surrogates are within control limits. Surrogate recoveries for each surrogate on each column must be provided in a summary form. The lowest acceptable control limits for recovery will be 10%.	1. Reanalyze. 2. If reanalysis recovery fails criteria but is >10%, report both analyses and document in case narrative report. 3. If reanalysis recovery is <10%, re-extract and reanalyze the sample. Special Circumstances. If matrix interference is present (as documented in the case narrative): 1. Reanalyze sample; may be at a higher dilution. 2. Report both analyses. Document any observations and corrective action in the case narrative.
Identification	Samples, blanks, and QC data.	Retention times must be within established retention time windows or must meet relative retention time criteria. Confirmation analysis is required. Retention time windows must be provided for each calibration verification.	1. Investigate problem; reanalyze calibration standards to check for retention time shift. 2. Document any observations and corrective action in the case narrative.

Table 3-3. PCBs using USEPA Method 8082 quality control requirements and corrective actions.

Audit	Frequency (Applies to both primary and confirmation columns)	Control Limits (Applies to both primary and confirmation columns)	Laboratory Corrective Action (Applies to both primary and confirmation columns)
Quantitation	Samples, blanks, and QC data.	Confirmation analysis is required. USEPA CLP Form 10 Summary form, providing the percent difference and retention times for all detected analytes in samples and QC samples, will be provided. Percent difference must be less than 25%: Difference between Primary column concentration and the Confirmation column divided by the Primary column times 100. Internal or external standard method may be used. Verify concentration is within linear calibration range of standards. Aroclor concentration is determined using response factor for each of the characteristic peaks and then averaging the five concentrations. Peak areas from a minimum of three Aroclor peaks unique, if possible, to the target Aroclor will be used to quantitate the Aroclor concentration. Every effort must be made to meet specified QL requirements. Lab must state the technique used for quantitation of results for the samples.	1. If concentration is above linear calibration range, dilute sample and reanalyze. Dilution should result in concentration in the upper calibration range of the instrument. 2. Document any observations and corrective action in the case narrative.

Table 3-3. PCBs using USEPA Method 8082 quality control requirements and corrective actions.

Audit	Frequency (Applies to both primary and confirmation columns)	Control Limits (Applies to both primary and confirmation columns)	Laboratory Corrective Action (Applies to both primary and confirmation columns)
Field/ Equipment Blank Analysis	Collected per project requirements.	Compounds concentrations must be <QL.	1. Investigate problem; reanalyze to verify laboratory cross contamination is not a factor. 2. Document in the case narrative.
Field Duplicate Analysis	Collected per project requirements.	Validation criteria: 50% RPD for waters and 100% RPD for solids. For sample results that are less than or equal to five times the QL, the criterion of plus or minus two times the QL will be applied to evaluate field duplicates.	No corrective action required of the laboratory since the laboratory will not know the identity of the field duplicate samples. If these criteria are not met, sample results will be evaluated on a case-by-case basis during the validation process.
Chromatography Presentation	For each standard, sample and QC sample analysis.	Copies of chromatograms provided in the data package must be large enough to view during validation; detail of each peak involved in the Aroclor identification, including peak shape and associated baseline. In the case that matrix interference is detected or manual integration is performed, enlarged copies of those manipulations will be included in the data package for review.	1. Provide requested information.
Cleanup	Acid wash clean-up is used for PCB extracts.	Calibrate according to method. Criteria must be met as listed in method.	Not applicable
Sample Batching	The laboratory will batch project samples together along with QC samples specified from the project. Non-project information will not be included in the data packages. USEPA Form 8 Summary form, providing the date, time of analysis of samples and QC samples, surrogate retention times and surrogate retention time window, will be provided.	Not applicable	Not applicable

Table 3-3. PCBs using USEPA Method 8082 quality control requirements and corrective actions.

Audit	Frequency (Applies to both primary and confirmation columns)	Control Limits (Applies to both primary and confirmation columns)	Laboratory Corrective Action (Applies to both primary and confirmation columns)
Confirmation Analysis	Dual column quantitation and qualitative confirmation will be performed. The information presented in CLP Form 10 will be provided in the data package for evaluation.	Not Applicable	Not Applicable
Laboratory control limits	Generated with results for an analyte from a minimum of 20 sample analyses. The average of the sample results and the standard deviation are calculated. The internal warning limits are established at 2 times the standard deviation and the control limits are established at 3 times the standard deviation. The control limits are updated annually.	Not applicable	Not applicable
Percent solids	For solids samples, the percent solids will be determined and sample results will be corrected for percent solids.	Not applicable	Not applicable
Dilutions	1. When target analyte concentration exceed upper limit of calibration curve. 2. When matrix interference demonstrated by lab and documented in the case narrative (highly viscous samples or a large number of non-target peaks on the chromatogram). . 3. Samples should be cleaned up during sample preparation/extraction procedure using appropriate methods when matrix interference is present. 4. Laboratory will note in the data deliverables which analytical runs were reported.	1. The reagent blank will meet the method blank criteria.	1. Reanalyze reagent blank until method blank criteria are met.

Table 3-3. PCBs using USEPA Method 8082 quality control requirements and corrective actions.

Audit	Frequency (Applies to both primary and confirmation columns)	Control Limits (Applies to both primary and confirmation columns)	Laboratory Corrective Action (Applies to both primary and confirmation columns)
Deliverables	1. Full deliverables must be provided to document each audit item for easy reference and inspection. 2. An example calculation will be provided for each analysis, for each type of matrix in the data package using samples from the project. 3. Any laboratory abbreviations or notations presented in the raw data or summary information will be explained or referenced in the case narrative. 4. Final spiking concentrations will be presented in summary form. 5. Standard tracing information will be provided. 6. Cooler temperatures will be provided in the data packages. 7. Run logs will be provided in the data packages.	Not applicable	Provide missing or additional deliverables for validation purposes.
Method and QCD requirements	The laboratory will perform the method as presented in this QCD and will adhere to the QCD requirements presented herein. Otherwise the laboratory will specifically note any procedures that differ from the method or the QCD in the data package case narrative.	Not applicable	Not applicable

Note
Data validation will be performed in accordance with QA/QC criteria established in these tables and the analytical methods that are currently used by the laboratory.
Excursions from QA/QC criteria will be qualified based on guidance provided in this QCD.
Communications with the QAO will be documented and included in the data packages.
Source: O'Brien & Gere

Table 3-4. Metals and mercury quality control requirements and corrective actions

Audit	Frequency	Control Limits *(Criteria for 6020, 7470A, 7471A)*	Corrective Action
Applies to: Metals using USEPA Methods 6020 and mercury by USEPA Methods 7470A/7471A			
Holding Times	Samples must be digested and analyzed within holding time.	Metals: 180 days from collection to analysis. Mercury: 28 days from collection to analysis.	1. If holding times are exceeded for initial or any reanalysis required due to QC excursions, notify the QAO since re-sampling may be required. 2. Document any observation or corrective action in the case narrative.
Mass Tuning	A solution containing elements representing mass regions of interest (Li, Co, In, and Tl for example) must be analyzed prior to sample analysis.	Mass calibrations must be within 0.1amu from the true value. The resolution should be <0.9amu full width at 10 percent peak height.	1. Adjust the mass calibration until criteria are met.
Initial Calibration Verification and Continuous Calibration Verification (Metals, mercury, cyanide) (ICV, CCV)	A minimum of two-point calibration for ICP consisting of one at least one standard and one blank. Is required. *An appropriate internal standard is required for each analyte. Recommended internal standards are 6Li, 45Sc, 74Ge, 89Y, 103Rh, 115In, 159Tb, 169Ho, and 209Bi.* Five point calibration for remaining methods, with one standard at the QL level. Should calibrate each time the instrument is set up. After calibration, Initial calibration verification (ICV) is performed. The ICV is from a source independent of the calibration standards. A continuing calibration verification (CCV) is analyzed at the beginning of the run, at 10% or every 2 hours. Also verify at the end of each run.	ICV, CCV - 90% to 110% of expected value for ICP, AA, colorimeter, and spectrophotometer. ICV for Mercury – 90% to 110% of expected true value. CCV for Mercury - 80% to 120% of expected true value. Correlation coefficient for first or second order curve must be ≥ 0.995.	1. Reanalyze. 2. If criteria are still not met, identify and correct problem, recalibrate. 3. Document any observation or corrective action in the case narrative - samples should not be analyzed until calibration control limit criteria have been met.

Table 3-4. Metals and mercury quality control requirements and corrective actions

Audit	Frequency	Control Limits *(Criteria for 6020, 7470A, 7471A)*	Corrective Action
Lower Limit of Quantitation Check (LLQC)	1. For ICP and AA, LLQC is a standard at the QL concentration analyzed at the beginning of each run for all elements at the QL level	The percent recovery of the LLQC must meet the control limits of 70-130%.	1. The LLQC shall be re-analyzed immediately for those analytes; if the results of the re-analysis for those analytes fall within the control limits, no further corrective action is required. 2. If the results of the re-analysis for those analytes do not fall within the control limits, the analysis shall be terminated, the problem corrected, the instrument recalibrated, the LLQC analyzed, and the samples associated with the LLQC re-analyzed. 3. Document any observation or corrective action in the case narrative.
Initial and Continuing Calibration Blank (ICB/CCB) (Metals, mercury, cyanide)	After ICV, CCV, at beginning and end of run and at a rate of 10% or every 2 hours during run.	The absolute value of the ICB and CCB must not exceed the QL.	1. Identify and correct problem. 2. If criteria are still not met, recalibrate and reanalyze affected samples. 3. Document any observation or corrective action in the case narrative-samples cannot be analyzed until blank control limit criteria have been met.
Rinse Blank	*Rinse blank must be analyzed following every sample and standard to flush the instrument.*	*The absolute value of the rinse blank must not exceed the QL.*	1. Identify and correct problem. 2. If criteria are still not met, recalibrate and reanalyze affected samples. 3. Document any observation or corrective action in the case narrative - samples cannot be analyzed until blank control limit criteria have been met.
Preparation Blank Analysis	One for each batch of samples prepared/ digested, or 1 in 20 samples, whichever is greater. PB shall be carried through the complete procedure and contain the same acid concentration in the final solution as the sample solution used for analysis.	The absolute value of the method blank must not exceed the QL.	1. Reanalyze blank. 2. If limits are still exceeded, clean instrument and recalibrate analytical system and re-preparation and reanalyze affected samples if detected. 3. Document any observation or corrective action in the case narrative - samples cannot be analyzed until blank criteria are met.
Field/Equipment Blank Analysis	Field collected - One per sampling event, or one per 20 samples or one per matrix (for less than 20 samples)	Less than QL	1. Investigate problem. 2. Document any observation or in the case narrative.

Table 3-4. Metals and mercury quality control requirements and corrective actions

Audit	Frequency	Control Limits *(Criteria for 6020, 7470A, 7471A)*	Corrective Action
Laboratory Control Sample Analysis	Every 20 samples or each digestion batch. Prepared independently from calibration standards.	Recovery within 80 to 120%	1. Reanalyze LCS and examine results of other QC analyses. 2. If recovery is still outside limits, and other QC criteria are met, report both runs. 3. If other QC criteria have not been met, stop analysis, locate and correct problem, recalibrate instrument and reanalyze samples since last satisfactory LCS. 4. Document corrective action in the case narrative.
Serial Dilution Analysis for ICP (Metals)	Required once per analytical batch when analyte concentration is >10 times the instrument detection limit (IDL) (or MDL if applicable). Samples from the investigation must be used for Serial dilution analysis.	An analysis of a 1:5 dilution of the sample should provide a result with 90% to 110% of the original determination (for concentrations 10x the lower limit of quantitation after dilution	1. Report results. 2. Document corrective action in the case narrative.
Interference Check Sample Analysis for ICP (Metals)	Beginning and end of each analytical run or twice during every 8 hours, whichever is more frequent for ICP. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents.	Results for the ICS Solution AB (ICSAB) during the analytical runs shall fall within the control limit of ±2 times the QL of the true value or ±20% of the true value, whichever is greater, for the analytes included in the ICSAB	1. Reanalyze. 2. If limits are still exceeded, adjust instrument. 3. Restart analytical run and reanalyze samples analyzed since last satisfactory ICS. 4. Document any observation or corrective action in the case narrative.
Matrix Spike Analysis (Metals, mercury, cyanide)	Collected one per 20 samples or one per matrix (for less than 20 samples) Samples from the investigation must be used for MS/MSD analysis.	Recovery within laboratory control limits or 75-125%, or in-house laboratory limits. Recovery does not apply if sample concentration > 4 X spike concentration. Spike must contain all analytes. The lowest acceptable laboratory control limits for recovery will be 10%.	1. Analyze post-digestion/post-distillation spike at two times the QL or two times the indigenous level, whichever is greater. 2. Document any observation or corrective action in the case narrative.
Post-Digestion Spike (Recommended for Metals, mercury)	Spike must contain all target elements. Performed every 20 samples as necessary.	Recovery within 80-120%of true value.	1. Dilute sample and reanalyze. 2. Recovery of the reanalysis must be 90-110% of the original analysis. 3. If recovery is outside limits, document in the case narrative. 4. Standard additions may be used to compensate for matrix effects.

Table 3-4. Metals and mercury quality control requirements and corrective actions

Audit	Frequency	Control Limits *(Criteria for 6020, 7470A, 7471A)*	Corrective Action
Internal standard	*Monitored for all samples, blanks, standards, and QC samples analyzed.*	*Internal Standard counts should be within 30% of Internal Standard counts of the calibration standard for all samples and standards.*	*1. If internal standard area is not within 30%, review the internal areas of the closest calibration blanks for compliance. If the calibration blanks meet criteria; dilute the sample five fold and reanalyze.* *2. If the internal standard area of the calibration blank is also outside of 30%, stop sample analysis and recalibrate.*
Laboratory Duplicate or Matrix Spike Duplicate Analysis	Collected one per 20 samples or one per matrix (for less than 20 samples) Samples from the investigation must be used for Laboratory Duplicate and MSD analysis	Laboratory control limit or 20% for RPD shall be used for original and duplicate sample values greater than or equal to five times the QL. A control limit of the QL value shall be used if either the sample or duplicate value is less than five times the CRQL.	1. Investigate problem and reanalyze. 2. Document any observation or corrective action in the case narrative.
Field Duplicate Analysis	Field collected – One for each matrix; every 20 samples of similar matrix. The field duplicate identification will not be provided to the laboratory.	Validation criteria: 50% RPD for waters and 100% RPD for solids. For sample results that are less than or equal to five times the QL, the criterion of plus or minus two times the QL will be applied to evaluate field duplicates.	No corrective action required of the laboratory since the laboratory will not know the identity of the field duplicate samples. If these criteria are not met, sample results will be evaluated on a case-by-case basis.
Percent solids	For solid samples, the percent solids will be determined and sample results will be corrected for percent solids.	Not applicable	Not applicable
Laboratory control limits	Generated with results for an analyte from a minimum of 20 sample analyses. The average of the sample results and the standard deviation are calculated. The internal warning limits are established at 2 times the standard deviation and the control limits are established at 3 times the standard deviation. The control limits are updated annually.	Not applicable	Not applicable
IDL Determination for ICP	Recommended within 30 days of the start of analysis and semiannually.	Not applicable	Not applicable

Table 3-4. Metals and mercury quality control requirements and corrective actions

Audit	Frequency	Control Limits *(Criteria for 6020, 7470A, 7471A)*	Corrective Action
MDL Determination	Before any field samples are analyzed, the MDLs shall be determined for non-prepared analyses, each digestion procedure and instrument used, prior to the start of analyses, and annually thereafter.	Not applicable	Not Applicable
Linear Range Analysis for ICP	Every 6 months must be routinely monitored by analysis of high concentration standard.	Results for high point standard must be within 10% of true value.	Not applicable
Interelement Correction For ICP	Within 6 months of the start of analysis and annually. Correction factors for Al, Ca, Fe, and Mg must be reported and for others if they are applied.	Not applicable	Not applicable
Sample Batching	The laboratory will batch project samples together along with QC samples specified from the project. Non-project information will not be included in the data packages.	Not applicable	Not applicable
Dilutions	1. When target analyte concentration exceed linear dynamic range of the instrument. 2. When matrix interference demonstrated by lab and documented in the case narrative. 3. Laboratory will note in the data deliverables which analytical runs were reported.	Not applicable	Not applicable
Deliverables	1. Full deliverables must be provided to document each audit item for easy reference and inspection. 2. An example calculation will be provided for each analysis, for each type of matrix in the data package using samples from the project. 3. Any laboratory abbreviations or notations presented in the raw data or summary information will be explained or referenced in the case narrative. 4. Final spiking concentrations will be presented in summary form. 5. Standard tracing information will be provided. 6. Cooler temperatures will be provided in the data packages. 7. Run logs will be provided in the data packages.	Not applicable	Provide missing or additional deliverables for validation purposes.

Table 3-4. Metals and mercury quality control requirements and corrective actions

Audit	Frequency	Control Limits *(Criteria for 6020, 7470A, 7471A)*	Corrective Action
Method and QCD requirements	The laboratory will perform the method as presented in this QCD and will adhere to the QCD requirements presented herein. Otherwise the laboratory will specifically note any procedures that differ from the method or the QCD in the data package case narrative.	Not applicable	Not applicable

Note
Data validation will be performed in accordance with QA/QC criteria established in these tables and the analytical methods that are currently used by the laboratory.
Excursions from QA/QC criteria will be qualified based on guidance provided in this QCD.
Communications with the QAO will be documented and included in the data packages.
Source: O'Brien & Gere

FIGURES

I/PROJECTS/GM 4966/39923/DOC/DWG/001.DWG

PLOT DATE: 12/13/2007 078 jmo

FIGURE 1

TRUE NORTH

SS-14
SS-13
POTENTIAL AREA WITH FLOOR BLOCKS
SS-16
SS-15
B-4
FB-05 & FBS-05
SS-12
FB-04 & FBS-04
SS-11
FB-03 & FBS-03
SS-04
SS-10
SS-03
SS-09
FB-02 & FBS-02
SS-08
SS-20
FB-01 & FBS-01
SS-07
SS-06
SS-05
C
B-2
MW2-2
SS-19
SS-18
MW2-1
SS-02
SS-01
B-3
Water Test For Tank (Buried)
FORMER ASPHALT ROADWAY
Former Pump House
SS-17

LEGEND

- MONITORING WELL LOCATION
- AREA EXCEEDING NONRESIDENTIAL CRITERIA
- SURFACE SOIL DELINEATION/ CONFORMATION LOCATION
- FLOOR BLOCK AND ASSOCIATED SOIL SAMPLE LOCATION

RACER TRUST
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

SUB AREAS B AND C
SAMPLING LOCATIONS

80 0 80
1"=80'

14774/46540.007
August 2011

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APPENDIX B

O'Brien & Gere Low-Flow Groundwater Sampling Protocol

LOW FLOW PURGING GROUNDWATER SAMPLING PROTOCOL

Low Flow Sampling Protocol (Groundwater Sampling)

PREPARATION

Prior to commencing daily sampling activities all ground water quality monitoring equipment shall be field checked in accordance with the manufacturers specifications. Results of field checks will be recorded in the field log notebook.

The depth of wells and well screened intervals will be acquired from site specific drilling logs or existing monitoring well specification tables. This data (and source of data) will be pre-recorded on the Groundwater Field Sampling Log.

Ground Water Elevation Measurements

A complete round of groundwater elevations should be measured in each site well to be sampled prior to commencing ground water sampling activities. Care shall be taken to disturb only the upper portion of the well water column to avoid re-suspension of settled solids in the wells. Groundwater elevation measurements will be taken as follows:

1. Identify the well and record the location on the Groundwater Field Sampling Log.
2. Put on a new pair of disposable gloves.
3. Using an electric well probe, measure the depth to water table.
4. Decontaminate the well probe in accordance with methods described in the QAPP.

Sampling Procedures

1. Identify the well and record the location on the Low Flow Groundwater Field Sampling Log. Review well depth, depth to water, and screened interval data.
2. Put on a new pair of disposable gloves.
3. Clean all meters, tools, and equipment before placing on the plastic sheet.
4. Prepare the submersible pump for operation. The pump discharge tubing should be new or dedicated polyethylene. Connect the tubing to the in-line water quality indicator parameter meter.
5. Slowly and carefully lower the sampling pump and associated equipment into the well. The objective is to minimize mixing of the stagnant water above the screened interval with the water within the interval and avoid re-suspension of fines within the well. Position the pump intake in the center of the screened interval.

6. Commence well purging by low flow pumping from the well. The flow rate shall not exceed 0.5 liters/min. Record purge rate on the Groundwater Field Sampling Log.

7. During purging, monitor and record pH, specific conductivity, temperature, oxidation-reduction potential (redox), and turbidity approximately every three minutes from the in-line monitor and turbidity meter.

8. Record water levels periodically during purging, to ensure that drawdown is not occurring. Should drawdown be occurring, reduce pumping rate and re-check for drawdown on a periodic basis.

9. Well sampling can commence after equilibration of water quality parameters. Equilibration is defined as three consecutive readings within 10% of each other or a minimum of 30 minutes of pumping. Record total volume of water purged and purging time on the Groundwater Field Sampling Log for future reference.

10. Pumping rates should, if needed, be reduced to the minimum capabilities of the pump to avoid pumping the well dry and/or allow stabilization of indicator parameters. If recharge rate of the well is very low and the well is purged dry, then sampling should commence as soon as the well has recharged to a sufficient level to collect the appropriate volume of samples. Sample collection using bailing techniques may be used in this situation. However, turbidity levels shall be maintained as low as possible.

11. Remove the sampling bottles from their transport containers, and prepare the bottles for receiving samples. Inspect all labels to insure proper sample identification. Sample bottles should be kept cool with their caps on until they are ready to receive samples. Arrange the sampling containers to allow for convenient filling. Always fill the containers labeled purgeable priority pollutant first.

12. After the last sample has been collected, record the date and time.

13. Begin the Chain of Custody documentation.

14. Remove the submersible pump from the well and decontaminate the pump both internally and externally. Associated pump wiring shall be rinsed with decontaminating fluids as well. Decontamination will be performed by the following procedure:

    - Pump solution (approximately five gallons) of potable water and non-phosphate detergent through pump.
    - Pump clean potable water through pump.
    - Pump distilled/deionized water through pump.
    - Return the pump to its covered storage box.

15. Replace the well cap, and lock the well protection assembly before leaving the well location.

O'Brien & Gere Engineers, Inc. — Low Flow Groundwater Sampling Log

Date _____ Personnel _____ Weather _____

Site Name _____ Evacuation Method _____ Well # _____

Site Location _____ Sampling Method _____ Project # _____

Well information:

Depth of Well * _____ ft.

Depth to Water * _____ ft.

Length of Water Column _____ ft.

Depth to Intake * _____ ft.

* Measurements taken from

_____ Top of Well Casing

_____ Top of Protective Casing

_____ (Other, Specify)

Start Purge Time: _____

Elapsed Time	Depth To Water (ft below TOC)	Temperature (^{o}C)	pH	Conductivity (mS/cm)	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min)

End Purge Time: _____

Water sample:

Time collected: _____

Total volume of purged water removed: _____

Physical appearance at start

Color _____

Odor _____

Sheen/Free Product _____

Physical appearance at sampling

Color _____

Odor _____

Sheen/Free Product _____

Field Test Results:

Dissolved ferrous iron: _____

Dissolved total iron: _____

Dissolved total manganese: _____

Analytical Parameters:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

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APPENDIX G

Health and Safety Plan

Health & Safety Plan
Dort Highway Land
Grand Blanc, Michigan

RACER Trust
Ypsilanti, Michigan

August 2011

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15388 | 47852

Health & Safety Plan
Dort Highway Land

10800 South Saginaw Street
Grand Blanc, Michigan

Prepared for:
RACER Trust
Ypsilanti, Michigan

SCOTT L. CORMIER, P.E.
VICE PRESIDENT
O'Brien & Gere Engineers, Inc.

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1. INTRODUCTION

The Health and Safety Plan (HASP) presented herein describes the health and safety procedures and emergency response guidelines to be implemented by O'Brien & Gere Engineers, Inc. (O'Brien & Gere) while performing soil investigation and remediation activities at the Dort Highway Land Site located in Grand Blanc, Michigan. The investigation and remediation activities to be performed are detailed in the Sampling and Analysis Plan (O'Brien & Gere, 2011). The Dort Highway Land is located adjacent to the General Motors Company (GM) Weld Tool Center (WTC) plant at 10800 South Saginaw Street, Grand Blanc, Michigan. A Site Location Map is included as **Figure 1** and a Site Layout depicting the Dort Highway Land is included as **Figure 2.**

While performing the fieldwork listed in the Sampling & Analysis Plan, personnel may come in contact with soils that may contain concentrations of polynuclear aromatic hydrocarbons (PAHs). This HASP has been developed to minimize contact by site personnel with these materials. Implementing the provisions of this HASP will minimize the potential for:

- Exposing Site personnel to the compounds of concern (*i.e.*, PAHs)
- Impacting public health and the environment by materials that may potentially migrate off Site during work activities
- Not complying with applicable governmental and non-governmental (American Conference of Governmental Industrial Hygienists [ACGIH]) regulations and guidelines. In particular, the rules of the Occupational Safety and Health Administration (OSHA) in Part 1910.120 (Title 29 Code of Federal Regulations [CFR] Part 1910.120) will be implemented for site work
- Adverse impact to Site workers, the general public, or the environment by initiation of emergency response procedures

For the purpose of this HASP, activities performed on Site involving contact with materials with potentially elevated chemical presence will be considered contaminated operations requiring Personal Protective Equipment (PPE). A detailed description of the PPE required is presented in Section 2.8.

1.1 COVERED PERSONNEL

The applicability of this Project HASP extends to personnel who will be on Site, including State and Federal Agency personnel, contractors, subcontractors of O'Brien & Gere, and visitors to the Site.

The Dort Highway Land work activities at the Site that are performed by O'Brien & Gere personnel or its subcontractors will be conducted in accordance with the provisions of this HASP. A copy of this HASP will be maintained on Site whenever activities are in progress.

1.2 HASP REVIEW & MODIFICATION

This HASP may be modified for new work activities not covered in this HASP or by developing supplemental Job Safety Analyses (JSAs). An example of a JSA template that may be used is included in **Appendix A**. JSAs will reference the HASP and will identify hazards and appropriate hazard controls for new or a higher level of hazardous work as required by the Site Health & Safety Officer (HSO). JSAs may also modify air sampling, PPE, and other safety precautions in this HASP as necessary to safely perform new work activities.

1.3 SITE DESCRIPTION

The Dort Highway Land is located immediately adjacent to the GM WTC plant located at 10800 South Saginaw Street, Grand Blanc, Michigan. A Site Location Map is included as **Figure 1** and a figure depicting the Dort Highway Land is included as **Figure 2**. The Dort Highway Land includes a 20.44 acre portion of what was formerly part of Area 2; an exterior area of the WTC. The GM LLC owned portion of the facility was previously known as the Metal Fabrication Division (MFD) and includes the other exterior areas of the plant (Areas 1 through 5) and the remaining portion of the plant (Area 6). Area 2 was an approximately 38.5 acre exterior area of the former plant. The Site is currently unused (*i.e.*, vacant land).

The Dort Highway Land fronts on Dort Highway and is located west of the GM WTC plant (see **Figures 1** and **2**).

The Dort Highway Land is presently owned by Revitalizing Auto Communities Environmental Response Trust (RACER), which took over responsibility of the site from Motors Liquidation Corporation (MLC) which managed the Dort Highway Land Site following the bankruptcy of General Motors Corporation.

Previous investigations into the potential environmental impacts of the Dort Highway Land have been performed as is summarized in the Site History and Current Conditions Report (O'Brien & Gere, 2011). A brief summary of these investigations is also included in Section 2.3 of the Sampling and Analysis Plan.

1.4 SCOPE OF WORK

This HASP addresses the following work activities that may be performed at the Dort Highway Land site:

- Surface soil sampling
- Soil excavation
- Post excavation verification sampling
- Backfilling and site restoration
- Groundwater monitoring well installation
- Groundwater sampling

A detailed discussion of potential work activities for the Site is presented in the Sampling and Analysis Plan (O'Brien & Gere, 2011).

1.5 PROJECT PERSONNEL & ORGANIZATION

The Dort Highway Land investigation and remediation activities will be organized as follows: RACER will direct the project and O'Brien & Gere personnel and its subcontractors will implement the work.

The following are key project personnel with respect to O'Brien & Gere's scope of work.

Role	Name	Organization	Phone	E-mail
Program Director	D. Favero	RACER Trust	217.741.6235	dfavero@racertrust.org
Project Officer	S. Cormier	O'Brien & Gere	248.505.8540	scott.cormier@obg.com
Project Manager	C. Yantz	O'Brien & Gere	313.333.0211	clifford.yantz@obg.com
Site Health & Safety Officer	K. Schneider	O'Brien & Gere	734.306.9685	kevin.schneider@obg.com
Health & Safety Corporate Manager	J. Parsons	O'Brien & Gere	315.391.0638	jeffrey.parsons@obg.com
Subcontractor Competent Person	TBD[1]	TBD[1]	TBD[1]	TBD[1]

[1] – The excavation, drilling, survey (or other) subcontractor qualified competent person to be determined.

1.6 RESPONSIBILITIES

As directed in the HASP, general compliance and HASP implementation will generally be addressed first by the O'Brien & Gere Site HSO with support from Project Officers. Subcontractors must identify qualified Safety Competent Persons who must be on Site for all field activities. All project personnel have the authority to stop work if a life-threatening condition or behavior is observed.

1.6.1 O'Brien & Gere Project Officer

The Project Officer is ultimately accountable for project safety performance and is responsible for providing executive management support for health and safety.

1.6.2 O'Brien & Gere Project Manager

O'Brien & Gere Project Manager is responsible for providing upper level management support for health and safety. He or she will provide sufficient authority and resources to the entire project team (including the HSO) to fully implement health and safety requirements as outlined in this HASP, contract documents, and regulatory requirements. The Project Manager is held accountable for project safety performance by the Project Officer and delegates safety responsibilities to the HSO, as appropriate, for the fieldwork under their direction.

1.6.3 O'Brien & Gere Site Health & Safety Officer (HSO)

The HSO advises project personnel on matters of health and safety on the Site. The HSO has the authority to stop work if any operation threatens Site workers, the public, or environment.

In general, responsibilities of the HSO include, but are not limited to, the following:

- Conducting and documenting safety inspections on a weekly basis and conducting daily safety walkthroughs
- Conducting daily safety pre-work safety meetings and documenting meetings on a daily Pre-Task Planner (or equivalent). An example of a daily Pre-Task Planner is included as **Appendix B.**
- Selection and inspection of PPE
- Conducting periodic surveillance to evaluate effectiveness of the HASP
- Monitoring on-Site hazards and conditions and recommending modifications to the HASP when new hazards are observed
- Informing the Construction Supervisor of observed safety deficiencies requiring corrective action
- Having knowledge of emergency procedures, evacuation routes, and telephone numbers for emergency services
- Posting directions to the hospital and telephone numbers for emergency services
- Coordinating emergency medical care as necessary
- Immediately notify followed by submittal of written accident/emergency reports to a client representative within 24 hours
- Review JSAs for all high-risk construction activities
- Reviewing and maintaining safety documentation and reports

1.6.4 O'Brien & Gere Manager of Corporate Health & Safety

The O'Brien & Gere Manager of Corporate Health & Safety will review and approve the HASP. O'Brien & Gere Manager of Corporate Health & Safety will periodically conduct safety inspections and report findings to the Project Manager and Project Officer. The O'Brien & Gere Manager of Corporate Health & Safety will periodically attend project status meetings.

1.6.5 Subcontractor Safety Competent Person

All subcontractors under contract to O'Brien & Gere are covered by this HASP and will be required to designate a Safety Competent Person. The Safety Competent Person must be the Superintendent/Foreman unless the project is sufficiently large to require a full-time Safety Competent Person. A Safety Competent Person must be on Site at all times when the subcontractor has employees performing work for O'Brien & Gere and will have the

same responsibilities as the O'Brien & Gere HSO within the subcontractor's scope of work. This individual must possess a sound working knowledge of pertinent OSHA regulations, this HASP, and other applicable safety requirements related to scope of work. The competent person will ensure timely correction of safety deficiencies identified by O'Brien & Gere. Subcontractors may request assistance from the O'Brien & Gere Corporate Health & Safety Department. An Alternate Safety Competent Person may also be designated as a backup.

2. SITE SAFETY & CONTROL PROCEDURES

This HASP incorporates by reference the OSHA requirements in 29 CFR Part 1910, 29 CFR Part 1926, the O'Brien & Gere Corporate Health & Safety Manual (CHS Manual) and EPA "*Standard Operating Safety Guides*," Publication 9285.1-03, June 1992. A copy of the O'Brien & Gere CHS Manual will be maintained on Site for reference. Subcontractors must review the O'Brien & Gere CHS Manual and/or Site HASP to ensure they meet or exceed O'Brien & Gere corporate requirements as well as all regulations applicable to their scope of work. Key Site safety procedures applicable to O'Brien & Gere employees and subcontractors are described in more detail in this section.

2.1 SAFETY TRAINING & COMPETENT PERSONS

Project personnel must be properly trained for the type of work being performed and consistent with OSHA Standards 29CFR1910 and 29CFR1926. Specialized training is required for (but not limited to) work with confined space entry and excavations.

HAZWOPER TRAINING - Project personnel will be trained as required by the OSHA Hazwoper Standard 29CFR1926.65 and 1910.120 as outlined below:

- OSHA 40 hour training with current 8-hour refresher. All Site personnel who may contact contaminated soil, sediment, groundwater, or materials or must otherwise enter an Exclusion or Contamination Reduction Zone. Site personnel with limited potential for contact with contaminated soil, sediment, or water may enter Exclusion Zones with OSHA 24 hour training with a current 8-hour refresher. An example of a trade in this category is surveyors
- COMPETENT PERSONS – the subcontractor will designate an Excavation Competent Person when excavations are being performed

2.2 VAPOR & ODOR CONTROL

Volatile organic vapors are not anticipated to be encountered during field activities at levels that would pose a potential health hazard or odor problem. However, the following controls will be implemented to mitigate potential issues:

- Controlling the amount of soils/sediments disturbed concurrently
- Open excavations and exposed stockpiled contaminated soil will be covered with polyethylene sheeting at the end of each work day

2.3 DAILY SAFETY MEETINGS

Safety meetings must be held daily and documented using a **Daily Pre-Task Planner** (Appendix B) or equivalent document approved by the O'Brien & Gere HSO.

> ***NOTE - The intent of daily safety meetings is to encourage daily safety planning (top portion of the Daily Pre-Task Planner)by Supervisors and support communication between Supervisors and their respective field crews (bottom portion of the Daily Pre-Task Planner).***

The use of Pre-Task Planners during daily safety meetings provides documentation about what "safety messages" Site personnel are receiving on a daily basis. Pre-Task Planners also provide a checklist to monitor changes to site personnel, equipment, work methods, or conditions that may affect hazards and require different safety precautions. Pre-Tasks Planners are intended to supplement, but not replace, Pre-Work JSAs and safety plans. Pre-Task Planners will be retained on Site for inspection during periodic safety audits.

Any significant changes to the scope of work or work methods during the work shift will require revising the Pre-Task Planner. Recognition of previously unidentified hazards will also require revising their safety plan or

Pre-Work JSAs. ***Pre-Task Planners are returned to the O'Brien & Gere HSO at the end of the day and will be maintained on site for inspection.***

2.4 WEEKLY TOOLBOX SAFETY MEETINGS

Toolbox Safety meetings are held at a minimum of once per week. The HSO on smaller projects with fewer Site personnel may choose to assemble all Site personnel during Daily Safety meetings and in so doing, may not hold separate Weekly Toolbox Safety Meeting. On projects where separate Daily Safety meetings are held for different field crews, the HSO will assemble all site personnel at a Weekly Toolbox Safety meeting ("All-Hands" Safety meeting). The intent of the weekly toolbox meeting is to provide additional field safety training and review relevant safety topics for approximately 15 minutes, and ensure that a consistent safety message is delivered to all site personnel on larger projects. Attendance will be documented on the **Safety Toolbox Meeting forms** ***(Appendix C or equivalent)*****.**

2.5 PERSONAL PROTECTIVE EQUIPMENT (PPE)

This section of the HASP describes the requirements for PPE and the specific levels of protection required for each work task to be conducted at the site during project activities. Basic PPE in all Site areas will consist of Level D.

2.5.1 Protection Levels

Personnel will wear protective equipment when project activities involve potential exposure to chemicals from vapors, gases, or particulates that may be generated on Site or when direct contact with potentially hazardous substances may occur. Chemical resistant clothing protects the skin from contact with skin-destructive and absorbable chemicals. Respirators protect lungs, the gastrointestinal tract, and if a full-face respirator is worn, the eyes, against airborne toxicants. Respiratory protection levels will be based on the real-time air monitoring results and the action levels that are presented in Section 6.5.

2.5.2 Protection levels are selected based upon the following:

Measured concentrations of the Site chemicals and expected concentrations in the ambient atmosphere compared to allowable exposure levels

- Potential for exposure to chemicals in air, splashes of liquids, or other contact due to the nature of work tasks
- Site chemical toxicity, route of exposure, and chemical matrix
- All project activities conducted at the Site will require the use of one of the following levels of PPE

Level C

- Tyvek® coveralls (polycoated tyvek® when handling or working with liquids [e.g., decontamination])
- Steel toe, leather work boots and rubber overboots (taped to suit)
- Disposable inner nitrile gloves
- Outer nitrile gloves (taped to the suit)
- Full-face air purifying respirator (APR), equipped with organic vapor and high efficiency dust filters
- Hearing protection as necessary
- Eye protection (goggles, face shield, or safety glasses) as necessary
- Hard hat

Modified Level D

- Tyvek® coveralls (polycoated tyvek® when handling or working with liquids) over work clothes
- Steel toe, leather work boots
- Outer nitrile gloves
- Eye protection (goggles, safety glasses, or face shield)
- Splash shields as necessary
- Hearing protection as necessary
- Rubber overboots as necessary
- Hard hat

Level D

- Over work clothes for skin protection
- Steel toe, leather work boots
- Outer nitrile gloves
- Eye protection (goggles, safety glasses, or face shield)
- Splash shields as necessary
- Hearing protection as necessary
- Rubber overboots as necessary
- Hard hat

The specific protection levels to be employed at the Site for each work task are as follows:

- Surveying activities - PPE during surveying activities will be Level D
- Installation of monitoring wells - PPE during installation of monitoring wells will be Level D. PPE may be increased to Modified Level D or Level C based on photoionization detector (PID) readings and action levels described in Section 5.0
- Collection of groundwater samples – PPE during sample collection activities will be Level D

PPE will be maintained in a clean sanitary condition and ready for use. Disposable coveralls shall be discarded when torn and as an employee leaves the exclusion zone (EZ). Respirators shall be cleaned after each day's use and cartridges discarded. A sufficient quantity of potable water shall be supplied for washing, cleaning PPE, and drinking. A potable water supply for washing and cleaning PPE will be maintained adjacent to the decontamination area described in Section 9.0. Fresh potable water for drinking will be supplied on a daily basis and be maintained at a location removed from the active work area.

2.5.3 Reassessment of Protection Levels

Protection levels provided by PPE selection shall be upgraded or downgraded based upon a change in Site conditions or the review of the results of air monitoring.

When a significant change occurs, the hazards shall be reassessed. Some indicators of the need for reassessment are:

- Commencement of a new work phase
- Change in job tasks during a work phase

- Change of season/weather
- When temperature extremes or individual medical considerations limit the effectiveness of PPE
- Chemicals other than those expected to be encountered are identified
- Change in ambient levels of chemicals
- Change in work scope which affects the degree of contact with areas of potentially elevated chemical presence

All proposed changes to protection levels and PPE requirements will be reviewed and approved by the HSO prior to their implementation.

2.5.4 Duration of Work Tasks

The duration of project activities involving the usage of PPE will be established by the HSO or his designee based upon ambient temperature and weather conditions, the capacity of personnel to work in the designated level of PPE (heat stress and cold stress, see Section 8), and limitations of the protective equipment (*i.e.*, ensemble permeation rates, life expectancy of air-purifying respirator cartridges, *etc*.). As a minimum, rest breaks will be observed at the following intervals:

- 15 minutes midway between shift startup and lunch
- ½ hour for lunch
- 15 minutes in the afternoon, between lunch and shift end

2.5.5 Limitations of Protective Clothing

PPE ensembles designated for use during project activities have been selected to provide protection against chemicals at known or anticipated concentrations in the soil and ground water. However, no protective garment, glove, or boot is chemical-proof, nor will it afford protection against all chemical types. Permeation of a given chemical through PPE is a complex process governed by the chemical concentrations, environmental conditions, physical condition of the protection garment, and the resistance of a garment to a specific chemical. Chemical permeation may continue even after the source of the chemical has been removed from the garment.

To obtain optimum usage from PPE, the following procedures are to be followed by all Site personnel using PPE:

- When using disposable coveralls, don a clean, new garment after each rest break or at the beginning of each shift
- Inspect all clothing, gloves, and boots both prior to and during use for:
  - Imperfect seams
  - Non-uniform coatings
  - Tears
  - Poorly functioning closures
- Inspect reusable garments, boots, and gloves both prior to and during use for:
  - Visible signs of chemical permeation
  - Swelling
  - Discoloration
  - Stiffness
  - Brittleness
  - Cracks

- Any sign of puncture
- Any sign of abrasion

Reusable gloves, boots, or coveralls exhibiting any of the characteristics listed above will be discarded. PPE used in areas known or suspected to exhibit elevated concentrations of chemicals will not be reused.

Additional PPE usage guidelines are as follows:

- Ankles/wrist openings for Tyvek coveralls will be secured tightly with the use of duct tape
- Prescription eyewear used on site shall be safety glasses equipped with side shields when full-face respirators are not required. Contact lenses shall not be used
- All EZ workers will have received training in the usage of full-face air purifying respirators and self-contained breathing apparatus (SCBA), which may be required in an emergency
- Steel toe leather footwear shall be covered with neoprene overboots prior to entering the EZ and immediately upon entering the CRZ
- Safety footwear and hard hats are to be worn by site personnel at all times

EZ personnel also carry certain responsibilities for their own health and safety, and are required to observe the following safe work practices:

- Familiarize themselves with this HASP
- Use the "buddy system" when working in a contaminated operation
- Use the safety equipment in accordance with training received, labeling instructions, and common sense
- Maintain safety equipment in good condition and proper working order
- Refrain from activities that would create additional hazards (*e.g.*, smoking, eating, *etc.* in restricted areas; leaning against dirty, contaminated surfaces)
- Smoking, eating, and drinking will be prohibited except in designated areas. These designated areas may change during the duration of the project to maintain adequate separation from the active work area(s). Designation of these areas will be the responsibility of the HSO
- Soiled disposable outerwear shall be removed and placed into a covered container prior to washing hands and face, eating, using lavatory facilities, or leaving the Site

2.5.6 Respiratory Protection Program

Prior to arriving at the Site, all on site personnel will have received training in the use of, and have been fit tested for the air-purifying respirator that they may need to wear. All on Site personnel will be required to comply with their employer specific written respiratory protection program developed in accordance with OSHA 29 CFR 1910.134.

Respiratory protection may be required during some of the project activities. This is to provide worker protection from potentially contaminated particulates and volatile organic compounds (VOCs). A PID will be used to evaluate if organic vapors are present. A background reading will be established prior to commencing work activities at each active work area.

Action levels for organic vapors to evaluate the appropriate level of respiratory protection during work activities are based on the concentration of the Site chemicals measured within the breathing zone. The action levels and appropriate respiratory protection for these Site activities are as follows:

Table 2.8-6 Respiratory Protection Action Levels

Sustained Organic Vapor Reading Above Background Within Worker Breathing Zone in Parts Per Million (ppm)	Action Taken
0 or Background to 5	Half -or Full-Face Respirator Available
5 - 10	Wear Half- or Full-Face Respirator
10 - 50	Wear Full-Face Respirator
>50	Stop work, remove personnel at least 10 feet from sample location

Source: O'Brien & Gere

2.5.7 Site Control

Designated work areas will be set up as appropriate inside the fence during the Site field activities, as required. A temporary fence may be installed to prevent unauthorized access to the project work areas. The purpose of these procedures is to limit access to areas with potentially elevated chemical presence, and prevent the migration of potentially hazardous materials into adjacent clean areas. These areas are described in the following:

The Exclusion Zone (EZ) will be the area immediately surrounding the active work area. Sufficient area will be provided for efficient movement of personnel and equipment as well as chemical control. Boundaries are modifiable depending on operational requirements. The HSO will be responsible for maintaining the boundaries of this area. Personnel entering this area are required to wear the PPE as defined previously.

Personnel (including visitors) entering the EZ or contaminant reduction zone (CRZ) using respiratory protection must have successfully passed a respirator fit test in accordance with OSHA 29 CFR 1910.134. Documentation of fit testing is the responsibility of each employer.

In the event that unauthorized personnel enter the EZ, work will stop. Work will not resume until the unauthorized personnel have been removed from the EZ or have been moved to an acceptable on Site area. A log of all visitors to the Site, including those entering the EZ, will be maintained.

The Contaminant Reduction Zone (CRZ) will provide a location for removal of PPE which has contacted material with elevated chemical presence and final removal and decontamination of personnel and equipment. Supplemental safety equipment, such as fire extinguishers, portable eyewash, and extra quantities of PPE may be stored in this area. The order in which safety equipment is to be donned is as follows:

- Tyvek® suit
- Rubber boots
- Gloves
- Respirator (if required)
- Hard hat

The following order applies when removing safety equipment:

- Wash off boots and outer gloves prior to removal
- Tyvek® suit
- Hard hat
- Respirator
- Inner gloves

The Support Zone (SZ) is situated in clean areas where there is a minimal risk of encountering hazardous materials or conditions. PPE beyond standard construction safety equipment is therefore not required.

2.6 EXCAVATIONS

NOTE – Subcontractor performing excavation work will designate qualified Excavation Competent Person(s) who must be on Site during all excavation work. Soil is designated as OSHA Type C on this site for purposes of sloping and shoring. Site personnel are considered "exposed" to a cave-in hazard that must be evaluated by an Excavation Competent Person if they are standing within a distance equal to 1.5 times the depth to an excavation wall that is not shored or sloped.

Before excavating, the existence and location of ***underground utilities*** must be determined. The underground utilities will be located and identified by contacting Michigan's utility notification organization (MISS DIG System, Inc.) at least three working days prior to field activities when on public property. The O'Brien & Gere HSO will also review available drawings and work with facility personnel familiar with site utilities. Utility locating services (ground penetrating radar or equivalent) may be necessary when little information is available on the location of utilities that may be present. "Soft dig" (*e.g.*, vacuum) technologies may also be used to physically locate utilities prior to excavating.

All excavations greater than five feet deep require sloping or shoring whenever persons enter excavations or adjacent structures may be affected by a cave-in. Details on proper sloping and shoring techniques are found in Section 2.15 of the CHS Manual which is also **attached as Appendix D**. Subcontractors will identify in safety plans or JSAs specific shoring systems or sloping/benching that will be used in specific areas. Excavations greater than four feet in depth are classified as a non-permit confined space unless contamination is encountered. Refer to the "Confined Space" section of this HASP for more guidance on how excavations will be handled with respect to confined space entry requirements.

- **Assume soil is Type C** unless soil testing indicates otherwise and such testing is documented on an O'Brien & Gere Soil Analysis Checklist (see CHS Manual for checklist) or approved alternate. Standard sloping and benching (per OSHA) will follow a 1:1.5 (V:H) cut-back associated with Type C soil
- Shore excavations greater than five feet depth where personnel must enter and sloping is not feasible. Equipment used to shore excavations MUST follow OSHA shoring tables, or the subcontractor must have tabulated data from the manufacturer on Site
- If sections of trench are less than five feet and no cave-in hazard exists, then shoring is not required
- No workers may enter excavations until the designated Excavation Competent Person has inspected the excavations using the **Daily Excavation Checklist (Appendix E)**. Excavation inspections must be documented with documentation remaining on Site for the full project duration and made available for O'Brien & Gere review
- Qualified engineers will evaluate excavations that could affect the stability of adjacent structures

- A ladder or egress ramp will be provided within 25 feet of workers who must enter excavations
- Water will not be allowed to accumulate in trenches in a manner that will affect the integrity of excavation walls and shoring systems
- All spoils will be kept a minimum of two feet from the edge of the excavation
- Fall Protection will be provided around excavations left open during off-hours. Fall protection will consist of solid barricades (saw horses or portable chain link) or soft barricades (safety fence) off-set 6' from the edge
- Pedestrian Barricades:
  - Portable chain link fence (48 inches) or equivalent will be used to protect pedestrians. If pedestrian traffic is re-routed to avoid excavations, pedestrian detours must be accessible to bicyclists, handicapped persons, and other pedestrian in the area who may have special needs
- Traffic Barricades
  - Any excavation activities that affect public or plant roads must be equipped with traffic safety devices as required by the Manual on Uniform Traffic Control Devices. If flaggers are used on public roads, they must receive DOT Flagger Training

2.7 CONFINED SPACE ENTRY

A Confined Space Entry Permit (refer to CHS manual) must be fully completed prior to entry of all permit-required confined spaces. Confined spaces may be classified as non permit spaces if serious hazards have been eliminated and the classification process is documented in accordance with O'Brien & Gere's Confined Space Entry Program. Documentation must remain on Site for the full project duration and available for review.

Excavations (which are accessed by roads or ramps of sufficient grade to allow vehicles and personnel unrestricted access) are not confined spaces and are therefore not covered by confined space requirements. Excavations that lack access ramps or stairs will be considered non-permit confined spaces unless there is a chemical spill. If there is a chemical spill or contaminated soil or groundwater is encountered then the excavation will be treated as a permit-required confined space until air monitoring supports reclassifying to a non-permit confined space as outlined in O'Brien & Gere's confined space procedure and this HASP.

2.7.1 General Permit-Required Confined Space Entry Precautions

All persons entering manholes, tanks or similar permit-required confined spaces must have a body harness and lifeline attached. When vertical entry /exit is required at greater than four feet, a tripod and man-winch (or equivalent means of rescue) must be setup prior to entry. The standby person must be familiar with its operation. Rescue services (*i.e.*, fire department) MUST also be available and notified of the entry. Standby persons shall NOT enter permit-required confined spaces to conduct rescue or first aid activities.

Respiratory protection and/or mechanical ventilation must be provided where hazardous atmospheres are identified or may develop during work activities. Action levels for oxygen, combustible vapors, hydrogen sulfide and carbon monoxide are outlined below and on the Confined Space Entry Permit.

- Oxygen – 19.5% to 23.5%
- LEL – 10%
- Carbon Monoxide – 35 ppm
- Hydrogen Sulfide – 10 ppm

2.7.2 Removal of Permit-Required Confined Space Entry Requirements

If confined spaces are reconfigured so that they are no longer confined, then permit-required confined space entry procedure does not apply. Examples include installing stairs or a ramp into pits and excavations and installing a man-door size opening in tanks.

2.7.3 Downgrade to a Non-Permit Confined Space

If all serious hazards can be eliminated, then a permit-required confined space can be reclassified as a non-permit confined space. As long as hazards are eliminated, a non-permit space is essentially treated like a normal work area subject to all other safety requirements. This must be done in accordance with the Confined Space Entry Program and requires at least initial air tests, documented on a permit before a confined space can be considered a non-permit space.

2.7.4 Alternate Entry Approach

If the only actual or potential hazards in a confined space are atmospheric (oxygen, flammable vapors, toxic vapors, etc.) and a mechanical blower is sufficient to control them, then entry may be conducted under an Alternate Entry approach. Under this approach, no permit is required, no rescue equipment is necessary, no standby person is needed, and a rescue team is not required. However, the following confined space requirements remain in effect: Entrants must be trained; initial air tests must be taken; and the blower must remain operating throughout entry. Refer to the O'Brien & Gere Confined Space Entry Procedure for more information.

2.8 DRILLING/BORING

The primary hazards associated with drilling/boring activities are associated with the use of the rig and supporting vehicles.

2.8.1 Crew Qualifications

All personnel performing drilling/boring work must possess required ***state or local licenses*** to perform such work. The drilling/boring foreman, superintendent, or crew leader (hereafter referred to as "drilling foreman") shall have experience with the drilling/boring equipment used on Site and is designated as the "competent person" for drilling/boring activities. The drilling foreman is responsible for the safe operation of the rig as well as the crew's adherence to safe drilling/boring practice.

2.8.2 Rig Inspection

Daily rig inspections are required prior to performing boring/drilling activities. The inspection shall include the following items as a minimum:

- Vehicle condition
- Proper storage of equipment
- Condition of all wire rope
- Condition and location of all safety equipment (fire extinguisher, first aid kit, spill supplies, etc.)
- Leaks (fuel, oil, hydraulic fluid)

2.8.3 Rig Setup

The drilling foreman must inspect all drilling/boring locations prior to moving the rig in place to ensure a stable surface exists. Special attention must be paid to soft, unstable terrain. The rig shall be properly blocked and leveled prior to operations. Blocking provides a more stable drilling surface by evenly distributing the weight of the rig. Proper blocking ensures that differential settling of the rig does not occur that may ultimately result in rig collapse/turnover. At a minimum, ***proper blocking shall consist of wooden blocks at least 24" by 24" and 4" to 8" thick (or equivalent)*** that are placed between the jack swivels and the ground. Sufficient clearance to overhead power lines shall be maintained as outlined in the electrical safety sections of this HASP.

2.8.4 Preparation for Drilling/Boring Activities

Before drilling, the existence and location of ***underground utilities*** must be determined. The underground utilities will be located and identified by contacting Michigan's utility notification organization (MISS DIG System, Inc.) at least three working days prior to drilling activities when on public property. The O'Brien & Gere HSO will also review available drawings and work with facility personnel familiar with Site utilities. Utility locating services (ground penetrating radar or equivalent) may be necessary when little information is available on the location of utilities that may be present. "Soft dig" (*e.g.*, vacuum) technologies may also be used to physically locate utilities prior to drilling/boring.

The O'Brien & Gere HSO will meet utility representatives and/or locators on site prior to marking out underground utilities. O'Brien & Gere's HSO will provide the utility representatives and/or locators with a drawing that shows the proposed drilling/boring locations. The O'Brien & Gere HSO will then conduct a physical Site walk-through with utility representatives and/or locators to visually identify each location where drilling/boring activities are to be conducted. The O'Brien & Gere Site Supervisor will document the Site walkthrough in a field log book or equivalent. Documentation that utilities have been located and marked shall be maintained on Site.

2.8.5 Drilling/Boring Safe Work Practices

No ignition sources (or hot work) are permitted if flammable vapors reach 10% of LEL in the immediate area (one foot radius) of the point of drilling. Combustible gas readings will be made in the general work area when flammable vapors at one foot from the point of drilling/boring reach 10% LEL.

Personnel shall NOT ride the travelling block or elevators nor will the catline be used to hoist personnel.

At the end of each work day, equipment will be moved to a location away from overhead power lines.

The rig shall not be moved while the mast is erected.

Workers should never stand near the borehole whenever any wire line device is being run.

2.8.6 Wire Rope

The drilling/boring foreman must remove wire rope from service when inspections reveal two wires are broken or corrosion is found adjacent to a socket or end fitting. Special attention shall be given to the inspection of end fittings on boom supports, pendants, and guy ropes.

Wire ropes removed from service must be clearly marked as being removed from service.

Wire rope clips attached with U-bolts shall have U-bolts on the dead or short end of the rope. Clip nuts shall be periodically checked for tightness.

When a wedge socket fastening is used, the dead or short end of the wire rope shall have a clip attached to it or looped back and secured to itself by a clip. The clip shall not be attached directly to the live end.

Protruding ends of strands in splices on slings and bridles shall be covered or blunted.

Except for eye splices in the ends of wires and for endless wire rope slings, wire rope used in hoisting, lowering, or pulling loads shall consist of one continuous piece without knots or splices.

An eye splice in any wire rope shall have not less than five full tucks.

Wire rope shall not be secured by knots except on haul back lines on scrapers.

Eyes in wire rope bridles, slings, or bull wires shall not be formed by clips or knots.

Wire rope clips shall not be used to splice wire rope.

2.8.7 Pipe/Auger Handling

Pipe and auger sections exceeding 75 pounds shall be transported by cart or carried by two persons. Individuals should not carry auger or pipe sections without assistance.

Workers should not be permitted on top of the load during loading, unloading, or transferring of pipe or rolling stock.

The drilling/boring foreman must instruct Site personnel to never try to stop rolling pipe or casing. Site personnel should be instructed to stand clear of rolling pipe.

Slip handles should be used to lift pipe and move slips. The drilling/boring crew should not be permitted to kick slips into position.

When pipe is being hoisted into position, Site personnel should not stand where the bottom end of the pipe could whip and strike them.

Pipe and augers stored in racks, catwalks, or on flatbed trucks should be chocked or otherwise secured to prevent rolling.

2.9 DECONTAMINATION PROCEDURES

In general, everything that enters the EZ at the Site must either be decontaminated or properly discarded upon exit from the EZ. All personnel, including any State and local officials, must enter and exit the EZ through the decontamination area. Prior to demobilization, potentially contaminated equipment will be decontaminated and inspected by the HSO before it is moved into the clean zone.

The type of decontamination solution to be used is dependent on the type of chemical hazards. The decontamination solution for this Site is laboratory-grade detergent for equipment and for any reusable PPE.

2.9.1 Equipment Decontamination Procedures

Equipment must be decontaminated within the CRZ or on the decontamination pad by a pressure washer upon exit from the EZ. Decontamination procedures should include: knocking soil/mud from machines; water rinsing using a solution of water and laboratory-grade detergent; scraping and brushing to remove remaining soils and a final water rinse. Personnel shall wear PPE when decontaminating equipment. Runoff will be collected and stored until appropriate disposal arrangements are made. Following decontamination and prior to equipment removal from the Site, the HSO shall be responsible for ensuring that the equipment has been properly cleaned. This shall be included in the field log book.

Heavy equipment will be decontaminated with pressurized water at a decontamination pad prior to leaving the Site and/or working in areas deemed “clean”. The decontamination pad will consist of a plastic liner on grade and/or stone sub base with water management. Haul trucks will be kept on clean haul roads/surfaces to prevent contamination of tires.

2.9.2 Personnel Decontamination Procedures

In general, decontaminating protective equipment will involve scrubbing heavily soiled boots and gloves, rinsing gloves and overboots with clean water or soap (*i.e.* Alconox) and water. Decontamination procedures will be conducted prior to breaks and at the end of the day. If the Exclusion Zone is left at any time during the workday, decontamination procedures must be followed and boots and gloves will be left at the decontamination area on plastic sheeting. Following decontamination, disposable items are to be disposed of in dry, impermeable containers.

3. SUBSTANCES OF POTENTIAL CONCERN

For purposes of screening, the substances of potential concern (SOPCs) in soil are defined as substances for which the detected concentrations exceed the Michigan Department of Environmental Quality (MDEQ) Nonresidential Direct Contact Criteria as listed in MDEQ's *Table 3. Soil:Nonresidential Part 201 Generic Cleanup Criteria and Screening Levels* dated March 25, 2011. Although MDEQ Part 201 criteria were used as the basis for identifying the nature and extent of waste related substances, it must be recognized that exceedance of this criteria does not necessarily represent a threat to human health or the environment.

Based on historical information, SOPCs identified in the soil include PAHs. SOPCs were not identified in Site groundwater. The table below lists specific PAHs that were detected above the Part 201 Nonresidential Direct Contact Criteria in Site soils:

Table 3.1 SOPC Detections in Site Soils

SOPCs	Location	Concentration*	MDEQ Direct Contact Criteria**
Benzo(a)anthracene	FB-01	405,000	80,000
	FBS-01	88,200	80,000
	FB-02	2,150,000	80,000
	FB-03	910,000	80,000
	FB-04	1,850,000	80,000
	FB-05	890,000	80,000
Benzo(a)pyrene	FB-01	332,000	8,000
	FBS-01	94,900	8,000
	FB-02	1,880,000	8,000
	FBS-02	18,700	8,000
	FB-03	860,000	8,000
	FB-04	1,750,000	8,000
	FBS-04	14,600	8,000
	FB-05	740,000	8,000
Benzo(b)fluoranthene	FB-01	680,000	80,000
	FBS-01	175,800	80,000
	FB-02	3,530,000	80,000
	FB-03	1,580,000	80,000
	FB-04	2,890,000	80,000
	FB-05	1,450,000	80,000
Benzo(k)fluoranthene	FB-02	4,010,000	8.0E+05
	FB-03	1,760,000	8.0E+05
	FB-04	3,160,000	8.0E+05
	FB-05	1,590,000	8.0E+05
Dibenzo(ah)anthracene	FB-03	30,000	8,000
Indeno(1,2,3-cd)pyrene	FB-01	99,000	80,000
	FB-02	700,000	80,000
	FB-03	290,000	80,000
	FB-04	580,000	80,000
	FB-05	240,000	80,000
Phenanthrene	FB-02	8,280,000	5.2E+06
	FB-04	7,620,000	5.2E+06

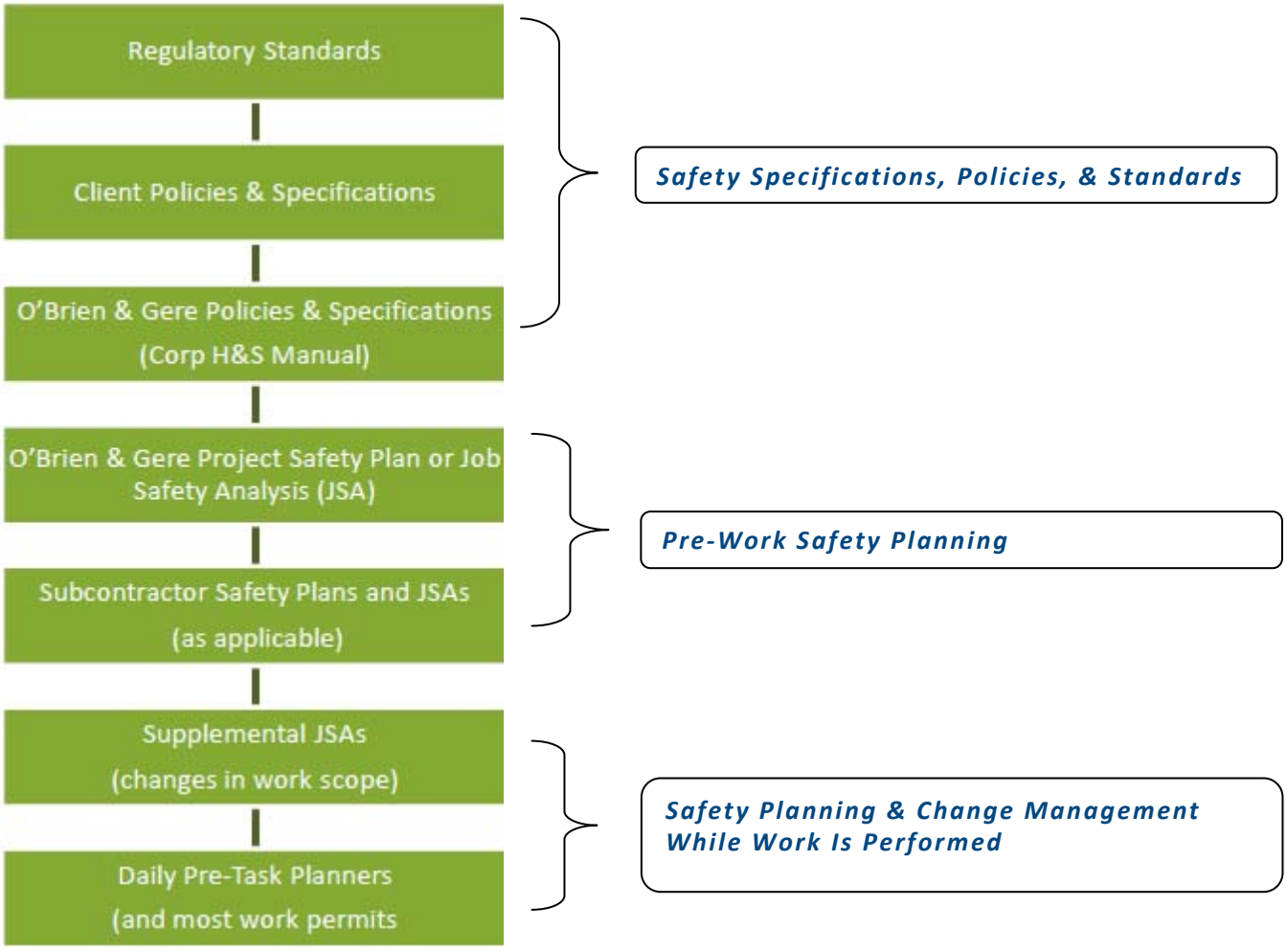
***Concentrations listed in µg/kg**

****DCC denotes MDEQ Part 201 Nonresidential Direct Contact Criteria**

Source: O'Brien & Gere Engineers, Inc.

4. ACTIVITY HAZARD/RISK ANALYSIS

The OSHA safety regulations (29CFR1910 and 29CFR1926) require that Site personnel, subcontractors, and visitors must be informed of the hazards associated with their work activities. Hazard Identification and control begins during safety planning. Safety planning is required for work on this project and occurs at different times during the project. Each "level" of safety planning typically has differing degrees of detail and focus. However, the ultimate objective is that Site management and crafts methodically evaluate hazards and implement safety controls to prevent the occurrence of an injury, fire, explosion, spill, or property damage incident and are able to manage changes as they occur. The following flow chart provides an overview of safety planning requirements and tools outlined in previous sections of this HASP.



Safety Plans, JSAs, and Safe Work Permits developed subsequent to this HASP by O'Brien & Gere or subcontractors (if any) will identify hazard controls that are consistent with this Health & Safety Plan. **O'Brien & Gere employees performing work activities covered under this HASP need not prepare additional JSAs unless requested by the SSHC due to new or unanticipated hazards resulting from changing Site conditions or work methods.**

Subcontractors must submit a safety plan for their scope of work that is specific to the means and methods to be used on this project. Subcontractors may use an O'Brien & Gere Pre-Work JSA template ***(Appendix A)*** or request approval from O'Brien & Gere to use an alternate safety planning

document. **Submitting standard company policies or programs is not acceptable.** Preliminary identification of hazards and their respective controls for major work tasks or phases are outlined below in ***Table 4.1.***

Table 4.1 – Hazard Identification & Control

Activities & Tasks	Affected Personnel	Safety Hazards	Safety Hazard Controls
GENERAL SAFETY HAZARDS **Mandatory PPE:** Level D PPE (Refer to PPE section of HASP for specific components of Level D PPE based on the task being performed) **As needed PPE:** Face shield for all grinding, torch cutting, pressure washing **Covered tasks:** This section covers safety hazards and their associated controls that are applicable to a variety of crafts/trades. These will only be repeated in subsequent sections when specific tasks or site conditions require changing or modifying safety hazard controls.	Generally applicable to all trades/crafts	**Slip, trips, and falls**	**Safety controls for slips, trips, and falls include:** ■ Daily cleanup ■ Unused materials must be stored in a designated area ■ Unused tools must be picked up daily ■ All trash, scrap metal, and construction debris must be placed in the appropriate dumpsters ■ Icy walkways, stairs, work platforms, and scaffolding must be salted prior to use. Slip-on traction devices (YakTrax®) should also be considered
		Manual lifting	**Follow proper lifting technique.** **Review primary precautions below:** ■ Keep load in close to the body ■ Keep hips and shoulders aligned (no twisting) ■ Maintain stability (keep a balanced position) ■ Think and plan difficult lifts (use two people when weight is >55-75 lbs)
		Noise- during operation of heavy equipment and power tools or working adjacent to such equipment	**Safety controls to prevent hearing loss from loud noise include:** ■ Wear hearing protection while operating heavy equipment (unless with enclosed cab) or noisy power tools. ■ Wear hearing protection if you have to raise your voice talking to someone five feet away
		Electrical – shock hazards associated with the use of extension cords and power tools ■ Contact with damaged cord ■ Overhead power lines ■ Contact with sub-surface utilities	**Electrical safety controls when using extension cords and power tools include:** ■ Locate and verify all building utilities with owner representative ■ Inform all site personnel that **overhead power lines are energized** and a **20-foot clearance** must be maintained » A 10-foot clearance may be used for insulated secondary lines that distribute power within the site » If the lines are <300 volts and a safety spotter observes equipment while it's moved, then a 3-foot clearance may be used ■ Use GFCIs on all power tools and extension cords ■ Inspect tools for visible damage on a daily basis ■ Inspect all flexible extension cords and power tool cords daily prior to use ■ Discard all flexible cords without a ground plug or outer insulation this is cut through. Tool cords must be in similarly good condition ■ Do not repair flexible cords smaller than 12 gauge ■ All extension cords must be ran overhead (>7-foot) when crossing walkways or other areas of high travel or protected when run across the floor (in a manner that does not create an excessive trip hazard) ■ All extension cords must be protected when run across

Table 4.1 – Hazard Identification & Control

Activities & Tasks	Affected Personnel	Safety Hazards	Safety Hazard Controls
			roadways ■ Subsurface utilities must be located and marked prior to driving stakes, fence posts, or earthwork. Temporary utilities for construction may be shallower than expected. **Perform the following to ensure that tools are in good working order** ■ Inspect tools for visible damage prior to each use. ■ Inspect all flexible extension cords and power tool cords. Discard all flexible cords without a ground plug or outer insulation that is cut through. Tool cords must be in similarly good condition. Do not repair flexible cords smaller than 12 gauge. ■ **Do not operate tools without guards and use only in accordance with manufacturer's operating instructions** ■ Use **GFIs** on all extension cords and power tools **Ladders must be used in accordance with OSHA guidelines or fall protection must be implemented above six feet. Ladder safe guidelines include, but are not limited to:** ■ Ensure all ladders are inspected and properly labeled ■ Maintain 3-point contact while working on step ladders and extension ladders (work requiring the use of both hands when on a ladder will require the worker to tie-off) ■ Keep your torso between the rails of the ladder ■ Do not use a step ladder as a straight ladder ■ Do not stand on the top two steps of a step ladder ■ Extend extension ladders three feet above the upper level ■ Secure the top and base of extension ladders ■ Extension ladders should have a 4:1 height to base ratio ■ Do not use metal ladders within 20 feet of exposed conductors or overhead power lines ■ **Ladders must be inspected prior to each use** **Heavy equipment safety precautions include:** ■ Ensure **slopes** in designated work areas do not exceed slopes allowed by manufacturer's safe operating guidelines ■ Keep **non-essential personnel** out of areas in which heavy equipment will be operating. Portable chain link (or equivalent) will be used to secure the construction area ■ Ensure all operators are qualified and familiar with the **manufacturer's safe operating guidelines** for the equipment they are operating. Subcontractors must submit the following for specific types of equipment: » Forklift – Operators license » Manlift – Training certificate. Letter of Authorization
		Hand & power tools ■ Shock ■ Flying dust, cuttings, debris ■ Hand injuries from cutting blades/bits	
		Ladder hazards ■ Ladders kicking out or tipping over during use ■ Users fall from a ladder ■ Falling objects strike workers or pedestrians on lower work surfaces	
		Heavy equipment hazards – Working near heavy equipment requires that general	

Table 4.1 – Hazard Identification & Control

Activities & Tasks	Affected Personnel	Safety Hazards	Safety Hazard Controls
		safety precautions be considered. ■ Turnover due to the slope angle and/or stability ■ Struck by injuries (counterweight swing or run-over) ■ Dropped loads ■ Hydraulic fluid leaks ■ Equipment fire	and Training on company letterhead, or equivalent. » Crane – State License and/or CCO ■ **Inspect heavy equipment daily** prior to use Immediately repair any leaks ■ Operators must wear **seatbelts** at all times unless the manufacturer does not provide seat belts ■ Equipment operators must ensure workers are kept clear from **crush points** created by counterweight swings and for boom movement ■ Never lift or **suspend a load over people** ■ **Inspect all rigging materials** prior to use ■ Never attach rigging directly to the forks of a forklift. Use only **forklift crane-hook attachments** compatible with the forklift. ■ Never **tip-load the forks** on forklifts. ■ Ensure that a **fire extinguisher** is mounted to the equipment ■ Ensure **spill materials** for oil/hydraulic fluid are located near the construction area
PRE-DESIGN INVESTIGATION (PDI) and CONSTRUCTION			
SITE PREPARATION **Minimum PPE:** Level D PPE (Refer to PPE section of HASP for specific components of Level D PPE based on the task being performed.) **Additional PPE:** Hearing protection during operation of heavy equipment or other loud equipment **Kevlar Chaps & Jacket**: During operation of chainsaw that may be required to clear small trees and large shrugs **Covered Tasks:** ■ Mobilization of equipment ■ Site Survey ■ Work area perimeter markings and signage (as necessary) ■ Setup of equipment staging areas ■ Installation of silt fence, drainage swales, and other	Laborers Equipment Operators Surveyors Delivery Personnel Utility Installation Crews	**General Hazards previously listed in the "General Safety Hazards" section of this table** **Vegetative Clearing** ■ Biological hazards - Poison Ivy and poisonous snakes and insects ■ Cuts/lacerations from chainsaws (if used)	**General Hazards previously listed in the "General Safety Hazards" section of this table** **Safety controls for clearing and grubbing include:** ■ Refer to the Biological Hazards section of this HASP. ■ Know how to recognize poison ivy. Maintain alcohol wipes or rubbing alcohol to wipe down exposed skin following contact with allergy-causing oils from poison ivy ■ Michigan is in a high Lyme disease area. Use 25%+ DEET on skin and permethrin on clothes when walking into overgrown areas ■ All personnel using chainsaws for clearing activities must wear **Kevlar Chaps and Jacket** and hard hat mounted face shield in addition to other safety gear ■ Use heavy equipment to do as much of the vegetative clearing as possible ■ Roots and stumps will be removed during excavation work. Removing surface vegetation without disrupting contaminated soil is not considered "intrusive" **Safety controls for clearing and grubbing include:** ■ Wear Modified Level D PPE. ■ Conduct periodic air monitoring with hand-held PID to evaluate the need for respiratory protection

Table 4.1 – Hazard Identification & Control

Activities & Tasks	Affected Personnel	Safety Hazards	Safety Hazard Controls
erosion controls ■ Clearing & Grubbing ■ Construction of access roads and walkways ■ Construction or setup of decon areas		**Intrusive work tasks such as installation of erosion controls, removal of tree stumps, and other subsurface work in contaminated soil.** ■ Contact with contaminated soil or groundwater	
DECON **Minimum PPE:** Modified Level D PPE (Refer to PPE section of HASP for specific components of Modified Level D PPE based on the task being performed.) **Additional PPE:** Hearing protection during pressuring washing equipment and standing near heavy equipment Face shield with chemical goggles when operating pressure washer **Kevlar Chaps & Jacket**: During operation of chainsaw that may be required to clear small trees and large shrugs **Covered Tasks:** ■ Gross decontamination using dry removal (shovels, scrapers, etc.) ■ Pressure washing ■ Cleaning decon sumps and handling decon water and	Decon Personnel	**General Hazards previously listed in the "General Safety Hazards" section of this table** **Pressure washer operation (when used for decon)** ■ abrasions, ■ slips and falls, ■ blindness, and ■ high-pressure injection	**General Hazards previously listed in the "General Safety Hazards" section of this table**. **Safety controls for operation of pressure washers include:** ■ Know and follow manufacturer's safe operating procedures ■ Wear PPE ■ Do not point pressure washer at individuals ■ Be aware of wear debris removed by pressure washing will land

Table 4.1 – Hazard Identification & Control

Activities & Tasks	Affected Personnel	Safety Hazards	Safety Hazard Controls
sludge			
PRE-DESIGN INVESTIGATION (PDI)			
Drilling or Boring **Minimum PPE:** Modified Level D PPE (Refer to PPE section of HASP for specific components of Level D PPE based on the task being performed.) **Additional PPE:** Hearing protection when near the drill rig **Covered Tasks:** ■ Mobilization of drilling or boring equipment ■ Truck or track-mounted direct push sampling ■ Truck or track-mounted Hammer driven sampling equipment ■ Operation of drill rigs	**Drilling/Boring Crew** **Geologists**	**General Hazards previously listed in the "General Safety Hazards" section of this table** **Drill Rig Hazards** ■ Rotating parts ■ Pinch Points ■ Overhead Power lines ■ Underground Utilities ■ Rig Stability ■ Falling materials ■ Contact with contaminated soil or groundwater **Vegetative Clearing (as necessary for access by drill rigs)** ■ Biological hazards - Poison Ivy and poisonous snakes and insects ■ Cuts/lacerations from chainsaws (if used)	**General Hazards previously listed in the "General Safety Hazards" section of this table** **Safety controls for clearing and grubbing include:** ■ Refer to the Drilling/Boring section of this HASP ■ Know and implement manufacturer's operating procedures for specific drilling or boring equipment ■ Wear PPE as required in this HASP **Safety controls for clearing and grubbing include:** ■ Refer to the Biological Hazards section of this HASP ■ Know how to recognize poison ivy. Maintain alcohol wipes or rubbing alcohol to wipe down exposed skin following contact with allergy-causing oils from poison ivy ■ Michigan is in a high Lyme disease area. Use 25%+ DEET on skin and permethrin on clothes when walking into overgrown areas ■ All personnel using chainsaws for clearing activities must wear **Kevlar Chaps and Jacket** and hard hat mounted face shield in addition to other safety gear ■ Use heavy equipment to do as much of the vegetative clearing as possible ■ Roots and stumps will be removed during excavation work. Removing surface vegetation without disrupting contaminated soil is not considered "intrusive" **Safety controls for clearing and grubbing include:** ■ Wear Modified Level D PPE. ■ Conduct periodic air monitoring with hand-held PID to evaluate the need for respiratory protection

Table 4.1 – Hazard Identification & Control

Activities & Tasks	Affected Personnel	Safety Hazards	Safety Hazard Controls
		Intrusive work tasks such as installation of erosion controls, removal of tree stumps, and other subsurface work in contaminated soil. ■ Contact with contaminated soil or groundwater	
Sampling & Well Development **Minimum PPE:** Modified Level D PPE (Refer to PPE section of HASP for specific components of Modified Level D PPE based on the task being performed.) **Additional PPE:** Hearing protection when near the drill rig **Covered Tasks:** ■ Soil and sediment sampling ■ Well sampling ■ Surface water sampling ■ Pumping groundwater	**Geologists**	**General Hazards previously listed in the "General Safety Hazards" section of this table** **Biological Hazards** ■ Poison ivy ■ Ticks/Lyme **Intrusive work tasks such as installation of erosion controls, removal of tree stumps, and other subsurface work in contaminated soil.** ■ Contact with contaminated soil or groundwater	**General Hazards previously listed in the "General Safety Hazards" section of this table** **Safety controls for biological hazards include:** ■ Refer to the Biological Hazards section of this HASP. ■ Know how to recognize poison ivy. Maintain alcohol wipes or rubbing alcohol to wipe down exposed skin following contact with allergy-causing oils from poison ivy ■ Michigan is in a high Lyme disease area. Use 25%+ DEET on skin and permethrin on clothes when walking into overgrown areas **Safety controls for clearing and grubbing include:** ■ Wear Modified Level D PPE. ■ Conduct periodic air monitoring with hand-held PID to evaluate the need for respiratory protection

Table 4.1 – Hazard Identification & Control

Activities & Tasks	Affected Personnel	Safety Hazards	Safety Hazard Controls
INVESTIGATIONS, INSPECTIONS, and SURVEYS **Minimum PPE:** Level D PPE (Refer to PPE section of HASP for specific components of Level D PPE based on the task being performed.) **Additional PPE:** Hearing protection when near the heavy equipment **Covered Tasks:** ■ Ground penetrating radar surveys ■ General site walkthroughs and inspections	**Geologists** **Surveyors** **GPR Subcontractor**	**General Hazards previously listed in the "General Safety Hazards" section of this table** **Biological Hazards** ■ Poison ivy ■ Ticks/Lyme **Intrusive work tasks such as installation of erosion controls, removal of tree stumps, and other subsurface work in contaminated soil.** ■ Contact with contaminated soil or groundwater	**General Hazards previously listed in the "General Safety Hazards" section of this table** **Safety controls for biological hazards include:** ■ Refer to the Biological Hazards section of this HASP. ■ Know how to recognize poison ivy. Maintain alcohol wipes or rubbing alcohol to wipe down exposed skin following contact with allergy-causing oils from poison ivy ■ Michigan is in a high Lyme disease area. Use 25%+ DEET on skin and permethrin on clothes when walking into overgrown areas **Safety controls for clearing and grubbing include:** ■ Wear Modified Level D PPE ■ Conduct periodic air monitoring with hand-held PID to evaluate the need for respiratory protection
CONSTRUCTION			
EXCAVATION & MATERIAL HANDLING **Minimum PPE:** Modified Level D PPE (Refer to PPE section of HASP for specific components of Modified Level D PPE based on the task being performed) **Additional PPE:** ■ Hearing protection during operation of heavy	Laborers Machine operators Dewind One-Pass Crew	**General Hazards previously listed in the "General Safety Hazards" section of this table** **Excavation Hazards:** ■ Cave In ■ Falls into excavations ■ Struck by vehicles ■ Struck by heavy equipment ■ Stability of adjacent structures ■ Buried utilities	**General Hazards previously listed in the "General Safety Hazards" section of this table:** **Excavation Safety Controls:** ■ Implement safety precautions outlined in Section 2.8, "Excavations" of this HASP ■ Complete work from outside the trench as much as possible ■ **Shallow excavations <5 feet deep** could pose a cave in hazard if site persons must work in trenches and excavations such that their head or chest is located below ground level. In these situations, Excavation Competent Person will ensure the trench/excavation is safe for entry as outlined for "Shallow Excavations" in Section 2.8 of this HASP ■ **Deep Excavations ≥5 feet deep** must be sloped or

Table 4.1 – Hazard Identification & Control

Activities & Tasks	Affected Personnel	Safety Hazards	Safety Hazard Controls
equipment or other loud equipment ■ Level C PPE based on air monitoring results **Covered tasks:** ■ Dewind One-Pass System (force main installation) ■ Pumping of contaminated groundwater that may infiltrate the excavation ■ Collection Trench Installation ■ Utility trenches ■ Sheeting Installation (see below) ■ Staging excavated materials ■ Backfill		**Inhalation of VOCs released by intrusive work, disruption of soil and or exposure to groundwater**	shored. There is sufficient room to slope or bench these areas at 1.5H:1V which is appropriate for Type C soil ■ Ensure workers, pedestrians, and vehicles are protected from movements by heavy equipment. Movements include relocation of equipment, counterweight swing, and bucket / arm movement ■ All workers in excavation areas located in high traffic areas will wear high visibility vests ■ Implement excavation safety requirements in this HASP **Safety controls to mitigate inhalation of vapors and dust are outlined below and explained more thoroughly in this safety plan.** ■ Implementation of an Employee and Community Air Monitoring Plan (ECAMP) to verify that Modified Level D PPE is adequate and determine if, or when, Level C PPE is necessary ■ Use of Level C PPE if ECAMP action levels are exceeded. ■ Dust and odor controls as outlined in the Employee and Community Protection Plan (ECPP) ■ Dewind One-Pass equipment minimize spoils, trench water, and the resulting VOC emissions that may be associated handling open trenches, exposed spoils, and handling water

5. AIR MONITORING

Field activities associated with the Dort Highway Land work are not expected to encounter conditions associated with the volatilization of chemical substances. However, monitoring of these substances will still be performed to evaluate whether appropriate personal protective measures are being employed during the performance of Site activities.

Monitoring of soil with a PID for volatile hydrocarbon content is being performed as part of the sample screening. These measurements will be used as an indication of the need to increase worker protective measures.

Readings will be recorded in the field log book by the HSO. The HSO will be responsible for the maintenance of health and safety monitoring instruments throughout the investigation. The following describes the monitoring parameters to be evaluated during the investigation. Recommended instruments to be used are also provided in the discussion. These instruments will meet the established requirements set forth by OSHA, MSHA, NIOSH, and state agencies where applicable.

Organic Vapor Concentrations. VOCs will be monitored at 15-minute intervals using an air-sampling instrument with a PID detector, calibrated according to the manufacturer's instructions. The concentrations of organic vapors will be used as criteria for upgrading or downgrading PPE and in implementing additional precautions or procedures.

Particulate Monitoring. Particulate monitoring is not expected to be performed during site activities. Site monitoring for health purposes will consist of visual observation of airborne dust levels.

Action Levels. Action levels have been established for activity cessation, site evacuation and determination and/or change of PPE levels. Section 6 discusses PPE required for specified site activities. Changes to these specified levels are dependent on the results of air monitoring, as described below. These action levels are based on the 1971 OSHA Permissible Exposure Limits (PELs) for the specific compounds detected during previous on site monitoring.

- Organic Vapor. Work will cease at any time that the average of the 15 minute breathing zone reading exceeds 5.0 ppm as indicated by the PID air sampling instrument. Work may resume after workers have donned organic vapor air purifying respirators. If the PID air sampling instrument reading is above 50 ppm, workers will not return until the level is below 35 ppm
- Particulates. Upon visual observation of airborne particulate matter associated with on site activities, a water spray will be applied as a control measure. If a water spray cannot be applied and a visible airborne dust is observed, Level C protection will be provided

6. GENERAL SAFETY AND PERSONAL HYGIENE

1) Eating at the Site is prohibited except in specifically designated areas. Designation of eating areas will be the responsibility of the HSO. The location of these areas may change during the duration of the project to maintain adequate separation from the active work area(s)

2) Smoking at the Site is prohibited except in specifically designated areas

3) Individuals getting wet to the skin with effluent from the washing operation must wash the affected area immediately. If clothes in contact with skin are wet, then these must be changed

4) Hands must be washed with soap and water before eating, drinking, smoking, and before using toilets

5) All disposable coveralls and soiled gloves will be placed in covered containers at the end of every shift or sooner, if deemed necessary by the HSO. Wastes will be stored until proper disposal arrangements have been made

6) Personnel working on Site will not be permitted to wear facial hair that interferes with the mask-to-face seal on air-purifying respirators

7. MEDICAL SURVEILLANCE

In accordance with the requirements detailed in 29 CFR 1910.120, all Site personnel who will come in contact with materials with potentially elevated chemical presence will have received, within 1 year prior to starting field activities, medical surveillance by a licensed physician or physician's group.

Medical records for all on Site personnel will be maintained by their respective employers. The medical records will detail the tests that were taken and will include a copy of the consulting physician's statement regarding the tests and the employee's suitability for work.

The medical records will be available to the employee or his/her designated representative upon written request, as outlined in 29 CFR 1910.1020.

Each employer will provide certifications to the HSO that its personnel involved in Site activities will have all necessary medical examinations and will have obtained medical certification prior to commencing work that requires respiratory protection or potential exposure to hazardous materials. Personnel not obtaining medical certification will not perform work within the CRZ and EZ.

Interim medical surveillance will be completed if an individual exhibits poor health or high stress responses due to any Site activity or when accidental exposure to elevated concentrations of chemicals occur.

8. ENVIRONMENTAL CONTROL PROGRAM

This section of the HASP outlines measures to be implemented at the site to prevent hazards associated with environmental conditions.

8.1 WEATHER MONITORING

The HSO or Site Superintendent will be responsible for checking weather forecasts for the next day and week of work to provide advance notification of any severe weather conditions. Severe weather conditions (*e.g.,* heavy rains) may cause unsafe conditions at the site and in some situations work may have to be stopped.

8.2 RAIN AND SNOW

Excessive amounts of precipitation may cause potential safety hazards for work tasks. The hazards would be most commonly associated with slipping, tripping, or falling due to slippery surfaces.

Severe weather conditions will result in work stoppage and the implementation of further emergency measures.

8.3 TEMPERATURE

Low or high temperatures may be experienced that require measures to be implemented to prevent health and safety hazards from occurring. Potential hazards arising from temperature extremes are heat stress and cold exposure.

The potential hazard due to worker heat stress is particularly important if high protection levels of PPE are in use (*e.g.,* respirators). It is the responsibility of the HSO to determine which measures are appropriate to implement to prevent heat stress; these will depend largely on daily Site conditions.

Exposure to cold is similar to heat stress in that the HSO must determine the appropriate preventative measures to implement. Some of the measures which may be implemented include: more frequent breaks, additional clothing, and partial enclosure of work areas.

8.4 WIND

High winds may be encountered at the Site and these can cause hazards that may affect site personnel health and safety. Preventative measures that will be implemented if necessary are as follows:

1) Restricted site activity
2) Battening down light equipment
3) Partially enclosing work areas
4) Reduction or stoppage of work activities

9. EMERGENCY RESPONSE

It is essential that Site personnel be prepared in the event of an emergency. Emergencies can take many forms; illnesses or injuries, chemical exposure, fires, explosions, spills, leaks, releases of harmful contaminants, or sudden changes in the weather. The following sections outline the general procedures for emergencies. Emergency information should be posted as appropriate.

9.1 EMERGENCY CONTACTS

Table 9.1-1 *Emergency Contact Numbers*

Fire	911
Police	911
Ambulance	911
Genesys Regional Medical Center (Grand Blanc, MI)	(810) 606-5000

Source: O'Brien & Gere

Directions to Genesys Regional Medical Center:

Take Saginaw Street southeast for 1.5 miles.

Bear right (southwest) on Holly Road and go 1.5 miles.

Turn right (west) on Genesys Parkway and go 0.5 mile into the Medical Center.

Figure 3 provides the route from the Site to the Medical Center.

9.2 ADDITIONAL EMERGENCY NUMBERS

Table 9.1-2 *Additional Emergency Contact Numbers*

National Spill Response Center (NRC)	(800) 424 – 8802
Poison Control Center	(800) 282 – 3171
Chemical Emergency Advice	(800) 424 - 9300
USEPA Emergency Response	(800) 424 - 8802
Michigan Emergency Response Hotline	(800) 292 – 4706
Flint Department of Public Works	(800) 766 - 7135
Underground Utilities Location Service (MISS DIG)	(800) 482 – 7171
RACER Trust Project Manager (David Favero)	(217) 741 - 6235
Contractor Project Manager (Scott Cormier) office	(248) 477 – 5701 ext. 13
Contractor Project Manager (Scott Cormier) mobile	(248) 505-8540
Contractor Site Superintendent (Clifford Yantz) office	(248) 477 – 5701 ext. 16
Contractor Site Superintendent (Clifford Yantz) mobile	(313) 333-0211
Contractor On Site HSO (Kevin Schneider) office	(248) 477 – 5701 ext. 33
Contractor On Site HSO (Kevin Schneider) mobile	(734) 306-9685
Contractor Manager of Health & Safety (Jeff Parsons) office	(315) 956-6871
Contractor Manager of Health & Safety (Jeff Parsons) mobile	(315) 391-0638

Source: O'Brien & Gere

9.3 EMERGENCY EQUIPMENT AVAILABLE ON SITE

The following equipment for safety and emergency response will be maintained in the HSO's field vehicle:

- Fire extinguisher
- First aid kit
- Eye wash station (wash bottles at a minimum)
- An extra copy of this HASP

9.4 PROJECT PERSONNEL RESPONSIBILITIES DURING EMERGENCIES

Health and Safety Officer (HSO)

As the administrator of the HASP, the HSO has primary responsibility for responding to and correcting emergency situations. The HSO will:

- Take appropriate measures to protect personnel including: withdrawal from the EZ, total evacuation and securing of the Site or upgrading or downgrading the level of protective clothing and respiratory protection
- Take appropriate measures to protect the public and the environment including isolating and securing the Site, preventing runoff to surface waters and ending or controlling the emergency to the extent possible
- See that appropriate Federal, State, and local agencies are informed, and emergency response plans are coordinated. In the event of fire or explosion, the local fire department should be summoned immediately. In the event of an air release of toxic materials, the local authorities should be informed in order to assess the need for evacuation. In the event of a spill, sanitary districts and drinking water systems may need to be alerted
- See that appropriate decontamination treatment or testing for exposed or injured personnel is obtained
- Evaluate the cause of the incident and make recommendations to prevent the recurrence
- See that required reports have been prepared

9.5 MEDICAL EMERGENCIES

Any person who becomes ill or injured in the EZ will be decontaminated to the maximum extent possible. If the injury or illness is minor, full decontamination should be completed and first aid administered prior to transport. If the patient's condition is serious, at least partial decontamination should be completed as much as possible without causing further harm to the patient. First aid should be administered while awaiting an ambulance or paramedics. All injuries and illnesses must immediately be reported to the HSO and Site Superintendent.

Any person transporting an injured/exposed person to a clinic or hospital for treatment should take with them directions to the hospital and a listing of the contaminants of concern to which they may have been exposed.

Any vehicle used to transport contaminated personnel will be cleaned or decontaminated as necessary.

9.6 FIRE OR EXPLOSION

In the event of a fire or explosion, the local fire department should be summoned immediately. Upon their arrival, the HSO or designated alternate will advise the fire commander of the location, nature, and identification of the hazardous materials on Site.

If it is safe to do so, Site personnel may:

- If hazardous, report to the Agency Site Coordinator and/or Project Manager
- Use firefighting equipment available on Site
- Remove or isolate flammable or other hazardous materials which may contribute to the fire.

9.7 SPILL RESPONSE PROGRAM

There is no storage of petroleum products associated with the Dort Highway Land investigation; therefore, a Spill Prevention Control and Countermeasure (SPCC) Plan is not required for this project. Because no petroleum products or chemical storage will be conducted as part of O'Brien & Gere activities, a Spill Response Procedures Plan was not prepared as part of this HASP.

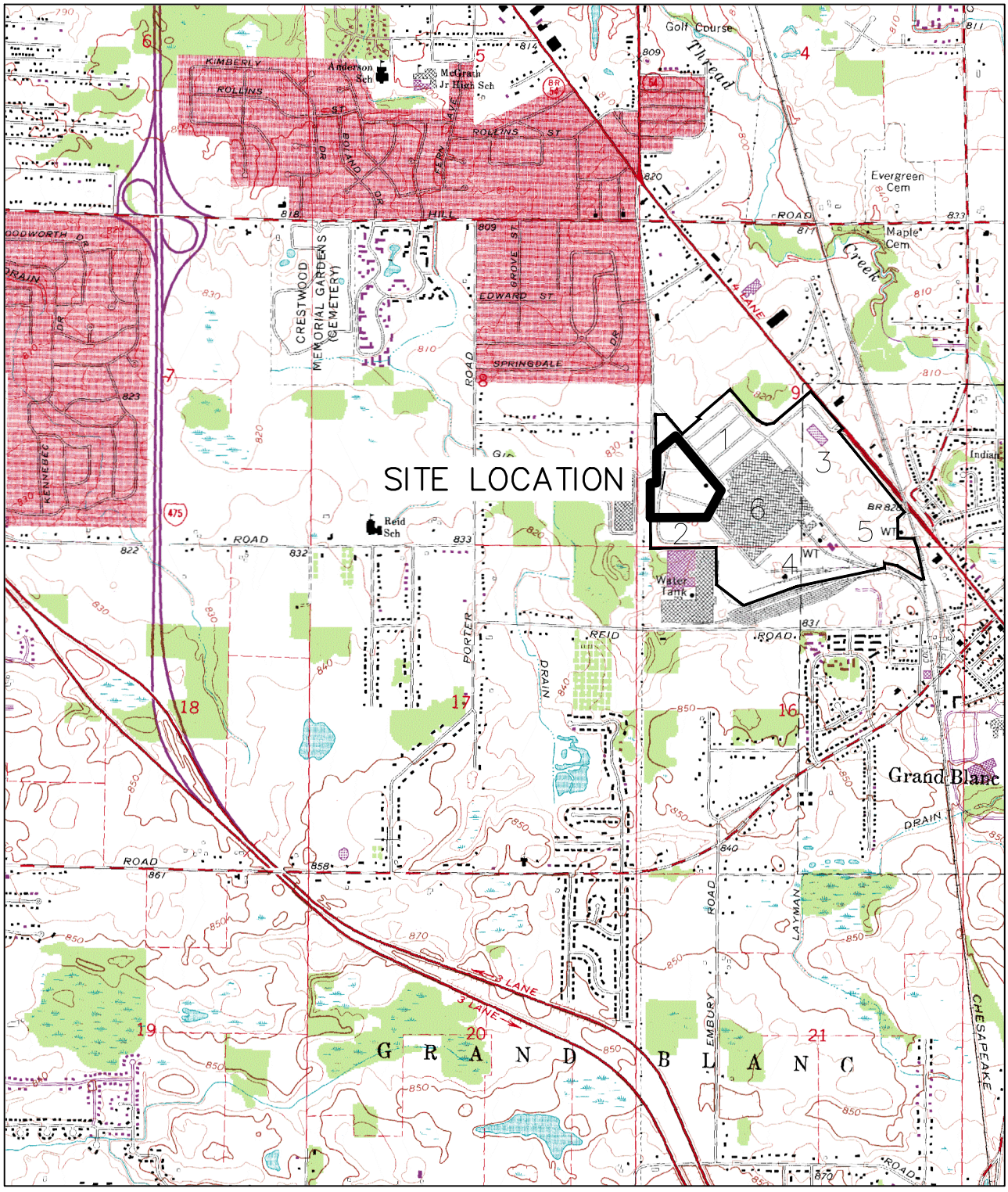
10. RECORDKEEPING

The HSO shall establish and maintain records of necessary and prudent monitoring activities as described below:

- Name and job classification of the employees involved on specific tasks
- Records of qualitative fit testing and physical examination results for Site personnel
- Records of OSHA training certification for Site personnel
- Records of training acknowledgment forms
- Emergency reports describing any incidents or accidents

Figures

FIGURE 1



MICHIGAN
QUADRANGLE LOCATION

15388/47852-001
AUGUST 2011

RACER TRUST
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

SITE LOCATION MAP

0 1
APPROXIMATE SCALE
ONE MILE

TRUE NORTH

OBRIEN & GERE
ENGINEERS INC.

I:\078\15388\47852\DOC\RPTS\HASP\001

8/22/2011 jmo

I:\PROJECTS\15388\47852\DOCS\REPORTS\HASP\002.DWG

FIGURE 2

DORT HIGHWAY

GATE LOCATION

Flooded area during site visit 03-24-2011

Permeable berm placed by GM LLC allows infiltration of ponded water onto GM property

Fence approx. location

Field observation 03-24-2011, potential wood block area

MISC. EQUIPMENT & MATERIAL STORAGE AREA

MW2-2

Monitoring well MW2-2, not observed on 03-24-2011 may have been covered with snow

Water Test For Tank (Buried)

FORMER ACCESS ROADS & DIE STORAGE AREA

SNOW STORAGE

Proposed gate location

Monitoring well MW2-1, needs stick up protective casing

MW2-1

Former Pumphouse

Pump House and tank have been demolished

CROCK SUMP

EMERGENCY EVACUATION ASSEMBLY AREA

B

TRUE NORTH

1"=120' 60 0 60

LEGEND

- MONITORING WELL LOCATION
- FIELD OBSERVATION 03-24-2011
- FLOODED AREA DURING SITE VISIT 03-24-2011
- APPROXIMATE RACER TRUST PROPERTY LINE
- FORMER TANK TEST TRACK AND DIE STORAGE ACCESS ROADS
- APPROXIMATE FENCE LOCATION
- SURFACE RUNOFF FLOW DIRECTION

SITE LAYOUT

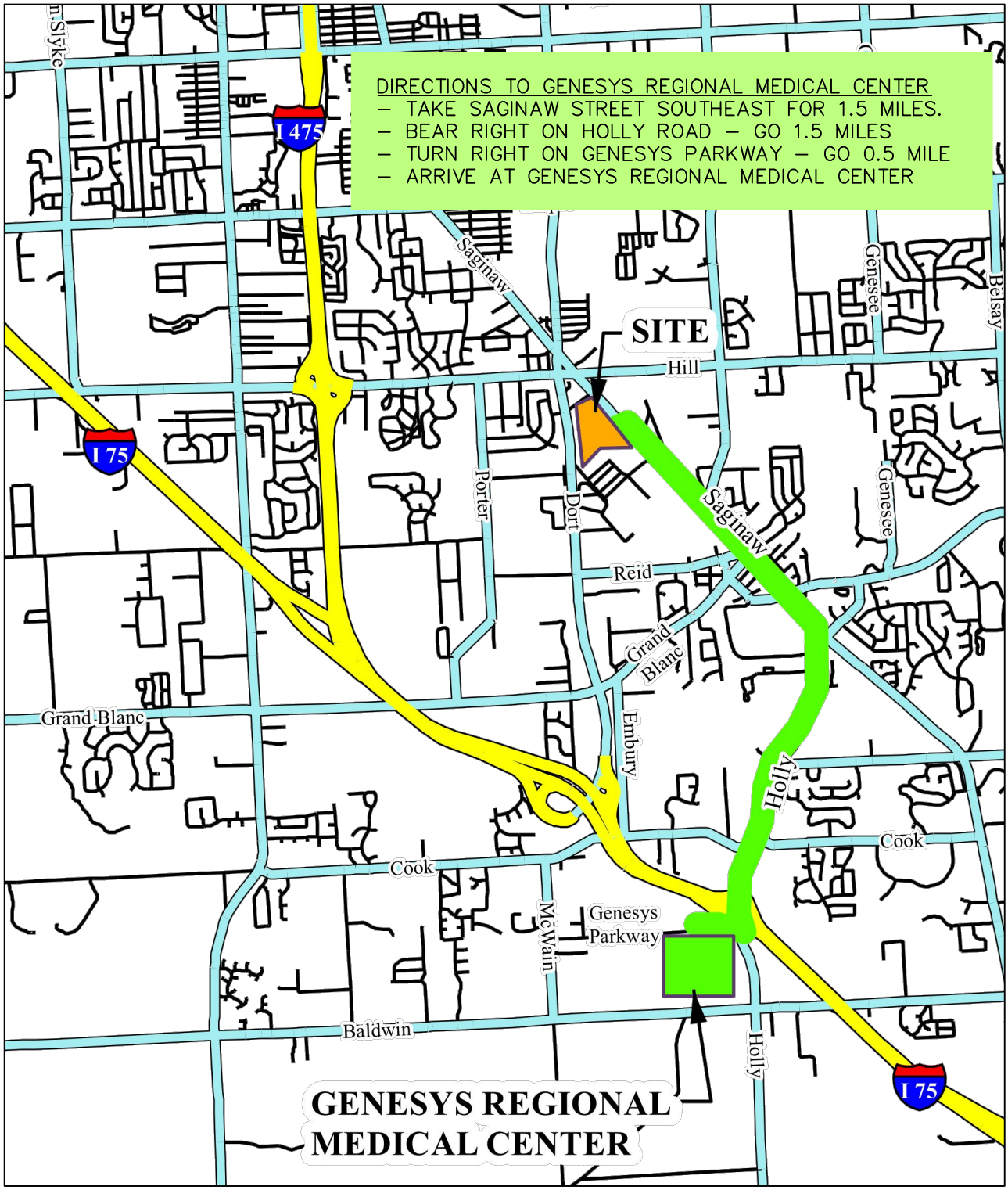
RACER TRUST
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

15388/47852-002
AUGUST 2011

O'BRIEN & GERE ENGINEERS, INC.

PLOT DATE: 8/22/2011 jmo

FIGURE 3



RACER TRUST
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

HOSPITAL ROUTE MAP

15388/47852-003
AUGUST 2011

0 1
APPROXIMATE SCALE
ONE MILE

TRUE NORTH

O'BRIEN & GERE ENGINEERS INC.

I:\078\15388\47852\DOC\RPTS\HASP\003

8/22/2011 jmo

Appendices

Appendix A

Job Safety Analysis Form

Project Name:		**OBG Project Officer:**	
Project Number:		**OBG Project Manager (PM):**	
JSA Title:		**OBG Site Supervisor:**	
JSA Revision Date:		**OBG Site Safety Coordinator:**	
JSA Prepared By:			
Client Name:		**Subcontractor Company Name:**	(☐ NA)
Project Location:		**Subcontractor Project Manager:**	
Project Phone No.:		**Subcontractor Superintendent:**	
Project Fax No.:		**Sub Safety Competent Person:**	
Scope of Work covered by this JSA (identify subcontractors covered by this JSA)			
Key Hazards (focus on highly hazardous tasks)			

Minimum Safety Equipment

(additional safety equipment may be required for specific hazards identified in the following sections)

☐ Hard Hat ☐ Safety Glasses ☐ Safety Shoes ☐ Cut-Resistant Gloves ☐ Ear Protection

Other (specify):

- ☐ High Visibility Vests (required for work on roads and in many construction & remediation sites)
- ☐ Ear Protection (heavy equipment, loud power tools, etc.)
- ☐ Fall Protection Harness & Lanyard (falls >6')
- ☐ Respiratory Protection (☐ N95 dust mask, ☐ half face, ☐ full-face) Specify cartridge in JSA.
- ☐ Tyvek or other chemical protective coverall: _____
- ☐ Face Shield (chemical handling, line breaks, pressure washing)
- ☐ Nitrile Gloves (☐ Surgical Type and/or ☐ "Dishwashing" Type)
- ☐

Pre-Work Documentation & Certifications *(Refer to JSA content for additional certifications and documentation that may be required.)*	**Documentation and Certifications**	**To Be Submitted or Provided By…….**
	☐ Drug Testing (☐ alcohol testing is also required)	
	☐ Project Safety Plan or Job Safety Analysis (JSA)	
	☐ Client/Facility Contractor Safety Orientation	
	☐ Project Safety Orientation (JSA Review)	
	☐ Daily Safety Meetings (Daily Pre-Task Planner)	
	☐ Verification of Hazwoper Medical Surveillance	
	☐ OSHA 40-hr Hazwoper w/ current 8-hr Refresher	
	☐ Respirator Training, Fit Test, and Resp. Medical	
	☐ Confined Space Entry Certification (necessary for permit-required entry or non-permit designations)	
	☐ Excavation Competent Person designation	
	☐	

Permits applicable to scope of work		
	☐ Confined Space Entry Permit	☐ Daily Excavation Inspection Checklist
	☐ Hot Work Permit	☐
	☐ Energized Electrical Work Permit (from sub)	☐

Individuals must sign the "Pre-Work Briefing" form on the last page after reviewing this JSA.

HAZARD		HAZARD CONTROLS (check all that apply and comment as required)
ELEVATED WORK		
☐ NA	FALLS > **6'** or within **15'** of a ROOF OR MEZZANINE EDGE where the fall is >6'	☐ Existing Guardrails ☐ Hole Covers Marked "HOLE" ☐ Fall Restraint ☐ Temporary Guardrails ☐ Manlifts used for elevated work ☐ _____ ☐ Warning Line 15' from Edge ☐ Fall Arrest w/ harness/lanyard (identify tie-off points) **Fall Protection Comments (describe equipment used):**
☐ NA	LADDERS / STAIRS ☐ Extension Ladders ☐ Step Ladders ☐ Fixed Ladders ☐ Stairs	☐ Employees training in safe ladder use at toolbox safety meeting ☐ Extension ladders are properly footed, secured at top, and setup at proper angle ☐ Stepladders are set on level ground or properly shimmed with spreaders locked. ☐ Stairs have proper rise over run and stairs >4 steps or 4' have guardrails. **LADDERS/STAIRS COMMENTS:**
EXCAVATIONS / TRENCHING		
☐ NA	☐ Max Depth ≥ 20' ☐ Max Depth ≥ 5' ☐ Max Depth <5' with potential cave-in hazard ☐ Potential permit-required confined space at depth ≥ 4' ☐ Underground utilities ☐ Structures/foundations ☐ Falls into excavations ☐ Other:	☐ Excavation Competent Person Name:_____ Company _____ ☐ Sloping & shoring for excavations ≥20' are approved by a professional engineer ☐ Sloping & shoring for excavations ≥5' when persons are exposed to cave-in. (specify below) ☐ Sloping & shoring for shallow (<5') excavations with cave-in hazard (specify below) ☐ O'Brien & Gere *Daily Excavation Checklist* to be completed by the Competent Person. ☐ Excavations ≥ 4' are classified as a non-permit confined space ☐ Excavations ≥ 4' are classified as Alternate Entry or Permit-Required (see confined space) ☐ Underground utilities have been identified and marked. ☐ Local "dig safe" organization has been notified for utility locations in public areas or rights of way. Number: _____ Date: _____ ☐ Hand digging within 3' of utility locations. ☐ Soft-dig/vacuum dig within ____' of utility locations. ☐ Excavations are protected by perimeter fencing (not barricade tape): (☐ rigid fence - chain link or wood ☐ safety fence 6' from edge.) **EXCAVATION COMMENTS:**
CONFINED SPACES		
☐ NA	☐ No Serious Hazards ☐ Toxic Atmosphere ☐ carbon monoxide ☐ hydrogen sulfide ☐ ☐ Flammable Atmosphere ☐ Low Oxygen ☐ Combustible dust ☐ Drowning - high water	☐ Confined space is altered so that it is no longer a confined space. (describe below) ☐ Confined space is downgraded to a non-permit confined space. (identify which spaces below) ☐ Alternate Entry is used. (Identify which space qualify for confined space entry below) ☐ Full permit-required confined space entry is used due to presence of serious hazards. ☐ Rescue team has been notified (☐ Paid FD ☐ Volunteer FD ☐ Plant Rescue) Rescue Team:_____Phone Number: _____ ☐ All entrants and attendants for Alternate Entry and Permit-Required Entry have confined space entry training.

	HAZARD	HAZARD CONTROLS (check all that apply and comment as required)
	level or potential for sudden changes in flow or level ☐ Other Serious Hazard:	☐ Refer to "Manual Lifting" section of this JSA for manhole cover removal safety. **CONFINED SPACE COMMENTS:**
OVERHEAD POWERLINES		
☐ NA	OVERHEAD POWER LINES _____ KV _____ ft above ground _____ KV _____ ft above ground	☐ Request to de-energize lines will be submitted for work within 20' of power lines. Request sent to: _____ Date: _____ ☐ No one will be permitted to work <10' to power lines without lines being de-energized. ☐ Project persons are informed of 20' safety zone around energized power lines. ☐ Project persons are informed of additional restrictions required when working ≤20' but >10': ☐ Dedicated spotter for all elevated work or operation of equipment that can contact lines ☐ Barricades setup at 20' from base of power lines to establish a "restricted work area." ☐ "Power Line Safety Permit' required to work within 20' of power lines. ☐ Power lines are shielded and/or marked with high visibility material **POWER LINE COMMENTS:**
DRILLING / BORING - All self-propelled rigs including trailer-mounted drilling/boring equipment		
☐ NA	Struck By, Run-Over, Caught In Between (pinch points), Roll Over, Hot Work (open flame) Fluid Leaks ☐ Drilling/Boring Rig: specify type(s) below: _____ _____ _____	☐ **Qualified persons** operate all drilling/boring equipment. Qualifications were determined by: ☐ Work Experience Summary on company letterhead or email with company email address. ☐ Other (describe): _____ ☐ Equipment will be **inspected** upon mobilization by: _____. NOTE - Inspections will include (but not be limited to) the following: leaks, defective safety equipment, and loose/unsecured parts that could fall during operation) ☐ Operators will be reminded of **seatbelt** use by: _____ ☐ **High visibility vests** are required for: _____ ☐ **Cut-resistant gloves** are required when handling cable, rods, and other sharp or "splintery" materials ☐ **Chemical-resistant gloves and clothing** are required while handling grout, cement, chemicals, or contaminated materials including soil or groundwater. (Refer to "Environmental Hazards" section for more information.) ☐ Operators and helpers will maintain a **safe distance** to moving parts. All those working near moving or rotating parts will secure loose hair, clothing, and equipment. All those working near the rods/casings are instructed to not put themselves in a position where they could get hurt if the rods/casings should turn or drop. ☐ Drill rods, casings, and other equipment will be **stored neatly** when not in use and secured to prevent them from falling on, or rolling into, site personnel. ☐ The area will be cleared of **rope, cords, weed-block fabric**, or similar material that could become wrapped around the auger, entangle someone and then pull them into the auger. ☐ **Fall protection** will be worn whenever (if) the drilling/boring mast must be climbed above 6'. (Tie-off Points are specified: ☐ in "Comments" below ☐ in the "Fall Protection" section) ☐ Masts located within 20' of an **overhead power line** will only be lowered or raised with a dedicated spotter. (Refer to the "Overhead Powerlines" section of this JSA for additional safety precautions) ☐ Drill rigs will only be **moved with masts lowered**.

	HAZARD	HAZARD CONTROLS (check all that apply and comment as required)
		☐ Masts will be erected with **outriggers fully extended** when equipped with outriggers. ☐ Outriggers will be placed on a **firm, stable surface** or will be cribbed to prevent sinking of outriggers and collapse of the drilling/boring rig. ☐ Drilling on **sloped surfaces** will be conducted such that the drilling/boring equipment remains stable and otherwise in accordance with requirements outlined below in Drilling/Boring comments. ☐ Damage to **underground utilities** will be prevented by cribbing outriggers to spread the load or relocated outriggers so they are not placed on utilities. ☐ Procedures for responding to **natural gas emissions** (explosive vapors) are: ☐ Outlined in "Comments" below. ☐ Outlined in an attached procedure. ☐ Procedures for drilling/boring from a **barge** or otherwise working over water are: ☐ Outlined in "Comments" below. ☐ in the "Working Over Water" section. ☐ Drilling/boring equipment will be **de-energized and locked-out** prior to maintenance. ☐ Site personnel working in the area surrounding the drilling/boring rig have will be informed where the **emergency shutoff** in the event of an emergency. Specify the location of the shutoff in the "Comments" section below. ☐ **Spill equipment** is available for fuel and hydraulic fluid leaks. Location; _____ **DRILLING/BORING COMMENTS:**
HEAVY EQUIPMENT (other than cranes)		
☐ NA	Struck By, Run-Over, Caught In Between (pinch points), Roll Over, Fluid Leaks ☐ Excavator ☐ Dump Truck ☐ mini Skid Steer (bobcat) ☐ mini Excavator ☐ Gator/Off-Road Vehicle ☐ Other:_____ ☐ Other:_____ ☐ Manlift - specify type(s):	☐ **Qualified persons** operate all heavy equipment. Qualifications were determined by: ☐ Work Experience Summary on company letterhead or email w/ company email address. ☐ Other (describe): _____ ☐ **Equipment will be inspected** upon mobilization by: _____. (NOTE - All leaks or defective safety equipment must be repaired before use.) ☐ Operators are required to wear **seatbelts** for all equipment provided with seatbelts. ☐ **High visibility vests** are required for: _____ ☐ Operators will review manufacturer's safety guidelines for all **equipment operated on slopes** including Gators© and similar ATVs/4x4's. (In the "Comments" section below, specify the maximum slope for each piece of equipment that will be operated on slopes. This may be completed upon mobilization.) ☐ Dump trucks, 4x4's, or other haul vehicles will not be loaded beyond manufacturer **capacities or weight limits** established by state and local authorities for transportation. ☐ **Counterweight swing radius** will be barricaded. ☐ Operators and helpers will maintain a **safe distance to moving parts**. All those working near moving or rotating parts will secure loose hair, clothing, and equipment. ☐ Fall protection will be worn by all those in **manlifts** (scissor lifts are excepted: ☐ Yes ☐ NO) ☐ **Spill equipment** is available for fuel and hydraulic fluid leaks. Location; _____ **HEAVY EQUIPMENT COMMENTS:**
POWER TOOLS, HAND TOOLS, and EXTENSION CORDS		
☐ NA	eye injury, hand/arm cuts, electrical shock, strains, foot injuries, dust ☐ Misc Handtools (shovels,	☐ All tools and electrical cords in-use will be **inspected daily** by: ☐ Users ☐ Site Supervisor/Safety Coordinator ☐ Other: _____ ☐ Only the right tools will be used in a manner for which they were designed.

HAZARD		HAZARD CONTROLS (check all that apply and comment as required)
	hammers, trowels, etc.) ☐ Chainsaws (Clearing & Grubbing) ☐ Sharp hand-tools (knives, cutters, scissors) ☐ Electrofishing (Fish Shocking) Equipment ☐ Hand Augers - Iwan or Spiral type ☐ Hand Sampler - Split Spoon or Thin Wall ☐ Hand Probe (GeoProbe) with ____ lb weight ☐ Manual Cathead Hoist with _____ lb weight ☐ Motorized Cathead Hoist with ____ lb weight ☐ Light-weight Motorized Auger drills (not truck-mounted) ☐ Manhole Lifting Devices **(specify in Comments)** ☐ Other (specify):	☐ **GFCIs** will be used on all extension cords and 120v power tools. ☐ All **extension cords** are in good condition with no cuts through outer insulation, ground plugs are present, and no "vinyl tape" repairs. (Only 12 gauge extension cords may be repaired.) ☐ **Face shield** and safety glasses used (required for chain saws and chemical handling) ☐ **Kevlar chaps and jacket** (required for all chainsaw work) ☐ **Cut-resistant gloves** are worn whenever cutting tools are used. ☐ **Safety cutters or scissors** are required for all cutting activities (no fixed-blade knives). ☐ **Hearing protection** required for which tools or areas: _____ _____ ☐ All **hand augers and sampling probes** will be inspected and verified to be in good conditions with ALL parts required by the manufacturer. Inspections will be completed by: ☐ Users ☐ Site Supervisor/Safety Coordinator ☐ Other: _____ ☐ Persons using sampling probes equipped with **manual slide hammers** are physically capable of handling the weight without difficulty and keep hands clear of pinch-points. ☐ Persons using **manual and motorized cathead hoists** have been trained on how to operate them in accordance with manufacturer guidelines. **(Identify qualified persons by name in the "Comments" Section below.)** ☐ Electrofishing equipment will be **inspected** and verified to be in good conditions with ALL parts required by the manufacturer and exterior cords have no cuts through outer insulation and no "vinyl tape" repairs. Inspections will be completed by: ☐ Users ☐ Site Supervisor/Safety Coordinator ☐ Other: _____ ☐ Persons using **Electrofishing Equipment** have been **trained** on how to operate it in accordance with manufacturer guidelines. **(Identify qualified persons by name in the "Comments" Section below.)** ☐ Electrofishing will be discontinued if the **public** approaches within **100'** ☐ Electrofishing boats will be marked with "**Danger Electricity**" signs (or equivalent) that can be read at a distance of **150'**. ☐ All electrofishing team members wear **electrically-rated rubber gloves** that are inspected daily by users and replaced every 6 months. Use leather or other cut-resistant gloves to protect the rubber gloves. (Similar to NFPA 70E requirements.) ☐ All electrofishing team members wear **chest or hip waders** to insulate the wearer from electrical shock. ☐ **Net handles** for nets used during electrofishing will be nonconductive and long enough to keep hands out of the water. ☐ The positive electrode (anode) on portable electroshockers is equipped with a **manual switch** that stops the current when released and is **not "bypassed'** with a hold-down mechanism (i.e., tape) ☐ At least **two (2) persons** on each Electrofishing boat or location are trained in **CPR**. ☐ All personnel involved in electrofishing know the location of the **emergency shutoff switch**. ☐ **Backpack electrofishing equipment** is equipped with a **tilt switch** that stops the current if the operator falls. **POWER TOOLS, HAND TOOLS & AUGERS, EXTENSION CORDS, & ELECTROFISHING COMMENTS:**
WORKING OVER/NEAR WATER OR ON ICE		
☐ NA	**drowning, hypothermia (winter months), spills to surface waterways, fall through ice**	☐ 100% Fall Protection while working over water or when otherwise exposed to a drowning hazard. **(Describe how fall protection will be implemented, Tie-off points, and the equipment that will be used.** ☐ in "Comments" below ☐ in the "Fall Protection" section) ☐ A "**safety observer**" will remain on shore with the ability to contact emergency response

HAZARD		HAZARD CONTROLS (check all that apply and comment as required)
	☐ Barge-mounted drilling/boring rigs ☐ Sampling from a boat ☐ Boat required for site access ☐ Work on an ice covered body of water ☐ Other: **NOTE – See "Walking Surfaces" section of JSA for slipping hazards on icy surfaces.**	personnel and communicate with those on boats/barges. ☐ USG-approved **flotation vests** will be used. ☐ **Ring-buoy** with 90' of rope and placed within 100' of site personnel. ☐ **Rescue skiff** will be staged such that one person can immediately launch the skiff. ☐ At least **one person will be available to launch** and operate the rescue skiff. NOTE - "Safety Observer" may launch rescue skiff after making emergency response notification(s). ☐ Ice Safety - **Core samples** will be taken every 100' on lakes or 50' on rivers to evaluate the thickness and quality of ice (i.e., *clear/blue ice* = best quality, *white/opaque ice* = moderate quality/use caution, *gray/slushy ice* = poor quality/unsafe). ☐ Ice Safety - Conservative **load estimates** are established for static and/or moving loads as appropriate for the type of work being conducted. Load estimates are explained: ☐ in "Comments" below ☐ in an attached document ☐ Spill Control - **Floating booms** will be used around barges, shore-based heavy equipment, or other locations where hydraulic fluid may leak from equipment into surface water. ☐ Spill Control - **Silt curtains** will be suspended below floating booms. ☐ Boats and Barges will not be operated above their **weight capacity**. ☐ Boats and barges operated (or potentially operated) in **bad weather** will be operated below their weight capacity by _____% (suggest at least 25%). ☐ Boat and barge emergency calls - **Weather resistant radios** that broadcast on Coast Guard frequencies (Channel 16 VHF/FM or 2182 MHZ) will be available for emergency calls. ☐ Boat or barge-based operations will be discontinued when NOAA issues a **small craft advisory** or when sustained **wind speeds of 20 mph** are observed and create dangerous wave or boat/barge handling conditions. ☐ **NOAA Weather Radio Receiver** will be used to monitor weather conditions that may affect boat or barge-based activities. **WORKING OVER WATER COMMENTS:**
MANUAL MATERIAL HANDLING & STORAGE / HOUSEKEEPING / WALKING SURFACES (includes manhole covers, heavy lifting, slippery surfaces, and steep slopes)		
☐ NA	back or shoulder strain, struck by falling objects, trips and falls, incompatible materials (fire or explosion) ☐ hvy manual lifting (>50 lbs) ☐ chemical storage ☐ compressed gas storage ☐ Tall storage greater than 2 pallets stacked. ☐ Material & equipment laydown areas ☐ Trash & debris removal ☐ Manhole Cover Removal ☐ Tripping Hazard (cords, hoses, uneven surfaces) ☐ Slipping Hazard (icy, muddy, oily, etc.) ☐ Steep sloped surfaces ☐ ☐	☐ Mechanical lifting equipment used to reduce manual material handling: (☐Forklift/Lull ☐ Heavy Equipment ☐ Dolly ☐_____) ☐ Manual lifting more than 75 lbs by a single person will be avoided. ☐ Good manual lifting techniques will be reviewed with the following trades/persons prior to site work: _____ ☐ Incompatible chemicals will be separated by 20' or a concrete block wall. ☐ Secondary containment will be provided for the following chemicals: _____ _____ ☐ Safety equipment will be located near chemical storage. ☐ Spill Kit ☐ Emergency Shower ☐ Eyewash ☐ Drench Hose ☐ Splash PPE ☐ Flammable gases and oxygen will be separated by 20'. ☐ All compressed gas cylinders will be transported vertically and secured upright. ☐ Equipment and materials will be stacked in laydown areas with aisles as necessary for safe access. All un-used equipment & materials will be returned to laydown areas daily. Designated laydown areas:_____ ☐ Materials will not be stacked greater than 2 pallets high without being secured. ☐ Trash and debris will be removed daily and placed in designated containers. Specify debris segregation and location of disposal containers below. ☐ Hoses & Cords will be run out of walkways (e.g., within 6" of walls or 7.5' overhead) whenever possible or will be clearly marked by cones or barricades. ☐ All chemical containers will be labeled per Hazard Communication requirements. ☐ **Manhole covers** will ONLY be removed with tools specifically designed to remove them

HAZARD		HAZARD CONTROLS (check all that apply and comment as required)
		including J-hooks that are at least **30"** long. No pry bars, shovels, or screw drivers. ☐ **"Stuck" manhole** removal equipment and procedures are described in "comments." ☐ **"Paved-over"** manhole removal equipment and procedures are described in "comments." ☐ **Slippery surface** – work area inspected for icy surfaces which will be salted/sanded. ☐ **Slippery surface** –YakTrax® or similar slip-on traction devices will be used for icy areas. **MATERIAL HANDLING & HOUSEKEEPING COMMENTS:**
ROADWAY, RAILROAD, & SIDEWALK OBSTRUCTION		
☐ NA	☐ Vehicle accidents ☐ Pedestrians struck by vehicles or heavy equipment ☐ Pedestrians falls ☐ Pedestrian struck-by falling objects ☐ Railroad accidents	☐ DOT signal devices will be used to re-route vehicles around excavations or busy site entrances/exits that affect road traffic. ☐ Roadway Flaggers will be used and have DOT Flagger Training ☐ Pedestrian traffic will be safely routed around or over excavations. ☐ Pedestrian traffic will be safely routed around or under overhead work. ☐ Railroad owner notified for permission to work on the railroad right-of-way. ☐ Railroad flagger is required for work in the right-of-way. ☐ Equipment, materials, and personnel may not be closer than 15' to the nearest railroad rail if the railroad flagger or the flagger's signal is not visible. ☐ Derailer(s)/bumper(s) will be installed on railroad tracks to isolate the work area. **ROADWAY, RAILROAD, & SIDEWALK COMMENTS:**
BIOLOGICAL HAZARDS		
☐ NA	Infection, Lyme Disease, West Nile Virus, Eastern Equine Encephalitis (EEE), Severe Rash, Allergic Reaction, Venom effects ☐ Ticks ☐ Mosquitoes (EEE, WNV, etc) ☐ Venomous Snakes ☐ Venomous Spiders ☐ Poison Ivy, Oak, or Sumac ☐ Bees & Wasps ☐ Fire Ants ☐ Other (identify below):	☐ Use **DEET** (25%-98%) repellent on skin for protection against mosquitoes, ticks, and similar insects. Use higher concentrations for heavily infested areas. ☐ Use **Permethrin** repellent on clothing in areas heavily infested with ticks, chiggers, etc. ☐ All site personnel will be instructed on how to **identify poison ivy, sumac, and oak**. (O'Brien & Gere Field Identification Guide or equiv. has been posted? ☐ YES ☐ NO) ☐ Poison ivy **barrier creams** (e.g., Ivy Block) will be used on exposed skin prior to the workday. ☐ Poison ivy **neutralizing wipes or rubbing alcohol** will be used on hands and exposed skin following work activities or incidents where contact with poison ivy/oak/sumac is suspected. ☐ **Protective coveralls** (such as Tyvek™) will be used to prevent contact with ticks or poison ivy. ☐ All site personnel will be instructed on how to **identify venomous snakes** indigenous to the area. List venomous snakes of concern in the "Comments" section below. (O'Brien & Gere Field Identification Guide or equiv. has been posted? ☐ YES ☐ NO) ☐ All field personnel with a potential to **encounter venomous snakes** will wear: ☐ Snake Chaps AND/OR ☐ High Leather Safety Boots (NOT ankle-high boots/shoes) ☐ All site personnel will be instructed on how to identify **venomous spiders** indigenous to the area. List venomous spiders of concern in the "Comments" section below. (O'Brien & Gere Field Identification Guide or equiv. has been posted? ☐ YES ☐ NO) ☐ Site personnel with known **allergies** to bee/wasp stings, fire ant bites, or other insect bites carry an "EpiPen" or equivalent medication prescribed for treating allergic reaction. **BIOLOGICAL HAZARDS COMMENTS:**

HAZARD	HAZARD CONTROLS (check all that apply and comment as required)

ENVIRONMENTAL HAZARDS / HAZARDOUS WASTE SITE WORK

☐ NA

Exposure to hazardous vapors or dust, contact with contaminated materials, fire, explosion.

Contaminants of Concern and hazardous chemicals include:

- ☐ volatile organic compounds
- ☐ (describe:_____ _____)
- ☐ semi-volatile organic compounds (describe:_____ _____)
- ☐ metal dusts (describe:_____ _____)
- ☐ PCBs
- ☐ Caustic (NaOH)
- ☐ Acid (H2SO4, HCL)
- ☐
- ☐

(many other hazardous waste site hazards are covered elsewhere in this JSA)

- ☐ Site workers with a potential for contact with contaminated materials and work in Level C PPE will have OSHA 40-hour training, current 8-hour refresher, and medical exam.
- ☐ Site workers with minimal contact with contaminated materials and no work in Level C PPE will have OSHA 40-hour OR 24-hour training, current 8-hour refresher, and medical exam.
- ☐ Foremen or Supervisors overseeing field crews will have 8-hour OSHA Supervisor training.
- ☐ No intrusive work activities or areas are anticipated with current scope of work.
- ☐ Intrusive work activities include: _____ _____ _____
- ☐ The perimeter of intrusive work areas are identified by:_____
- ☐ Decontamination of personnel or equipment is <u>not</u> anticipated with the current scope of work.
- ☐ Decontamination of personnel and small tools will be conducted as follows: _____ _____
- ☐ Decontamination of heavy equipment will be conducted as follows: _____ _____ _____
- ☐ Heavy equipment leaving the site will be inspected by: _____
- ☐ Work area monitoring is not anticipated with the current scope of work.
- ☐ Work area air monitoring will be conducted per attached air monitoring plan & action levels.
- ☐ **Work Area Air Monitoring** as follows for: ☐ Dust, ☐ VOCs, ☐ Other:_____

(**NOTE** - Insert additional or revise existing response actions as appropriate)

Action Levels	Description & Response Actions
	1. <u>Level C PPE</u> - Tyvek, boot covers, nitrile gloves, half or full face w/ respirator with _____ cartridges changed (☐ daily, ☐ _____) OR 2. Reduce contaminant concentrations below action level(s).
	1. <u>Level B PPE</u> - Same as above except with a supplied air respirator OR 2. Reduce contaminant(s) below Level B action level(s).
	1. STOP work

- ☐ Community Air Monitoring is not anticipated with the current scope of work.
- ☐ Community Air Monitoring is required per the attached air monitoring plan & action levels.
- ☐ **Community Area Air Monitoring** as follows for: ☐ Dust, ☐ VOCs, ☐ Other:_____

(**NOTE** - Insert additional or revise existing response actions as appropriate)

Action Levels	Description & Response Actions
	1. If dust or odors are observed leaving the site perimeter, then dust/odor controls must be implemented. 2. If dust/odor controls fail to prevent dust/odor emissions from leaving the site, then **STOP** work and notify the client contact.
	1. Use dust/odor suppression techniques outlined in the "Comments" section. 2. Evaluate additional techniques or controls if necessary. 3. Notify the client contact.
	1. STOP work

EMERGENCY RESPONSE

(911 Service is Available ☐ Yes ☐ No **Cell Phone Required** ☐ Yes ☐ No)			
Alternate Emergency Number (if not "911"):			
Site Address:			
Muster Point in case of site evacuation:			
Emergency Medical Treatment - Hospital Name: Hospital Address:		**Number:**	
Non-Emergency Med. Treatment - Clinic Name: Occupational Clinic Address:		**Number:**	
Fire Department Name		**Number:**	
Spill Response:		**Number:**	
Client Representative Name::		**Office Number:** **Cell Number:**	
O'Brien & Gere **Project Manager** Name:		**Office Number:** **Cell Number:**	
O'Brien & Gere **Corporate H&S** Name:		**Office Number:** **Cell Number:**	
Contact Name:		**Office Number:** **Cell Number:**	
Contact Name:		**Office Number:** **Cell Number:**	

EMERGENCY RESPONSE COMMENTS:

1. NOTIFICATIONS - Upon occurrence of any injury, fire, explosion, major spill (beyond incidental), property damage >$1,000, or near-miss that could have resulted in a fatality or disabling injury, **IMMEDIATELY NOTIFY** the O'Brien & Gere Project Manager, O'Brien & Gere Manager of Corporate H&S, and the Client Representative.
2. WRITTEN REPORT - Complete an *Incident Report* within **24 hours** and submit to the O'Brien & Gere Manager of Corporate H&S for review. Report may be submitted as a "draft" or "preliminary" and updated as additional information is identified.
3. INJURY RESPONSE
   - First aid injuries will be handled on site with FA-trained personnel. First aid and CPR supplies are located: _____.
   - Minor (not life threatening) injuries that require medical attention will be treated at the "Non-Emergency Med Treatment" clinic identified above. If no clinic is available or identified, then default to the "Emergency Medical Treatment" facility.
   - Life Threatening injuries are an emergency and require implementing emergency response (911 or alternate).
4. FIRE or EXPLOSION
   - Incipient stage (trash can size) fires may be handled by site personnel using fire extinguishers or hoses.
   - Larger fires will require that affected personnel are evacuation to the identified muster point and implementing emergency response (911 or alternate).
5. SPILL RESPONSE
   - Major spills that exceed the available supplies and resources to safely control and cleanup will require contacting an off-site spill responder indicated above for "Spill Response" and in accordance with existing site spill response plans. If a specific spill responder is not identified, a large spill will require implementing emergency response (911 or alternate).
   - Review available spill control and prevention plans that may be applicable to the work area. Ensure project personnel are familiar with plan requirements.
   - Minor or incident spills will be cleaned up by site personnel using supplies that are located: _____.
   - The site owner will make notifications for reportable spills unless O'Brien & Gere is authorized to make those notifications.
6. POSTING - Emergency numbers and Hospital Route Map are posted: _____.
7. OTHER EMERGENCY INFORMATION:



< Insert Hospital Map and Directions Here >



<If Available, insert Occupational Clinic Map and Directions Here>

Pre-Work Briefing Acknowledgement: Individuals who are performing work covered by this JSA have received a **project-specific safety orientation** that includes a review of the safety requirements outlined in this JSA. The undersigned individuals acknowledge that have read this JSA and/or reviewed this JSA with a designated project representative and agree to comply with safety requirements outlined herein. The undersigned individuals understand that these safety requirements are not "all-inclusive" and that they are expected to follow any additional safe work practices applicable or customary to their specific scope of work or trade.

Print Name	Signature	Company	Date

Appendix B

Daily Pre-Task Planner

Project Name:		**Date:**	
Company Name:		**Project No.:**	
Authorized Tasks **Scope of Work for the day (be specific):**			

Shaded Boxes Indicate Change and Must Be Addressed.

YES	NO	Daily Supervisor Safety Planning (focus on changes from previous work shift)
	Do Not Proceed	***Project Safety Orientation*** has been provided to all workers prior to work. ***IF NO***, then provide an orientation prior to performing site work.
	Do Not Proceed	***Pre-Work Documentation*** has been submitted or reviewed for all workers in accordance with safety plan and/or JSA requirements. ***IF NO***, then ensure documentation is reviewed and current prior to performing affected site work.
		The ***Health & Safety Plan (HASP) or Job Safety Analysis (JSA)*** is applicable to the "Authorized Tasks" and hazard controls have been implemented. ***IF NO***, then (choose one): ☐ Identify new hazards and controls in the following sections and communicate new hazards and controls in this planner OR ☐ Revise the safety plan or JSA and review with site personnel.
		ANY ***unusual or changed site conditions*** that may affect safety hazards. ***IF YES***, explain in "***Key Safety Instructions***" and review appropriate changes to safety equipment or procedures. ☐ Heavy Rain ☐ Possible Lightening ☐ High Winds ☐ Heat ☐ Cold or Ice ☐ New Work Area ☐ Other:
		ANY ***new tools or equipment or changes to work methods*** that may affect safety hazards. ***IF YES***, explain in "***Key Safety Instructions***" and review appropriate changes to safety equipment or procedures.
		Do ANY of the following ***coordination or notification conditions*** apply to today's authorized tasks? ***IF YES***, take necessary measures (or verify that such measures have already been taken) to coordinate with, or notify, affected organizations including: ☐ Process owners or operators when working near active process equipment including electrical substations, chemical/bulk storage areas, water/wastewater treatment equipment, active production areas, etc. ☐ Contractors performing work in adjacent work areas or other areas potentially impacted by project activities. ☐ Public officials or regulatory agencies for work that may impact public roads, navigable waterways, sewer discharges, etc. ☐ Railroad and Utility Companies for work in rights-of-way OR crossing rights-of-way including "Dig Safe" notifications. ☐ Rescue services for permit-required confined space entry. ☐ Other:
		Permits & Inspections needed for authorized tasks? (**IF YES**, then check all that apply) ☐ Permit-Required Confined Space Entry ☐ Hot Work ☐ Daily Excavation Checklist ☐ Non-Permit Confined Space Downgrade ☐ Energized Electrical Work ☐ Daily Scaffolding Inspection ☐ Alternate Entry (Confined Space) ☐ Lifting & Rigging Plan ☐ Equipment Inspections (specify below) ☐ Other:

Key Safety Instructions or Message For The Day (to be reviewed with field personnel)

☐ PERMIT REVIEW - Work permits and inspections are applicable to today's work tasks (Review identified permits & inspections.)
☐ NO CHANGE - The safety plan or JSA is applicable to today's work tasks and PPE and safety procedures are the same as the previous work shift
☐ CHANGE - The safety plan or JSA is applicable to today's work tasks ***but PPE or safety procedures are different.*** (Explain below.)
☐ CHANGE - The safety plan or JSA is ***NOT*** applicable to today's work tasks. ***New hazards and safety controls are identified.*** (Explain below.)

O'Brien & Gere Representative (review):	
Subcontractor Foreman/Supervisor Signature (authorize):	
Crew Signatures (acknowledge):	

O'BRIEN & GERE

HAZARD		HAZARD CONTROLS (check all that apply and comment as required)
		ENVIRONMENTAL & CHEMICAL HAZARD COMMENTS:
OTHER HAZARDS & CONTROLS not addressed in other sections of this JSA		
☐ NA	☐ ☐ ☐	

Appendix C

Safety Toolbox Meeting Form

O'BRIEN & GERE

Toolbox Safety Meeting

File Name: App C_TOOLBOX form.doc
Revised: June 22, 2007

Client:		**Project No.:**	
Project Name:		**Today's Date:**	
Project Location:			
Conducted By:			
Meeting Topic:			

	Name	Signature	Company Name
1			
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Meeting Topics (be specific):

KEEP COPIES OF ALL TOOLBOX MEETING MINUTES WITH PROJECT RECORDS

Appendix D

Section 2.15 (Excavation) of Corporate Health & Safety Manual

2.15 EXCAVATION

1. Purpose

This program is designed to assist employees in the safe work practices involved with soil excavation. Excavations are defined to include trenches and openings in the earth's surface.

2. Scope

- Specific Responsibilities;
- Procedures:
  - Utilities;
  - Exit and Entry;
  - Falling Materials;
  - Warning Lines/Systems;
  - Confined Spaces;
  - Water Accumulation;
  - General Sloping & Shoring Requirements
  - Sloping and Benching;
  - Shield Systems;
  - Shoring Systems
  - Adjacent Structures;;
  - Daily Inspection; and
  - Soil Testing.
- Additional Information:
  - Sloping Angles by Soil Type; and
  - Timber and Aluminum Hydraulic Shoring Requirements

3. Specific Responsibilities

3.1 Project Manager

To ensure that all excavations are properly safeguarded prior to employee entry; To ensure that all affected employees understand and are knowledgeable in safe entry and work procedures; and To ensure employees involved in excavation are properly trained in the safe work practices associated with all excavation operations.

3.2 Site Supervisor/Foreman/Team Leader

To train or provide training to all employees who are unfamiliar with safe excavation practices; To ensure all affected employees under their supervision are knowledgeable in excavation safety; and To ensure all excavations greater than four (4) feet deep are characterized for confined space potential. To ensure that an Excavation Competent Person is on site whenever workers must enter excavations 5' or more deep or are otherwise exposed to excavation collapse hazards.

3.3 Excavation Competent Person

The Excavation Competent Person is responsible to characterize soils, select sloping and shoring methods, and inspect excavations daily, and implement other requirements of this procedure. Excavation competent persons must complete the *Soil Analysis Checklist* if a soil class other than "Type C" is selected and complete a *Daily Excavation Checklist* each day that workers are exposed to excavation/cave-in hazards. Excavation competent persons must have National Underground Utility Contractors Association (NUCA) training or equivalent that thoroughly covers requirements in 29CFR1926 Subpart P.

3.4 Employee/Subcontractor/Visitor

Understand and abide by all applicable training; Comply with all signage; Advise appropriate personnel of deficiencies in the program and/or hazards on-site; and Follow all Health and Safety rules at the facility and meet all the Health and Safety requirements of their contracts. To NOT enter excavations without verifying that excavations have had the daily inspection required by OSHA.

4. Procedures

4.1 Utilities

A. Prior to opening an excavation, the estimated location of utility installations (i.e., sewer, telephone, fuel, electric, waterlines, etc.) shall be established.

B. Contact affected utility companies for utility locations. If location is uncertain or a response cannot be received within 24 hours (unless a longer period is required by state or local law), work may proceed provided the appropriate precautions are taken (i.e., use of detection equipment, etc.).

C. When excavations approach the estimated location of utility, the exact location of the installation shall be determined by safe and acceptable means (i.e., use of hand shovels).

Note: Often utilities are flagged 12 - 24 inches above the actual installation.

4.2 Exit and Entry

A. A ladder, stairway, ramp or other safe means of egress will be located in excavations four (4) feet or more in depth at least 25 feet from each employee in the excavation.

B. Ramps:

- Equipment ramps will be designed by a competent person qualified in structural design;
- Structural members must be the same thickness and connected together when two (2) or more are in-line;
- Personnel ramps should be cleaned or provided with a surface treatment to prevent slipping;
- Cleats will be attached in a manner to prevent tripping; and
- Ramps/Walkways Crossing over excavations deeper than six (6) feet require guarding. Refer to *Fall Protection* of this manual).

4.3 Falling Materials

A. No employee will be permitted underneath loads handled by lifting or digging equipment.

Note: Employees will be required to stand away from any vehicle being loaded or unloaded to avoid being struck by an spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when the vehicles are equipped to provide adequate protection for the operator during loading and unloading operations.

B. Employees will be protected from excavated materials or equipment that could pose a hazard by falling or rolling into excavations. Protection will be provided by placing and keeping such materials or equipment at least two (2) feet from the edge of excavations, or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.

C. Adequate protection will be provided to protect employees from loose rock or soil that could pose a hazard by falling or rolling from an excavation face. Such protection will consist of:

- Scaling to remove loose material;
- Installation of protective barricades at intervals as necessary on the face to stop and contain falling material; or
- Other means that provide equivalent protection.

D. All persons working on the upper surface must stay six (6) feet from the excavations edge to the maximum extent possible and where feasible. Contact CHS for guidance.

4.4 Warning Line/System

When mobile equipment is used/operated near open excavations, a warning system (i.e. barricading, stop logs, hand or mechanical signals) shall be utilized.

4.5 Confined Space

A. Excavations over four (4) feet in depth may be considered a confined space. Generally if the excavation is sufficiently sloped to provide <u>easy</u> personnel access (no use of a ladder, stairs, etc.) then it is not classified as a confined space.

B. If the excavation is considered a confined space, enter via confined space entry procedures outlined in *Confined Space Entry* of this manual.

4.6 Water Accumulation

A. Employees will not work in excavation with water accumulation unless sufficient precautions have been taken. These include, but are not limited to: use of support shields, pumping of water, and protection from cave-ins.

B. If water accumulation is controlled by mechanical means, a competent person will monitor the effectiveness and operation of the equipment. If equipment failure occurs, personnel will leave the excavation until proper safe precautions have been taken.

C. If excavation work interrupts the natural drainage of surface water (such as streams), diversion ditches, dikes, or other suitable means will be used to prevent surface water from entering the excavation and to provide adequate drainage of the area adjacent to the excavation. Excavations subject to runoff from heavy rains will require a documented inspection by a competent person.

4.7 General Sloping & Shoring Requirements

A. Each employee in an excavation will be protected from cave-ins by an adequate protective system designed in accordance with this procedure and 29CFR1926.652 except when:
- Excavations are made entirely in stable rock; or
- Excavations are less than five (5) feet in depth and examination of the ground by a competent person provides no indication of a potential cave-in.

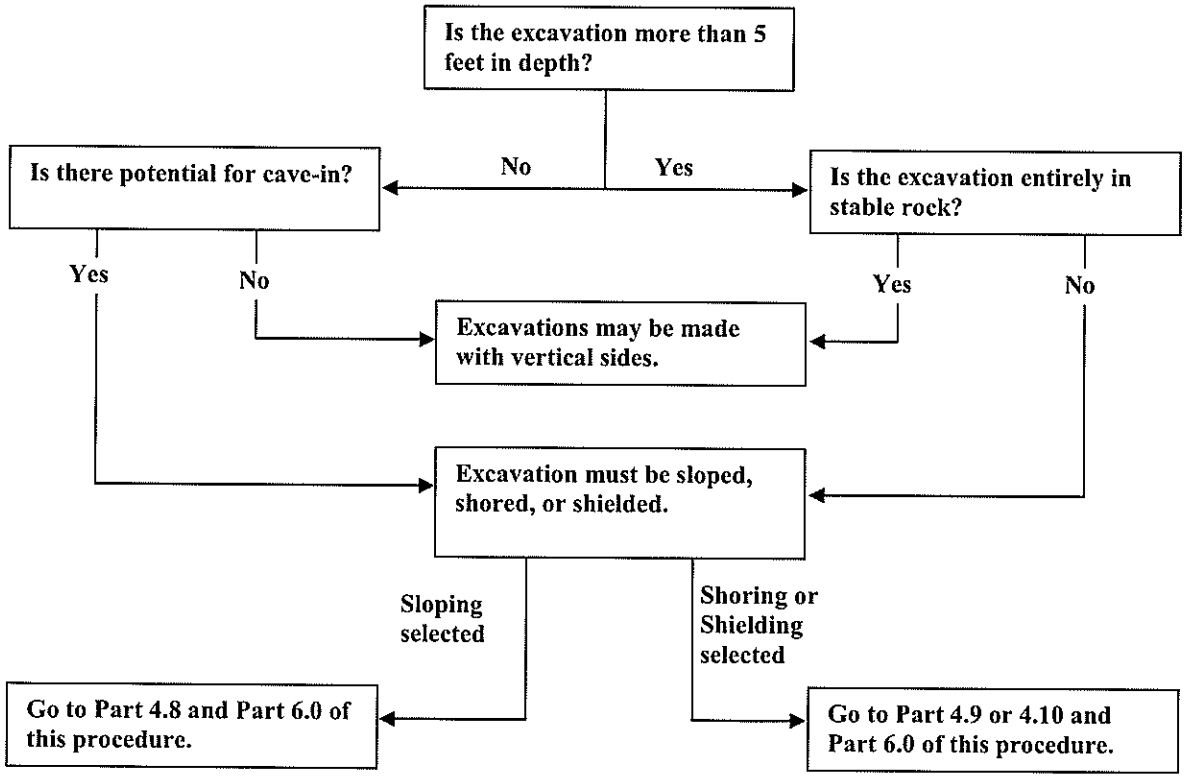
B. Excavations will be sloped at an angle not steeper than 1½ horizontal to 1 vertical (34° measured from the horizontal), unless other sloping or shoring options are used.

C. If a PE is used to design sloping, benching, shielding, or shoring excavation systems, then the designs must remain in the job trailer for the duration of the job; and

D. All designs must remain in the job trailer for the duration of the project.

E. Refer to the following figure for guidance in selecting sloping or shoring options.

Selection of Protection System



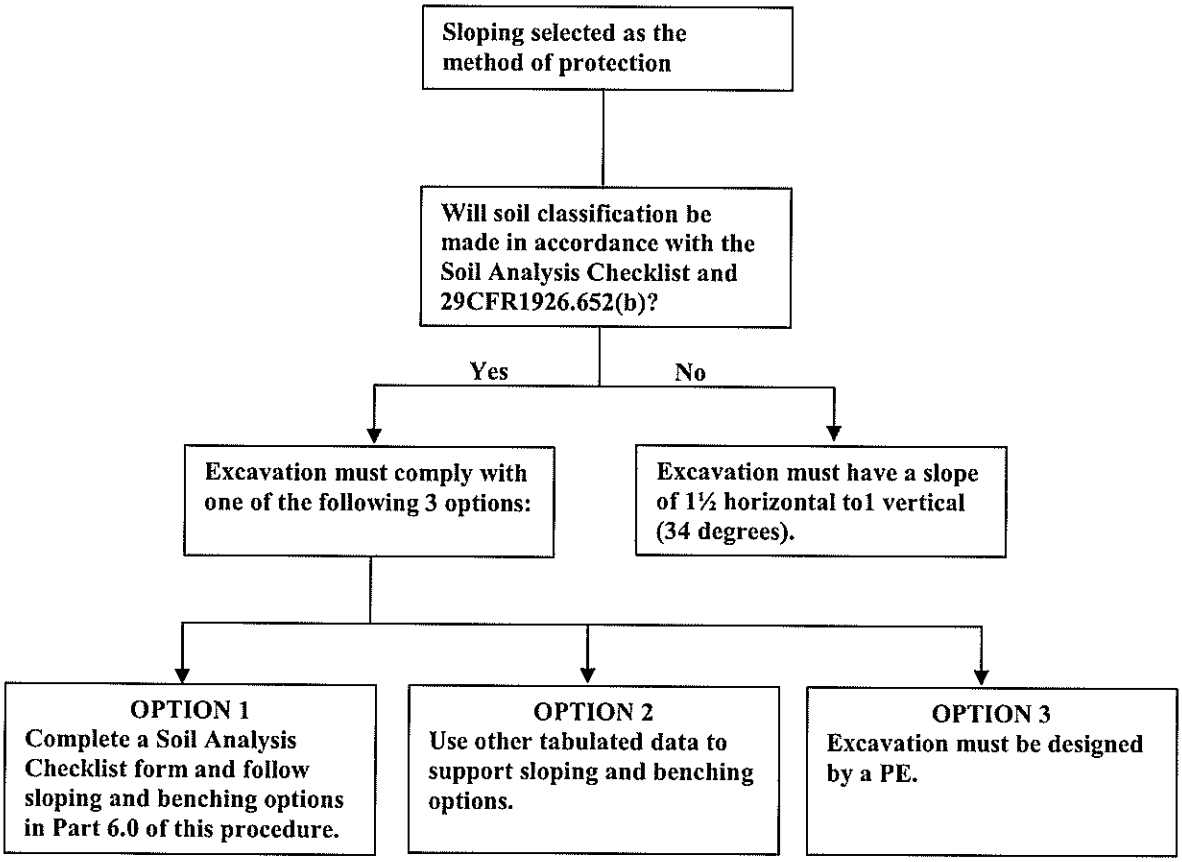
4.8 Sloping and Benching

A. Sloping and shoring requires that the soil is classified by its type, either A, B, or C. The *Soil Analysis Checklist* is available to document and provide guidance in soil analysis activities. Sloping and shoring options in accordance with the following figure and refer to Table 1 and Figures 6.1 to 6.16 in Part 6.0 of this procedure for specific information on sloping and benching angles according to soil type.

B. Deviations from sloping and benching requirements set forth in 29CFR1926 Subpart P, Appendices A and B must be approved by a PE.

C. Refer to the following figure for selection of sloping and benching options.

Selection of Sloping Options

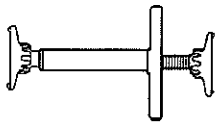


4.9 Shield Systems

A. Shield systems (e.g., trench boxes) will have the capacity to resist failure against all loads that are intended or could reasonably be expected to be applied or transmitted to the system.

B. Shield systems will not be subjected to loads exceeding those which the system was designed to withstand;

C. Shields will be installed in a manner to restrict lateral or other hazardous movement of the shield in the event the excavation or trench caves in.

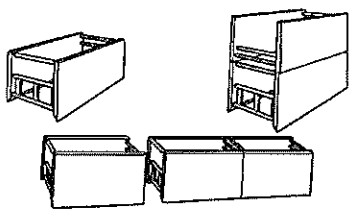


Trench Jacks
(Screw Jacks)

D. Employees will be protected from the hazard of cave-ins when entering or exiting the areas protected by shields;

E. Employees will not be allowed between (in) shields when shields are being installed, removed, or moved vertically;

F. Shields must extend to at least two (2) feet from the bottom of the excavation;



Trench Shields

G. Shields must extend 18 inches above shored excavations; and

H. Always follow manufacturers recommendations. Deviations from manufacturers recommendations must be requested in writing to the manufacturer and documented in the job trailer for the duration of the project.

I. Refer to the adjacent figure for examples of typical trench shield or trench boxes.

4.10 Shoring Systems

A. Shoring systems (e.g., trench boxes) will have the capacity to resist failure against all loads that are intended or could reasonably be expected to be applied or transmitted to the system.

B. Shoring systems will not be subjected to loads exceeding those which the system was designed to withstand

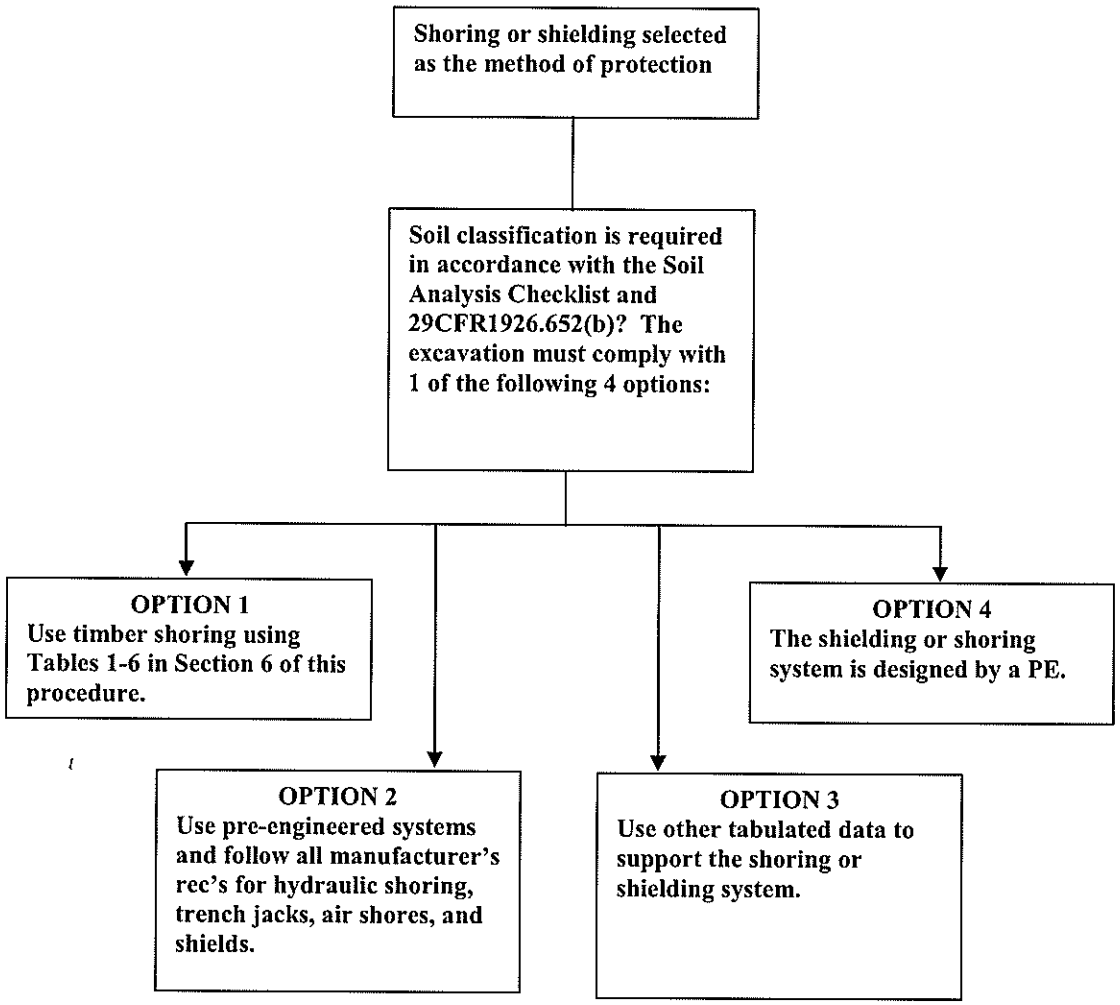
C. Shoring systems other than those listed in 29CFR1926 Subpart P must be approved by a PE. Information on common timber and aluminum hydraulic shoring systems from 29CFR1926 Subpart P is included in Tables 2-10 in Part 6 of this procedure.

D. Materials and Equipment:

- Materials and equipment used for protective systems will be free from damage or defects that might impair their proper function; and
- When material or equipment that are used for protective systems is damaged, a competent person will examine the material or equipment and evaluate its suitability for continued use. If a competent person cannot assure the material or equipment is able to support the intended loads or is otherwise suitable for safe use, then such material or equipment will be removed from service, and will be evaluated and approved by a registered professional engineer before being returned to service.

Note: The equipment should be effectively tagged "Do Not Use - Defective".

Selection of Shoring or Shielding Options



E. Installation and Removal of Support:

- Members of support systems will be securely connected together to prevent sliding, falling, kickouts, or other predictable failure;
- Support systems will be installed and removed in a manner that protects employees from cave-ins, structural collapses, or from being struck by members of the support system;
- Individual members of support systems will not be subjected to loads exceeding those which those members were designed to withstand;
- Before temporary removal of individual members begins, additional precautions will be taken to ensure the safety of employees, such as installing other structural members to carry the loads imposed on the support system;
- Removal will begin at, and progress from, the bottom of the excavation. Members will be released slowly so as to note any indication of possible failure of the remaining members of the structure or possible cave-in of the sides of the excavation; and
- Backfilling will progress together with the removal of support systems from excavations.

F. Refer to the following figure for selection guidance on shoring and shielding options.

4.11 Adjacent Structures

A. Where the stability of adjoining buildings, walls, or other structures is endangered by excavation operation, support systems such as shoring, bracing, or underpinning will be provided to ensure the stability of such structures for the protection of employees;

B. Excavation below the level of the base or footing of any foundation or retaining wall that could be reasonably expected to pose a hazard to employees will not be permitted except when:

- A support system, such as underpinning, is provided to ensure the safety of employees and the stability of the structure; or
- The excavation is in stable rock; or
- A registered professional engineer has approved the determination that such excavation work will not pose a hazard to employees; and
- Sidewalks, pavements, and appurtenant structure will not be undermined unless a support system or another method of protection is provided to protect employees from the possible collapse of such structures.

4.12 Daily Inspections

A. Daily inspections of excavations, the adjacent areas, and protective systems will be made by a competent person for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection will be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections will also be made after every rainstorm or other hazard increasing occurrence. These inspections are only required when employee exposure is anticipated.

B. Where the competent person finds evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions, exposed employees will be removed from the hazardous area until the necessary precautions have been taken to ensure their safety.

C. Each inspection must be fully documented and meet or exceed the content referenced in the O'Brien & Gere ***Daily Excavation Checklist***. Refer to Section 4, forms.

4.13 Soil Analysis

Soil analysis documentation and procedures are outlined in the soil analysis checklist. Refer to Section 4, Forms.

A. Soil Qualities must be assessed by a person trained to identify soil types and excavation hazards. Soil qualities are grain, site, saturation cohesiveness and unconfined compressive strength. OSHA identifies soil types as follows:

- Soil Type A - Most stable soil: clay, silty clay, clay loam, and hardpan (resists penetration);
- Soil Type B - Medium stability soil: silt, sandy loam, medium clay and unstable dry rock;

- Soil Type C - Least stable soil: gravel, loamy sand, soft clay, submerged soil or dense, heavy unstable rock; and
- Stable Rock – Natural solid material matter that can be excavated with vertical sides and remain intact while exposed.

B. Grain sizes (gravel, sand, silt and clay) vary in stability. The larger the grain, the less stable the soil. Particles larger than a pin head are considered gravel. The naked eye cannot see particles of clay or silt.

C. Saturation refers to the amount of water between the particles of soil. When water fills all voids in the soil, the soil is considered saturated. Saturated soils may be more likely to cave-in.

D. Cohesion/stability refers to how well the particles hold together therefore predicting how well the excavation will hold together.

E. Unconfined compressive strength refers to how the particles react under pressure, and is measured in pounds per square foot.

F. Visual Testing Clues:

- Look at soil particle size and type. You'll see a mixture of different types;
- Does soil clump when dug? It could be clay or silt;
- Cracks in walls and spalling can mean soil types B or C;
- Layered systems with adjacent hazardous areas - buildings, roads and vibrating machinery - may require a professional engineer for classification; and
- Standing water or water seeping through trench walls automatically means soil type C.

G. Manual soil tests are required before a protective system is selected. A sample taken from soil dug out into a spoil pile is tested as soon as possible to preserve its natural moisture. Soil can be tested either on-site or off-site. Manual tests include:

- Sedimentation: Test determines how much silt and clay are in sandy soil. Saturated sandy soil is placed in a straight-sided jar with about five inches of water. After the sample is thoroughly mixed and allowed to settle, the percentage of sand is visible. Using this data the soil is classified: for example, a sample with 80 percent sand will be classified Type C;
- Wet shaking test is another way to determine the amount of sand versus clay and silt in a soil sample. In your hand, shake a saturated sample to gauge soil permeability based on the following facts: Shaken clay resists water movement through it. Water flows freely through sand and less freely through silt;
- Thread test determines cohesion. A representative soil sample is rolled between the palms of the hands to 1/8" diameter and several inches in length. The rolled piece is placed on a flat surface, then picked up. If a sample holds together for two (2) inches, it's considered cohesive; and
- Ribbon test determines cohesion and is used as a backup for the Thread Test. A representative soil sample is rolled out (using the palms of your hands) to ¾" in diameter, and several inches in length. The sample is then squeezed between thumb and forefinger into a flat unbroken ribbon 1/8" to ¼" thick, which is allowed to fall freely over the fingers. If

the ribbon does not break off before several inches are squeezed out, the soil is considered cohesive.

5. Documentation

A. Each daily excavation inspection must be documented and retained on-site for the duration of the job project.

B. Soil analysis documentation must be retained on-site for the project duration.

C. Each excavation design (i.e., shoring, benching, shielding, etc.) must be kept on-site for the duration of the project.

6. Additional Information

6.1 Slope Angles by Soil Type

Table 1
Maximum Allowable Slopes

Soil or Rock Type	Maximum allowable slope (H:V) * for excavations less than 20 feet deep ***
Stable Rock	Vertical (90°)
Type A **	¾:1 (53°)
Type B	1:1 (45°)
Type C	1½:1 (34°)

NOTES:

* Numbers shown in parentheses next to maximum allowable slopes are angles expressed in degrees from the horizontal. Angles have been rounded off.

** A short-term maximum allowable slope of ½H:1V (63°) is allowed in excavations in Type A soil that are 12 feet (3.67m) or less in depth. Short-term maximum allowable slopes for excavations greater than 12 feet (3.67m) in depth shall be ¾H:1V (53°).

*** Sloping or benching for excavations greater than 20 feet deep shall be designed by a registered professional engineer.

EXCAVATION SAFETY – TYPE A SOIL
Simple Slope – General

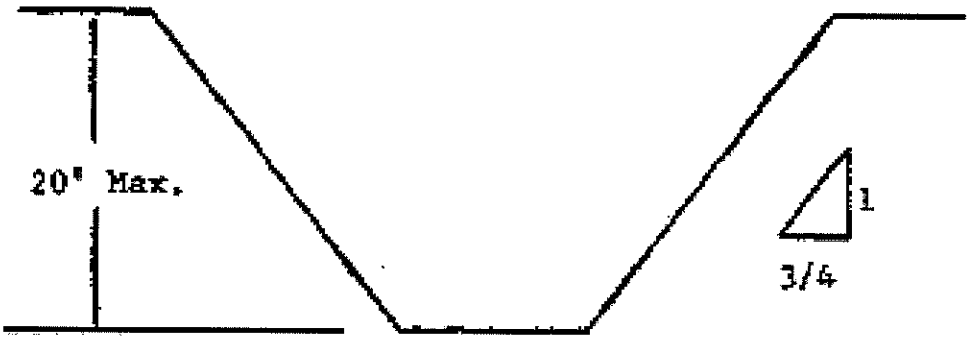


Figure 6.1 – All simple slope excavations in Type A soil that are 20 feet or less in depth shall have a maximum allowable slope of ¾:1.

EXCAVATION SAFETY – TYPE A SOIL
Simple Slope – Short Term

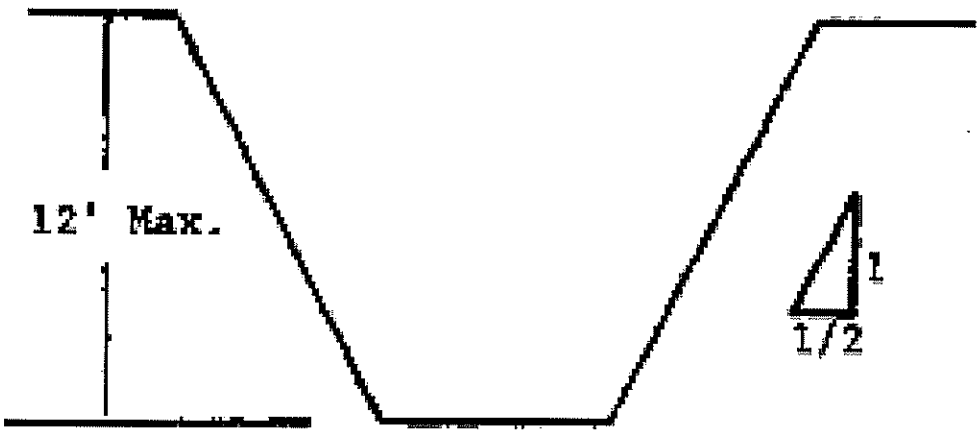
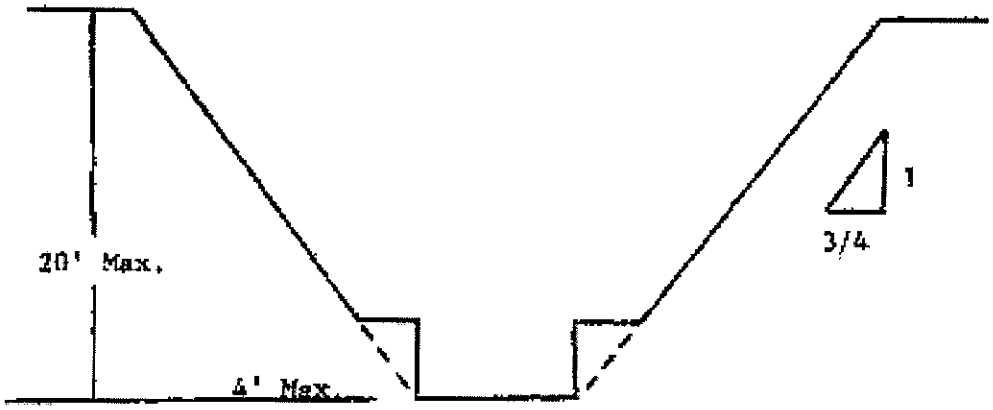


Figure 6.2 – (Exception) Simple slope excavations in Type A soil which are open 24 hours or less (short-term) and which are 12 feet or less in depth shall have a maximum allowable slope of ½:1.

EXCAVATION SAFETY – TYPE A SOIL

Simple Bench



Multiple Bench

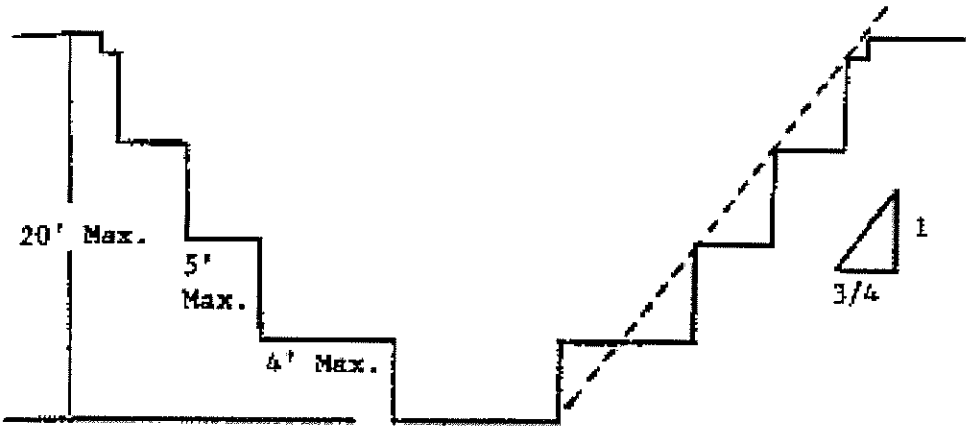


Figure 6.3 – All benched excavations in Type A soil that are 20 feet or less in depth shall have a maximum allowable slope of ¾:1 and maximum bench dimensions as shown above.

EXCAVATION SAFETY – TYPE A SOIL
Unsupported Vertically Sided Lower Portion –
Maximum 8 Feet In Depth

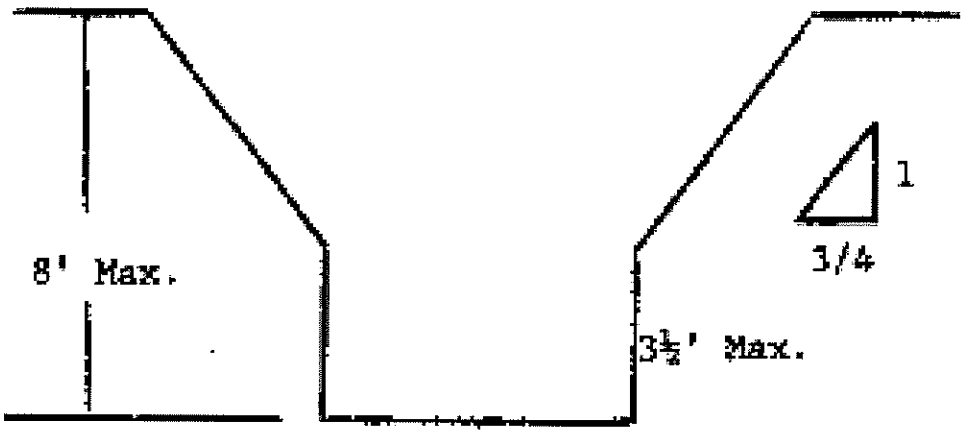


Figure 6.4 – All excavations in Type A soil that are 8 feet or less in depth which have unsupported vertically sided lower portions shall have a maximum vertical side of 3.5 feet.

EXCAVATION SAFETY – TYPE A SOIL
Unsupported Vertically Sided Lower Portion –
Maximum 12 Feet In Depth

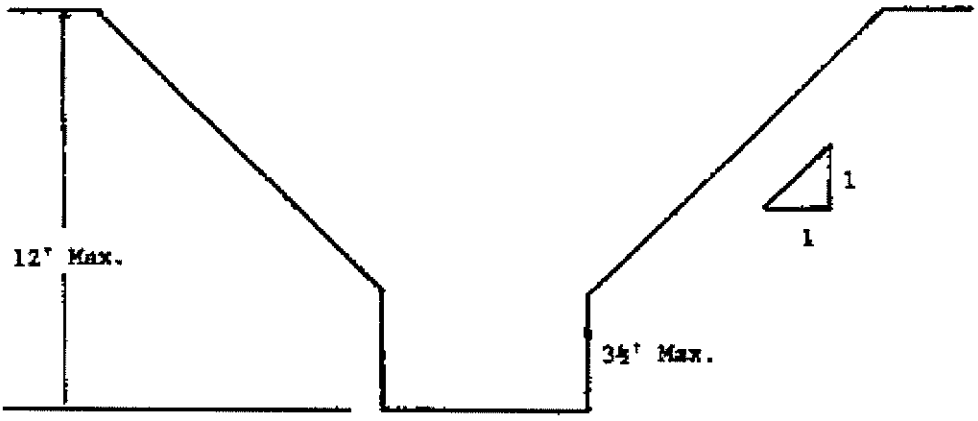


Figure 6.5 – All excavations in Type A soil that are more than 8 feet but not more than 12 feet in depth with unsupported vertically sided lower portions shall have a maximum allowable slope of 1:1 and a maximum vertical side of 3.5 feet.

EXCAVATION SAFETY – TYPE A SOIL
Supported or Shielded Vertically Sided Lower Portion

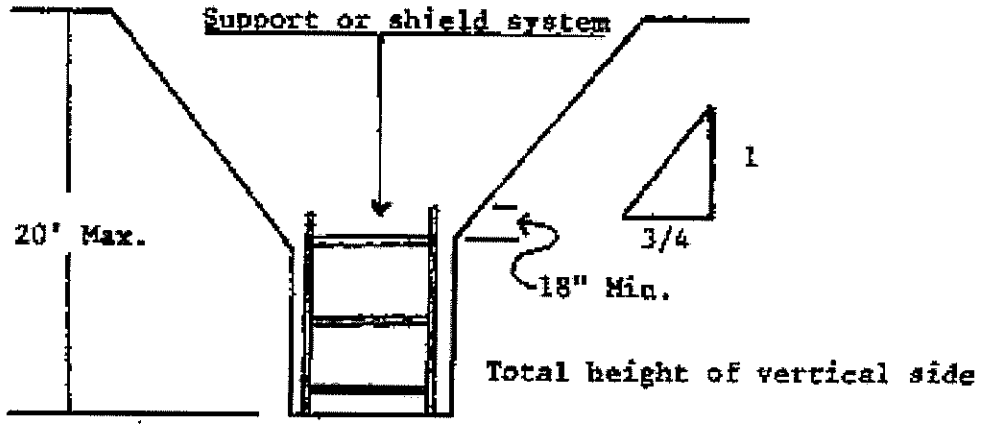


Figure 6.6 – All excavations in Type A soil that are 20 feet or less in depth which have vertically sided lower portions that are supported or shielded shall have a maximum allowable slope of ¾:1. The support or shield system must extend 18 inches above the top of the vertical side.

EXCAVATION SAFETY – TYPE B SOIL
Simple Slope

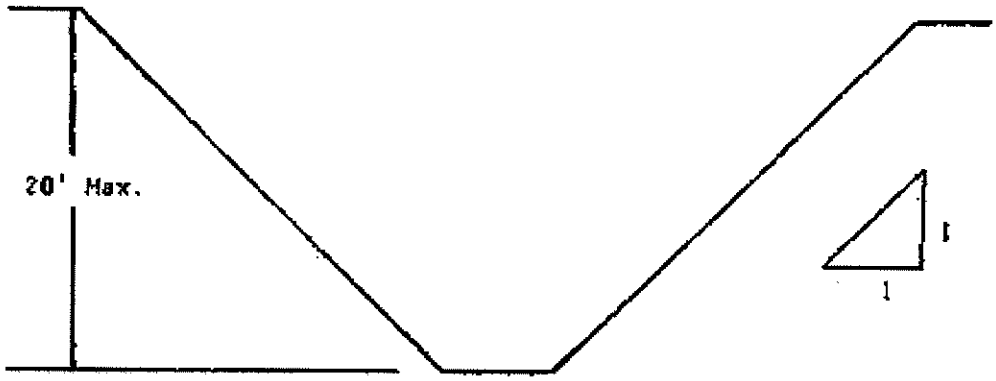
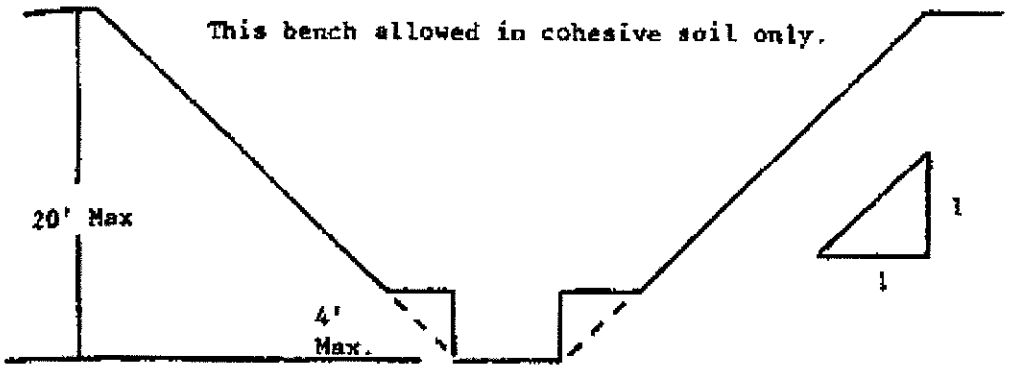


Figure 6.7 – All simple slope excavations in Type B soil that are 20 feet or less in depth shall have a maximum allowable slope of 1:1.

EXCAVATION SAFETY – TYPE B SOIL

Single Bench



Multiple Bench

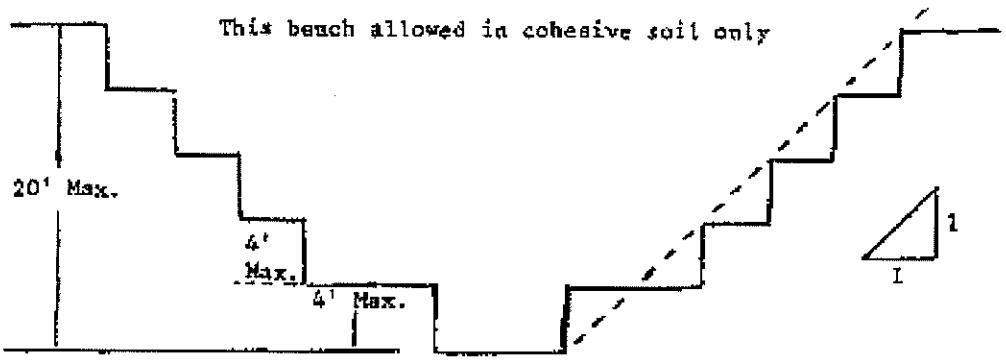


Figure 6.8 – All benched excavations in Type B soil that are 20 feet or less in depth shall have a maximum allowable slope of 1:1 and maximum bench dimensions as shown above.

EXCAVATION SAFETY – TYPE B SOIL
Supported or Shielded Vertically Sided Lower Portion

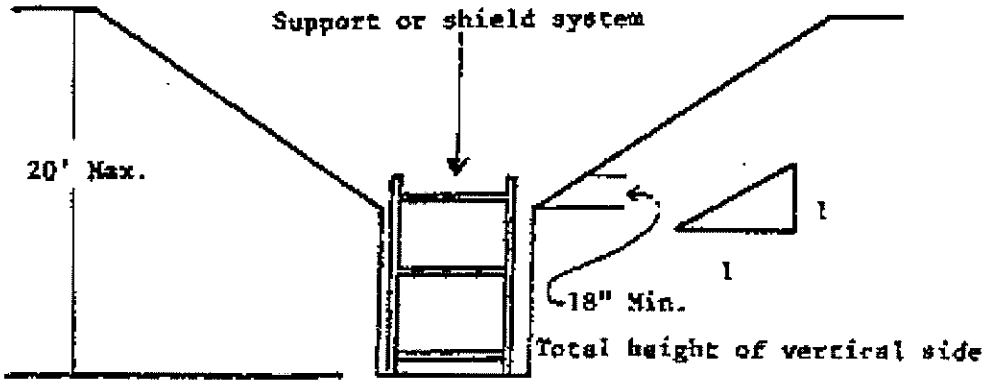


Figure 6.9 – All excavations in Type B soil that are 20 feet or less in depth which have vertically sided lower portions that are supported or shielded shall have a maximum allowable slope of 1:1. The support or shield system must extend 18 inches above the top of the vertical side.

EXCAVATION SAFETY – TYPE C SOIL
Simple Slope

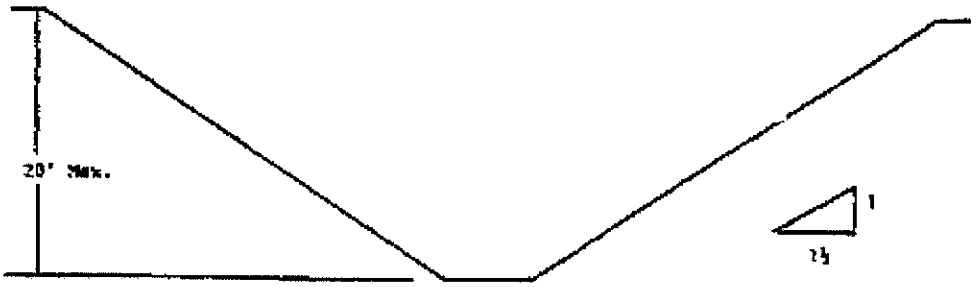


Figure 6.10 – All simple slope excavations in Type C soil that are 20 feet or less in depth shall have a maximum allowable slope of 1½:1. Benching techniques are not effective in Type C soil.

EXCAVATION SAFETY – TYPE C SOIL
Supported or Shielded Vertically Sided Lower Portion

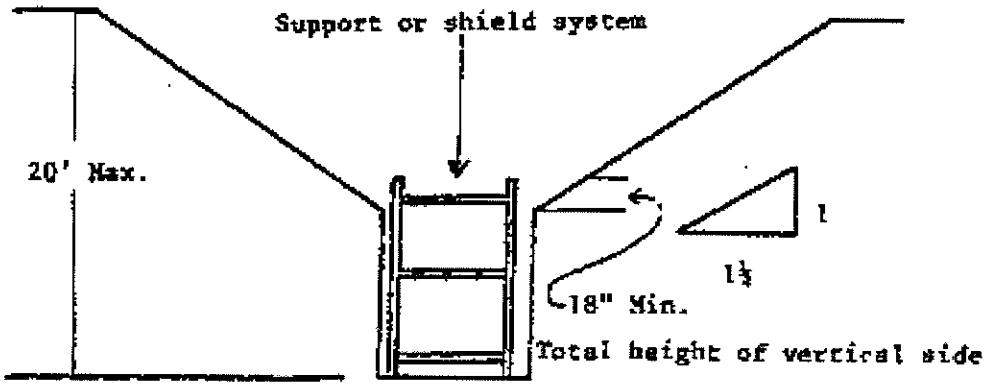


Figure 6.11 – All excavations in Type C soil that are 20 feet or less in depth which have vertically sided lower portions that are supported or shielded shall have a maximum allowable slope of 1½:1. The support or shield system must extend 18 inches above the top of the vertical side.

EXCAVATION SAFETY – LAYERED SOILS
B over A

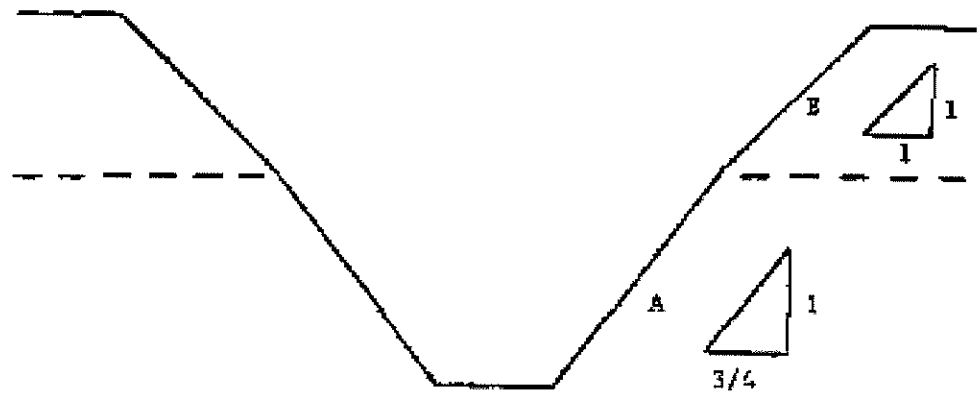


Figure 6.12 – All excavations 20 feet or less in depth in B over A layered soils have a maximum allowable slope for each layer as shown above.

EXCAVATION SAFETY – LAYERED SOILS
C over A

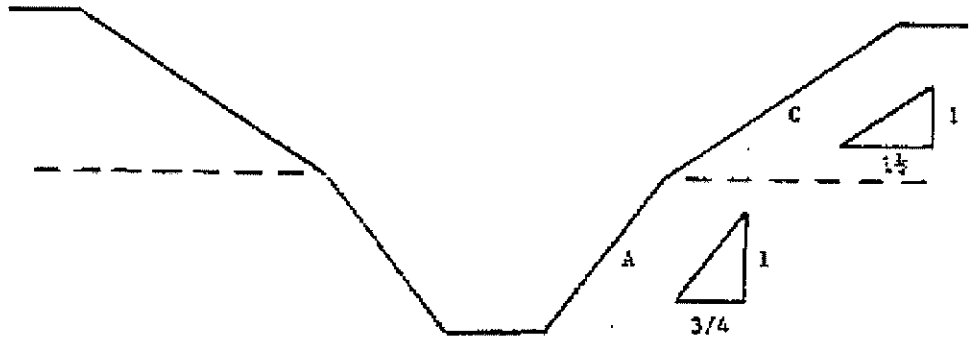


Figure 6.12 – All excavations 20 feet or less in depth in C over A layered soils have a maximum allowable slope for each layer as shown above.

EXCAVATION SAFETY – LAYERED SOILS
C over B

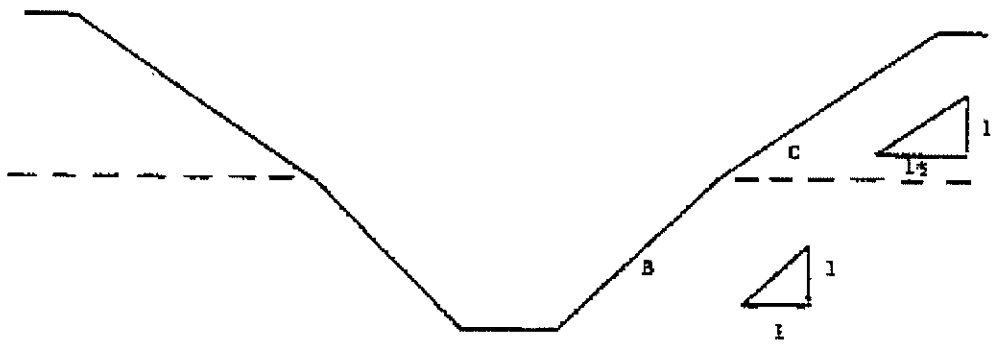


Figure 6.13 – All excavations 20 feet or less in depth in C over B layered soils have a maximum allowable slope for each layer as shown above.

EXCAVATION SAFETY – LAYERED SOILS
A over B

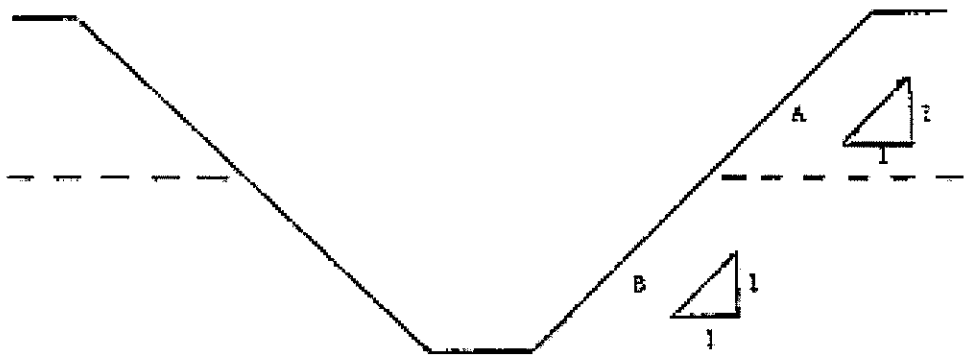


Figure 6.14 – All excavations 20 feet or less in depth in A over B layered soils have a maximum allowable slope for each layer as shown above.

EXCAVATION SAFETY – LAYERED SOILS
A over C

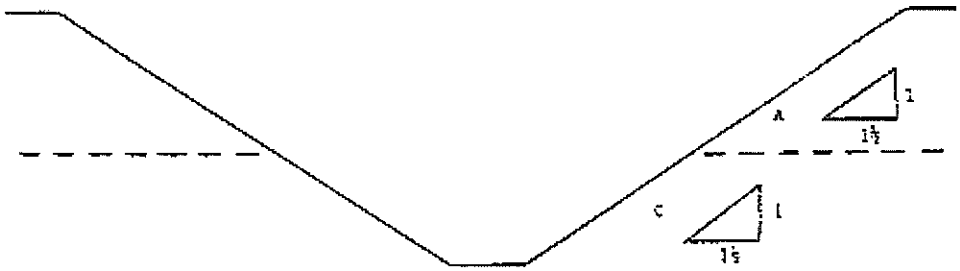


Figure 6.15 – All excavations 20 feet or less in depth in A over C layered soils have a maximum allowable slope for each layer as shown above.

EXCAVATION SAFETY – LAYERED SOILS
B over C

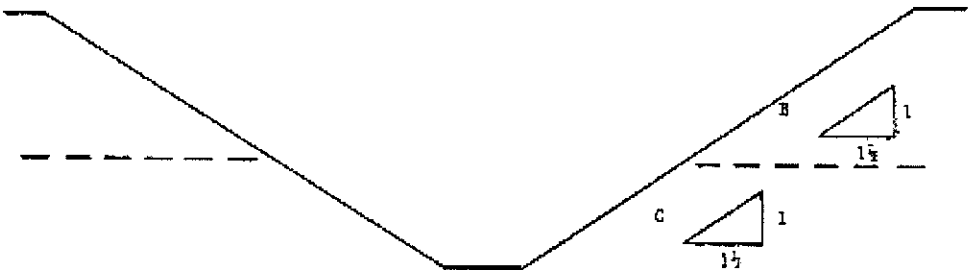


Figure 6.16 – All excavations 20 feet or less in depth in B over C layered soils have a maximum allowable slope for each layer as shown above.

6.2 Timber & Aluminum Hydraulic Shoring Requirements

TABLE 2
Timber Trench Shoring -- Minimum Timber Requirements*
Soil Type A $P_a = 25 \times H + 72$ psf (2 ft. Surcharge)

Size (Actual) and Spacing of Members**														
Depth of Trench (feet)	Cross Braces						Wales			Uprights				
	Horizontal Spacing (feet)	Width of Trench (feet)					Vert. Spacing (feet)	Size (inches)	Vert. Spacing (feet)	Maximum Allowable Horizontal Spacing (feet)				
		Up to 4	Up to 6	Up to 9	Up to 12	Up to 15				Close	4	5	6	8
5 to 10	Up to 6	4 x 4	4 x 4	4 x 6	4 x 6	6 x 6	4	Not req'd	---				2 x 6	
	Up to 8	4 x 4	4 x 4	4 x 6	6 x 6	6 x 6	4	Not req'd	---					2 x 8
	Up to 10	4 x 6	4 x 6	4 x 6	6 x 6	6 x 6	4	8 x 8	4			2 x 6		
	Up to 12	4 x 6	4 x 6	6 x 6	6 x 6	6 x 6	4	8 x 8	4				2 x 6	
10 to 15	Up to 6	4 x 4	4 x 4	4 x 6	6 x 6	6 x 6	4	Not req'd	---				3 x 8	
	Up to 8	4 x 6	4 x 6	6 x 6	6 x 6	6 x 6	4	8 x 8	4		2 x 6			
	Up to 10	6 x 6	6 x 6	6 x 6	6 x 8	6 x 8	4	8 x 10	4			2 x 6		
	Up to 12	6 x 6	6 x 6	6 x 6	6 x 8	6 x 8	4	10 x 10	4				3 x 8	
15 to 20	Up to 6	6 x 6	6 x 6	6 x 6	6 x 8	6 x 8	4	6 x 8	4	3 x 6				
	Up to 8	6 x 6	6 x 6	6 x 6	6 x 8	6 x 8	4	8 x 8	4	3 x 6				
	Up to 10	8 x 8	8 x 8	8 x 8	8 x 8	8 x 10	4	8 x 10	4	3 x 6				
	Up to 12	8 x 8	8 x 8	8 x 8	8 x 8	8 x 10	4	10 x 10	4	3 x 6				
Over 20	See Note 1													

* Mixed oak or equivalent with a bending strength not less than 850 psi.
** Manufactured members of equivalent strength may be substituted for wood.

TABLE 3
Timber Trench Shoring -- Minimum Timber Requirements*
Soil Type B $P_a = 45 \times H + 72$ psf (2 ft. Surcharge)

Size (Actual) and Spacing of Members**												
Depth of Trench (feet)	Cross Braces						Wales			Uprights		
	Horizontal Spacing (feet)	Width of Trench (feet)					Vert. Spacing (feet)	Size (inches)	Vert. Spacing (feet)	Maximum Allowable Horizontal Spacing (feet)		
		Up to 4	Up to 6	Up to 9	Up to 12	Up to 15				Close	2	3
5 to 10	Up to 6	4 x 6	4 x 6	6 x 6	6 x 6	6 x 6	5	6 x 8	5			2 x 6
	Up to 8	6 x 6	6 x 6	6 x 6	6 x 8	6 x 8	5	Not req'd	5			2 x 6
	Up to 10	6 x 6	6 x 6	6 x 6	6 x 8	6 x 8	5	8 x 8	5			2 x 6
	See Note 1											
10 to 15	Up to 6	6 x 6	6 x 6	6 x 6	6 x 8	6 x 8	5	Not req'd	5		2 x 6	
	Up to 8	6 x 8	6 x 8	6 x 8	8 x 8	8 x 8	5	Not req'd	5		2 x 6	
	Up to 10	8 x 8	8 x 8	8 x 8	8 x 8	8 x 10	5	Not req'd	5		2 x 6	
	See Note 1											
15 to 20	Up to 6	6 x 8	6 x 8	6 x 8	8 x 8	8 x 8	5	Not req'd	5	3 x 6		
	Up to 8	8 x 8	8 x 8	8 x 8	8 x 8	8 x 10	5	Not req'd	5	3 x 6		
	Up to 10	8 x 10	8 x 10	8 x 10	8 x 10	8 x 10	5	Not req'd	5	3 x 6		
	See Note 1											
Over 20	**See Note 1**											

* Mixed oak or equivalent with a bending strength not less than 850 psi.

** Manufactured members of equivalent strength may be substituted for wood.

TABLE 4
Timber Trench Shoring -- Minimum Timber Requirements*
Soil Type C $P_a = 45 \times H + 72$ psf (2 ft. Surcharge)

Size (Actual) and Spacing of Members**										
Depth of Trench (feet)	Cross Braces						Wales			Uprights
	Horizontal Spacing (feet)	Width of Trench (feet)					Vert. Spacing (feet)	Size (inches)	Vert. Spacing (feet)	Maximum Allowable Horizontal Spacing (feet)
		Up to 4	Up to 6	Up to 9	Up to 12	Up to 15				Close
5 to 10	Up to 6	6 x 8	4 x 6	6 x 6	6 x 6	6 x 6	5	6 x 8	5	2 x 6
	Up to 8	8 x 8	6 x 6	6 x 6	6 x 8	6 x 8	5	Not req'd	5	2 x 6
	Up to 10	8 x 10	8 x 10	8 x 10	8 x 10	10 x 10	5	12 x 12	5	2 x 6
	See Note 1									
10 to 15	Up to 6	8 x 8	8 x 8	8 x 8	8 x 8	8 x 10	5	10 x 12	5	2 x 6
	Up to 8	8 x 10	8 x 10	8 x 10	8 x 10	10 x 10	5	12 x 12	5	2 x 6
	See Note 1									
	See Note 1									
15 to 20	Up to 6	8 x 10	8 x 10	8 x 10	8 x 10	10 x 10	5	12 x 12	5	3 x 6
	See Note 1									
	See Note 1									
	See Note 1									
Over 20	**See Note 1**									

* Mixed oak or equivalent with a bending strength not less than 850 psi.

** Manufactured members of equivalent strength may be substituted for wood.

TABLE 5
Timber Trench Shoring -- Minimum Timber Requirements*
Soil Type A $P_a = 25 \times H + 72$ psf (2 ft. Surcharge)

Size (Actual) and Spacing of Members**														
Depth of Trench (feet)	Cross Braces						Wales			Uprights				
	Horizontal Spacing (feet)	Width of Trench (feet)					Vert. Spacing (feet)	Size (inches)	Vert. Spacing (feet)	Maximum Allowable Horizontal Spacing (feet)				
		Up to 4	Up to 6	Up to 9	Up to 12	Up to 15				Close	4	5	6	8
5 to 10	Up to 6	4 x 4	4 x 4	4 x 4	4 x 4	4 x 6	4	Not req'd	Not req'd				4 x 6	
	Up to 8	4 x 4	4 x 4	4 x 4	4 x 6	4 x 6	4	Not req'd	Not req'd					4 x 8
	Up to 10	4 x 6	4 x 6	4 x 6	6 x 6	6 x 6	4	8 x 8	4			4 x 6		
	Up to 12	4 x 6	4 x 6	4 x 6	6 x 6	6 x 6	4	8 x 8	4				4 x 6	
10 to 15	Up to 6	4 x 4	4 x 4	4 x 4	6 x 6	6 x 6	4	Not req'd	Not req'd				4 x 10	
	Up to 8	4 x 6	6 x 6	4 x 6	6 x 6	6 x 6	4	6 x 8	4		4 x 6			
	Up to 10	6 x 6	6 x 6	6 x 6	6 x 6	6 x 6	4	8 x 8	4			4 x 8		
	Up to 12	6 x 6	6 x 6	6 x 6	6 x 6	6 x 6	4	8 x 10	4		4 x 6		4 x 10	
15 to 20	Up to 6	6 x 6	6 x 6	6 x 6	6 x 6	6 x 6	4	6 x 8	4	3 x 6				
	Up to 8	6 x 6	6 x 6	6 x 6	6 x 6	6 x 6	4	8 x 8	4	3 x 6	4 x 12			
	Up to 10	6 x 6	6 x 6	6 x 6	6 x 6	6 x 8	4	8 x 10	4	3 x 6				
	Up to 12	6 x 6	6 x 6	6 x 6	6 x 8	6 x 8	4	8 x 12	4	3 x 6	4 x 12			
Over 20	See Note 1													

* Douglas fir or equivalent with a bending strength not less than 1500 psi.

** Manufactured members of equivalent strength may be substituted for wood.

TABLE 6
Timber Trench Shoring -- Minimum Timber Requirements*
Soil Type B $P_a = 45 \times H + 72$ psf (2 ft. Surcharge)

Size (Actual) and Spacing of Members**													
Depth of Trench (feet)	Cross Braces						Wales			Uprights			
	Horizontal Spacing (feet)	Width of Trench (feet)					Vert. Spacing (feet)	Size (inches)	Vert. Spacing (feet)	Maximum Allowable Horizontal Spacing (feet)			
		Up to 4	Up to 6	Up to 9	Up to 12	Up to 15				Close	4	5	6	8
5 to 10	Up to 6	4 x 6	4 x 6	4 x 6	6 x 6	6 x 6	5	6 x 8	5			3 x 12		4 x 12
	Up to 8	4 x 6	4 x 6	6 x 6	6 x 6	6 x 6	5	8 x 8	5			4 x 8	4 x 8	
	Up to 10	4 x 6	4 x 6	6 x 6	6 x 6	6 x 8	5	8 x 10	5			4 x 8		
	See Note 1													
10 to 15	Up to 6	6 x 6	6 x 6	6 x 6	6 x 8	6 x 8	5	8 x 8	5	3 x 6	4 x 10			
	Up to 8	6 x 8	6 x 8	6 x 8	8 x 8	8 x 8	5	10 x 10	5	3 x 6	4 x 10			
	Up to 10	6 x 8	6 x 8	8 x 8	8 x 8	8 x 8	5	10 x 12	5	3 x 6	4 x 10			
	See Note 1													
15 to 20	Up to 6	6 x 8	6 x 8	6 x 8	6 x 8	8 x 8	5	8 x 10	5	4 x 6				
	Up to 8	6 x 8	6 x 8	6 x 8	8 x 8	8 x 8	5	10 x 12	5	4 x 6				
	Up to 10	8 x 8	8 x 8	8 x 8	8 x 8	8 x 8	5	12 x 12	5	4 x 6				
	See Note 1													
Over 20	**See Note 1**													

* Douglas fir or equivalent with a bending strength not less than 1500 psi.

** Manufactured members of equivalent strength may be substituted for wood.

TABLE 7
Timber Trench Shoring -- Minimum Timber Requirements*
Soil Type C $P_a = 80 \times H + 72$ psf (2 ft. Surcharge)

Size (Actual) and Spacing of Members**										
Depth of Trench (feet)	Cross Braces						Wales			Uprights
	Horizontal Spacing (feet)	Width of Trench (feet)					Vert. Spacing (feet)	Size (inches)	Vert. Spacing (feet)	Maximum Allowable Horizontal Spacing (feet)
		Up to 4	Up to 6	Up to 9	Up to 12	Up to 15				Close
5 to 10	Up to 8	6 x 6	6 x 6	6 x 6	6 x 6	8 x 8	5	8 x 8	5	3 x 6
	Up to 8	6 x 6	6 x 6	6 x 6	8 x 8	8 x 8	5	10 x 10	5	3 x 6
	Up to 8	6 x 6	6 x 6	8 x 8	8 x 8	8 x 8	5	10 x 12	5	3 x 6
	See Note 1									
10 to 15	Up to 6	6 x 8	6 x 8	6 x 8	8 x 8	8 x 8	5	10 x 10	5	4 x 6
	Up to 8	8 x 8	8 x 8	8 x 8	8 x 8	8 x 8	5	12 x 12	5	4 x 6
	See Note 1									
	See Note 1									
15 to 20	Up to 8	8 x 8	8 x 8	8 x 8	8 x 10	8 x 10	5	10 x 12	5	4 x 6
	See Note 1									
	See Note 1									
	See Note 1									
Over 20	**See Note 1**									

* Douglas fir or equivalent with a bending strength not less than 1500 psi.

** Manufactured members of equivalent strength may be substituted for wood.

TABLE 8
Aluminum Hydraulic Shoring
Vertical Shores For Soil Type B

Depth of Trench (feet)	Hydraulic Cylinders				
	Spacing (feet)		Width of Trench (feet)		
	Maximum Horizontal	Maximum Vertical	Up to 8	Over 8 Up to 12	Over 12 Up to 15
Over 5, Up to 10	8	4	2 Inch Diameter	2 Inch Diameter (See Note 2)	3 Inch Diameter
Over 10, Up to 15	6.5				
Over 15, Up to 20	5.5				
Over 20	See Note 1				

Footnotes to tables and general notes on hydraulic shoring are found in Appendix D, Item (g).

Note 1: See Appendix D, Item (g)(1).
Note 2: See Appendix D, Item (g)(2).

TABLE 9
Aluminum Hydraulic Shoring
Vertical Shores For Soil Type A

Depth of Trench (feet)	Hydraulic Cylinders				
	Spacing (feet)		Width of Trench (feet)		
	Maximum Horizontal	Maximum Vertical	Up to 8	Over 8 Up to 12	Over 12 Up to 15
Over 5, Up to 10	8	4	2 Inch Diameter	2 Inch Diameter (See Note 2)	3 Inch Diameter
Over 10, Up to 15	8				
Over 15, Up to 20	7				
Over 20	See Note 1				

Footnotes to tables and general notes on hydraulic shoring are found in Appendix D, Item (g).

Note 1: See Appendix D, Item (g)(1).
Note 2: See Appendix D, Item (g)(2).

TABLE 10
Aluminum Hydraulic Shoring
Waler Systems for Soil Type B

Depth of Trench (feet)	Hydraulic Cylinders								Timber Uprights		
			Width of Trench (feet)						Max. Horizontal Spacing (On Center)		
	Wales		Up to 8		Over 8, Up to 12		Over 12, Up to 15				
	Vertical Spacing (feet)	Section Modules (Inches^3)	Horizontal Spacing	Cylinder Diameter	Horizontal Spacing	Cylinder Diameter	Horizontal Spacing	Cylinder Diameter	Solid Sheet	2 Feet	3 Feet
Over 5, Up to 10	4	3.5	8.0	2 Inches	8.0	2 Inches (see Note 2)	8.0	3 Inches	---	---	3 x 12
		7.0	9.0	2 Inches	9.0	2 Inches (see Note 2)	9.0	3 Inches			
		14.0	12.0	3 Inches	12.0	3 Inches	12.0	3 Inches			
Over 10, Up to 15	4	3.5	6.0	2 Inches	6.0	2 Inches (see Note 2)	6.0	3 Inches	---	3 x 12	---
		7.0	8.0	3 Inches	8.0	3 Inches	8.0	3 Inches			
		14.0	10.0	3 Inches	10.0	3 Inches	10.0	3 Inches			
Over 15, Up to 20	4	3.5	5.5	3 Inches	5.5	2 Inches (see Note 2)	5.5	3 Inches	3 x 12	---	---
		7.0	6.0	3 Inches	6.0	3 Inches	6.0	3 Inches			
		14.0	9.0	3 Inches	9.0	3 Inches	9.0	3 Inches			
Over 20	**See Note 1**										

Footnotes to tables and general notes on hydraulic shoring are found in Appendix D, Item (g).

Note 1:See Appendix D, Item (g)(1).
Note 2:See Appendix D, Item (g)(2).

* Consult product manufacturer and/or qualified engineer for Section Modules of available wales.

TABLE 11
Aluminum Hydraulic Shoring
Waler Systems for Soil Type C

Depth of Trench (feet)	Hydraulic Cylinders								Timber Uprights		
			Width of Trench (feet)						Max. Horizontal Spacing (On Center)		
	Wales		Up to 8		Over 8, Up to 12		Over 12, Up to 15				
	Vertical Spacing (feet)	Section Modules (Inches^3)	Horizontal Spacing	Cylinder Diameter	Horizontal Spacing	Cylinder Diameter	Horizontal Spacing	Cylinder Diameter	Solid Sheet	2 Feet	3 Feet
Over 10, Up to 15	4	3.5	4.0	2 Inches	4.0	2 Inches (see Note 2)	4.0	3 Inches	3 x 12	---	---
		7.0	5.5	3 Inches	5.5	3 Inches	5.5	3 Inches			
		14.0	8.0	3 Inches	8.0	3 Inches	8.0	3 Inches			
Over 15, Up to 20	4	3.5	3.5	2 Inches	3.5	2 Inches (see Note 2)	3.5	3 Inches	3 x 12	---	---
		7.0	5.0	3 Inches	5.0	3 Inches	5.0	3 Inches			
		14.0	6.0	3 Inches	6.0	3 Inches	6.0	3 Inches			
Over 20	**See Note 1**										

Footnotes to tables and general notes on hydraulic shoring are found in Appendix D, Item (g).

Note 1:See Appendix D, Item (g)(1).
Note 2:See Appendix D, Item (g)(2).

* Consult product manufacturer and/or qualified engineer for Section Modules of available wales.

FIGURE NO. 1
VERTICAL ALUMINUM HYDRAULIC SHORING (SPOT BRACING)

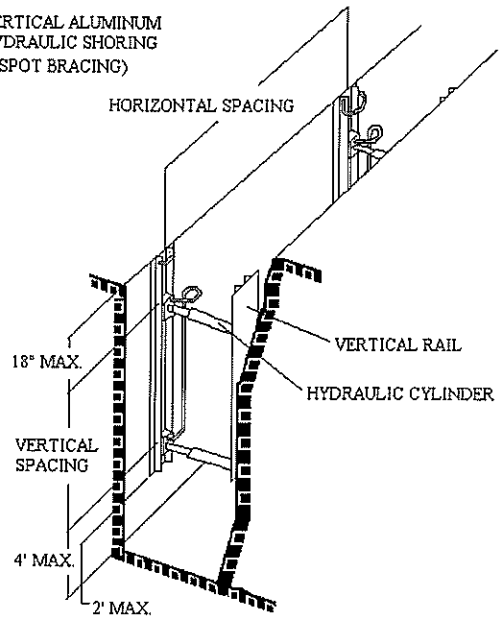


FIGURE NO. 2
VERTICAL ALUMINUM HYDRAULIC SHORING (WITH PLYWOOD)

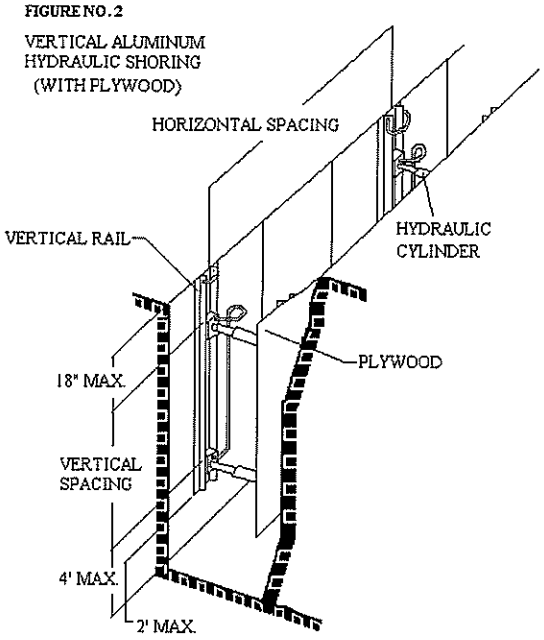


FIGURE NO. 3
VERTICAL ALUMINUM HYDRAULIC SHORING (STACKED)

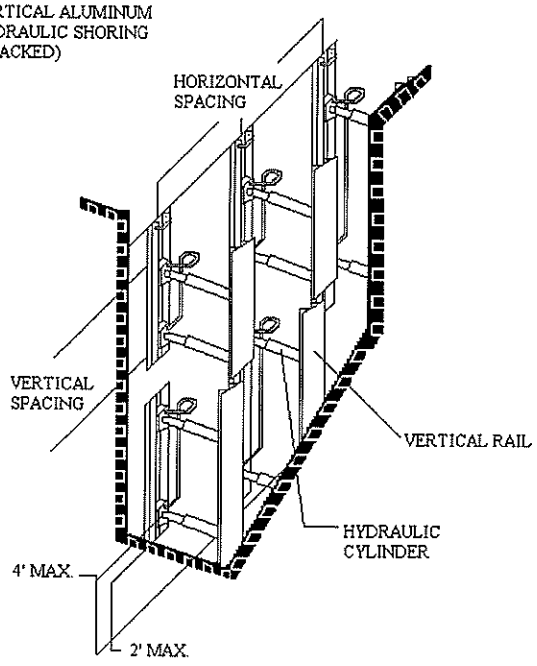
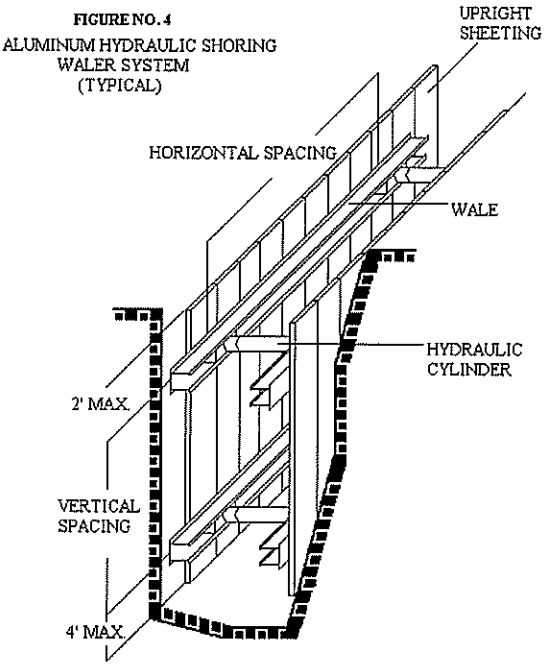


FIGURE NO. 4
ALUMINUM HYDRAULIC SHORING WALER SYSTEM (TYPICAL)



Appendix E

Daily Excavation Checklist

O'BRIEN & GERE

Daily Excavation Checklist

File Name: App E_EXCAVATION_DAILY_CHECKLIST.doc
Revised: June 22, 2007

Client:			**Today's Date:**	
Project Name:			**Approx. Temp**	
Project Location:			**Approx. Wind Dir**	
Job No.:			**SSHC:**	
Excavation Depth & Width:	**D:**	**W:**	**Soil Class:**	
Protective System Used:				
Activities in Excavation:				
Competent Person:				

Excavation > 4' deep? ☐ Yes ☐ No If ***Yes***, - Evaluate if the excavation is a permit-required confined space or can be downgraded to a Non-Permit Space

CAUTION*: Any excavation over 5 feet must be sloped or shored. Excavations >20 feet require review by a Professional Engineer. Any items marked* ***NO*** *on this form* ***MUST*** *be corrected prior to any employees entering the excavation. Review Excavation from the Corporate Health & Safety Manual for guidance.*

YES	NO	N/A	INSPECTION ITEMS
			GENERAL
			Employees in, or near, excavations are protected from cave-ins or from being struck by loose rock/soil
			Spoils, materials, and equipment set back at least 2 feet from the edge of the excavation
			Engineering designs for sheeting and/or manufacturers data on trench box capabilities on site
			Adequate signs posted, and barricades provided
			Training (i.e, Toolbox meeting) conducted with employees prior to employees entering excavation
			Proper sloping, shoring, and/or distance controls are in place to prevent damage to footings, foundations, sidewalks, roadways, and similar structures from cave-ins or excavation equipment.
			UTILITIES
			Utility company contacted and given 24 hrs notice and/or utilities already located and marked
			Overhead lines located, noted, and reviewed with operator
			Utility location reviewed with operator, and precautions taken to ensure contact does not occur
			Utilities crossing the excavation supported, and protected from falling materials
			Underground installations protected, supported or removed when excavation is open
			WET CONDITIONS
			Precautions taken to protect employees from water accumulation (i.e., continuous dewatering)
			Surface water or runoff diverted/controlled to prevent accumulation in the excavation
			Inspection made after every rainstorm or other hazard-increasing occurrence
			HAZARDOUS ATMOSPHERE
			Air in the excavation tested for oxygen deficiency, combustibles, or other contaminants
			Ventilation used in atmospheres that are O_2 rich or deficient and/or contains hazardous substances
			Ventilation provided to keep LEL below 10%
			Emergency equipment available where hazardous atmospheres could or do exist
			Safety harness and lifeline used
			Supplied Air necessary (if **Yes**, contact CHS prior to entry)
			ENTRY & EXIT
			Exit (i.e., ladder, sloped wall) no further than 25 feet from ANY employee
			Ladders secured, and extended 3 feet above the edge of the trench
			Wood ramps constructed of materials of uniform thickness, cleated together on the bottom.
			Employees protected from cave-ins when entering or exiting the excavation

Keep 1 copy of EACH Daily Checklist on site for the project duration

NOTE: Separate forms are required for each excavation.

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