



Mr. Peter Quackenbush
Waste Management Division
525 Allegan St., Atrium-North
Lansing, MI 48933

Subject:

Transmittal of *Southend: Certification of Closure for Closure Response Activities at RCRA Waste Management Units for the Former General Motors Corporation North American Operations Facility (Otherwise known as Buick City)*

Dear Mr. Quackenbush:

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this *Southend: Certification of Closure for Closure Response Activities at RCRA Waste Management Units for the Former General Motors Corporation North American Operations Facility (Otherwise known as Buick City)* (Certification Report). This Closure Report was prepared to document and summarize closure activities associated with Waste Management Units (WMUs) #7, #8, and #10 located at the Southend of the Buick City Site.

Based on an evaluation of the analytical data collected to date and discussions with the MDEQ the following requests for determination are made:

For WMU #7 - Building 41A, Assembly Plant Waste Storage Tank Area, it is requested that this WMU be deferred to corrective action due to the presence of sheen identified in the soil borings and the proximity of this WMU to known LNAPL plumes.

For WMU #8 - Building 02, Container Storage Area, it is requested that this WMU be clean closed.

For WMU #10 - Factory 86, Building 04, Assembly Plant Waste Storage Tanks, it is requested that this WMU be deferred to be addressed as part of the Site RCRA Corrective Action activities. In addition a restrictive covenant will be filed for this WMU documenting the potential for listed hazardous waste to be present beneath the WMU.

Sincerely,

ARCADIS G&M of Michigan, LLC

Micki M. Maki
Project Manager

ARCADIS G&M of Michigan, LLC
10559 Citation Drive
Suite 100
Brighton
Michigan 48116
Tel 810 229 8594
Fax 810 229 8837
www.arcadis-us.com

ENVIRONMENT

Date:

April 2, 2012

Contact:

Micki M. Maki

Phone:

248-994-2271

Email:

Micki.maki@Arcadis-us.com

Our ref:

B0064410.2012

Imagine the result

Copies:

Grant Trigger (RACER Trust) – Via Email
Dave Favero (RACER Trust) – Via Email
Chris Black (USEPA) – Via Email
Chris Peters (ARCADIS) – Via Email

**Revitalizing Auto Communities
Environmental Response (RACER)
Trust**

**Southend: Certification of Closure
for Closure Response Activities at
RCRA Waste Management Units**

Former General Motors Corporation
North American Operations Facility
(Otherwise known as Buick City)

Flint, Michigan

April 2, 2012

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1. Introduction

1.1 Overview

This Certification of Closure (Certification) has been prepared on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust by ARCADIS. This Certification is for the closure activities completed at the Resource Conservation and Recovery Act of 1976 (RCRA) Waste Management Units (WMU) located at Building 41A, Building 02, Building 23, and Factory 86 of the former General Motors Corporation (GMC) North American Operation (NAO) Flint Operations Site located at 902 East Leith Street in Flint, Michigan (the Site) (Figure 1 and Figure 2). On March 31, 2011, ownership of the site was transferred from Motors Liquidation Company (MLC) to RACER Properties LLC and responsibility for environmental remediation of the Site was transferred to RACER Trust. The United States Environmental Protection Agency (USEPA) ID No. for the Site is MID 005356712.

Specifically, this work plan covers the following WMUs, all of which are located in the Southend (the portion of the RACER property south of Leith Street) of the Site (Figure 2):

- Building 41A, Assembly Plant Waste Storage Tank Area (WMU #7)
- Building 02, Container Storage Area (WMU #8)
- Factory 86, Building 04, Assembly Plant Waste Storage Tanks (WMU #10)

1.2 Background

The Site is located at 902 East Leith Street in Flint, Michigan, and consists of approximately 450 acres of land. The portion of the Site located North of Leith Street is commonly referred to as the Northend, while the portion of the Site located South of Leith Street is referred to as the Southend. The Site is generally bounded to the north by Stewart Avenue and Pierson Road, to the south by Harriet Street, to the east by James P. Cole Boulevard, and CSX Railroad, and to the west by Industrial Avenue and North Street. The Site has been used since the early 1900s for automobile manufacturing, including various manufacturing processes including: ferrous and non-ferrous metal machining, plastic injection molding, metal forging and foundry, painting and finishing, vehicle assembly, and products testing.

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Response Activities at
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The Site has been used since the early 1900s for various manufacturing processes including: ferrous and non-ferrous metal machining, plastic injection molding, metal forging and foundry, painting and finishing, vehicle assembly, and products testing. In the Southend of the Site, operations have ceased and the buildings have been demolished, with the exception of the administration building.

In April 2007, a *RCRA Waste Management Unit Closure Status Report* (Closure Status Report) was submitted to the Michigan Department of Environmental Quality (MDEQ) – Waste and Hazardous Materials Division (WHMD) summarizing 10 WMU areas and the proposed activities / information required for closure (ARCADIS BBL, 2007). In July 2009, the MDEQ – WHMD issued a response to the Closure Status Report detailing guidance on the activities needed to obtain closure of the 10 WMU areas (MDEQ, 2009).

In January 2010, a conference call between the Michigan Department of Natural Resources and the Environment (MDNRE) – WHMD (MDEQ was referred to as MDNRE between January 17, 2010 and March 13, 2011) and ARCADIS was held to discuss and clarify the July 2009 MDEQ-WHMD letter. During this call it was decided that WMUs located in the Northend and Southend would be addressed under separate work plans. In April 2010, it was decided that because of the schedule for demolition of Factory 36, the closure of WMU #1 needed to be accelerated and a separate work plan would be prepared for this activity. Therefore, three separate work plans were planned to be submitted for the Site's WMU areas (Factory 36, Northend, and Southend). The Southend work plan was approved by the MDEQ on October 7, 2011 (Appendix A).

2. WMU Closure Activities

Closure field work activities discussed below were performed between November 16, 2011 and January 27, 2012. Prior to beginning field work at each WMU area, the location of the WMU was staked by BMJ Surveying (BMJ). All sample locations were also surveyed by BMJ and the locations are presented on Figures 3 through 5. Also, a Ground Penetrating Radar (GPR) survey was completed on December 7, 2011 at each WMU area to provide subsurface information. A photo log documenting field activities is presented in Appendix B.

2.1 WMU #7 Closure Activities

Historically, the Building 41A, Assembly Plant Waste Storage Tank Area (WMU #7) contained four steel underground storage tanks (USTs) used to contain hazardous waste (tanks 73 and 74) and other waste (tanks 71 and 72). Tank 71 was a 10,000-gallon UST that stored transmission oil, tank 72 was a 16,000-gallon UST that stored waste solvents, tank 73 was a 10,000-gallon UST that stored hazardous chlorinated solvents (F003 and F005), and tank 74 was a 12,000-gallon UST that stored hazardous paint sludge (F003 and F005). These tanks were aligned end to end, and had a cement vault above the walkway which housed the associated piping system. Tank 71 was documented to be closed in place in January 1987, and tanks 72, 73, and 74 were documented to be removed also in January 1987.

2.1.1 WMU Area Inspection

The WMU #7 area consists of a concrete area with former Division Street to the west, a gravel berm to the north and railroad tracks to the east. Cracking was observed in the concrete in the eastern and western portions of the WMU area. Staining was observed in the center of the WMU area. Soil boring locations were chosen during the initial inspection on November 16, 2011 in these areas of cracking and staining. Photographs of WMU #7 can be found in the Photo Log in Appendix B.

2.1.2 Soil Sampling and Analytical Results

Three soil samples were collected based on the area of WMU #7 (approximately 588 square feet). All of the soil boring locations (WMU7_SB1 through WMU7_SB3) were placed in areas of observed cracking or staining. A Rotasonic drill rig was used to core through the surface concrete and complete the boring after the initial 0 to 5 feet below ground surface (bgs) was hand cleared. The surface concrete was approximately 1

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foot thick. Based on historic data, a subsurface concrete pad was located below WMU #7 at approximately 13 feet bgs. During the soil boring completion, there was no evidence of a subsurface concrete pad. Therefore, all three soil borings were advanced to 16 feet bgs, below where the subsurface concrete pad was estimated to be located. Samples were collected below the groundwater table beneath potential fill materials (i.e., sand or gravel) in what was assumed to be native soil (i.e., dry to moist silty clay). Soil was continuously logged and photoionization detector (PID) measurements were recorded. Soil boring logs are presented in Appendix C. Sheen and staining was noted at all three boring locations. PID readings ranged from 0 to 12 parts per million (ppm). The soil sample locations were surveyed and are presented on Figure 3.

The soil samples were submitted to Merit Laboratories for analysis of the following F-listed waste analytical methods and constituents:

- **USEPA Method 8015:** 2-Ethoxyethanol, 2-Nitropropane, Isobutanol, Methanol, and n-Butyl Alcohol
- **USEPA Method 8260:** 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1,2-Trichloro-1,2,2-Trifluoroethane, Acetone, Benzene, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chlorinated Fluorocarbons (dichlorodifluoromethane and trichlorofluoromethane), Cyclohexanone, Ethyl Acetate, Ethyl Benzene, Ethyl Ether, Methylene Chloride, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, ortho-Dichlorobenzene, Tetrachloroethylene, Toluene, Trichloroethylene, and Xylene
- **USEPA Method 8270:** Cresols, Cresylic Acid, Nitrobenzene, and Pyridine

The soil sample laboratory analytical results are presented in Appendix D. The analytical data were compared to MDEQ Act 307 Type B (Act 307) criteria and the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended, Part 201 generic cleanup (Part 201) criteria. The samples collected from WMU7_SB1 (15.5-16'), WMU7_SB2 (14.5-15'), and WMU7_SB3 (15.5-16') do not exceed Act 307 or Part 201 criteria.

However, a known release was reported from the USTs located at this WMU when they were removed in 1987 and a sheen was observed in all three soil borings completed at this WMU. It is unknown whether the historic release is associated with the product storage tank or hazardous waste storage tanks. Also, please note that

WMU #7 is located between LNAPL plumes AOI 02-B and AOI 40-A, B and 16-C. Due to the presence of sheen identified in the soil borings and the proximity of this WMU to known LNAPL plumes, response actions regarding this WMU are requested to be deferred to the ongoing RCRA Corrective Action activities on Site.

2.2 WMU #8 Closure Activities

Historically, the Building 02, Container Storage Area (WMU #8) stored methylene chloride (F001) and ignitable (D001) wastes from 1980 to 1984 in steel drums on pallets. The 15-foot by 30-foot storage area consisted of a concrete paved area along the north wall of Building 02. The storage area had a maximum capacity for 160 drums of waste materials.

2.2.1 WMU Area Inspection

On November 16, 2011, a visual inspection of the WMU #8 area was completed. The WMU is approximately 1,860 square feet and consists of a concrete area with railroad tracks to the east. No waste drums or demolition debris or visible staining was observed in the area; however, cracking was observed. Soil boring locations were chosen based on the observed cracking in the concrete. Photographs of WMU #8 are presented on the Photo Log in Appendix B.

2.2.2 Soil Sampling and Analytical Results

Five soil samples were collected based on the area of WMU #8 (approximately 1,860 square feet). All of the soil boring locations (WMU8_SB1 through WMU8_SB5) were placed in areas of observed cracking. A Rotosonic drill rig was used to core through the surficial concrete, which ranged in thickness from 10 to 24 inches. Once the surficial concrete was cored, the borings were completed using a stainless steel hand auger. However, at two locations (WMU8_SB3 and WMU8_SB5), subsurface concrete or concrete debris was encountered beneath the surficial concrete at approximately 1.5 to 2.5 feet bgs and was approximately 1 to 2.5 feet thick. At these locations, the Rotosonic drill rig was used to core through the subsurface slab to allow for hand augering to continue to the sampling depth (4 to 5 feet bgs). Soil was continuously logged and PID measurements were recorded. The soil boring logs are presented in Appendix C. No elevated (i.e., greater than 5 ppm) PID readings were measured. The soil sample locations were surveyed and presented on Figure 4.

Soil samples were submitted to Merit Laboratories for analysis of the following F-listed waste analytical methods and constituents:

- **USEPA Method 8015:** 2-Ethoxyethanol, 2-Nitropropane, Isobutanol, Methanol, and n-Butyl Alcohol
- **USEPA Method 8260:** 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1,2-Trichloro-1,2,2-Trifluoroethane, Acetone, Benzene, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chlorinated Fluorocarbons (dichlorodifluoromethane and trichlorofluoromethane), Cyclohexanone, Ethyl Acetate, Ethyl Benzene, Ethyl Ether, Methylene Chloride, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, ortho-Dichlorobenzene, Tetrachloroethylene, Toluene, Trichloroethylene, and Xylene
- **USEPA Method 8270:** Cresols, Cresylic Acid, Nitrobenzene, and Pyridine

The soil sample laboratory analytical results are presented in Appendix D. The analytical data were compared to MDEQ Act 307 Type B (Act 307) criteria and Part 201 criteria. The samples collected from WMU8_SB1 (2-2.8'), WMU8_SB2 (1.5-2'), WMU8_SB3 (3.5-4'), WMU8_SB4 (1.2-1.7'), and WMU8_SB5 (4.2-5') do not exceed Act 307/Part 201 criteria. Clean closure is requested for WMU#8.

2.3 WMU #10 Closure Activities

Historically, Factory 86, Building 04, Assembly Plant Waste Storage Tanks (WMU #10) contained four 12,000-gallon USTs in 1946 at the south end of the now demolished Factory 86, Building 04. The tanks were used for painting-related activities. Three tanks were used to store hazardous waste and one stored nonhazardous waste: tank #1 contained waste Flo-coat primer, tank #2 contained Flo-coat primer (D001 and D008), tank #3 was used to store non-hazardous lubricating oil, and tank #4 contained waste paint thinner (F003 and F005). The tanks were situated perpendicular to the south wall of Building 04 on an 18-inch concrete pad. A concrete basement-type enclosure was built around the tanks. A floor sump and pump discharged collected water to the process wastewater sewer system. The underground enclosure area could be accessed by a stairway inside Building 04.

Tank removal activities began in April 1984 and included excavation and removal of approximately 3,000 cubic yards of soil and debris, decontamination of the tanks/concrete, and soil/concrete sampling. The final limits of the excavation extended approximately 10 feet south and west and 14 feet east of the concrete pad edges. During closure activities, oily water was observed seeping into the excavated area at about 10 to 15 feet bgs. A subsurface collection line and sump manhole was installed around the perimeter of the tank area to collect the oil and remove it. After two years of operation only small quantities of oil were being collected by this system; therefore due to limited recovery rates its operation was discontinued. Closure activities were completed in September 1985 and a partial closure report was submitted to the USEPA and MDNR in October 1985. A full closure report was submitted in 1988, after additional information was requested by the MDNR and USEPA. However, as noted in the July 2009 MDEQ-WHMD response letter, the previously provided soil data was not sufficient to confirm that the closure was completed. Therefore, the MDEQ required additional soil and concrete sampling was required to achieve closure.

2.3.1 WMU Area Inspection

A visual inspection of the WMU #10 area was completed on November 16, 2011. The WMU is approximately 2,704 square feet and consists of a concrete building pad. A raised gravel berm, approximately 3 feet bgs higher than the surface concrete pad was located on the north side of the WMU. There was cracking and minor rust colored staining observed at during the inspection. Soil boring locations were chosen based on the observed cracking in the concrete. Photographs of WMU #10 are located in the the Photo Log in Appendix B.

2.3.2 Sampling and Analytical Results

Six borings were completed based on the area of the WMU (approximately 2,704 square feet). Two samples (soil and/or concrete) were collected at each boring location. A Rotosonic drill rig was used to core through the surficial concrete, which was approximately 12 inches thick. Once the surficial concrete was cored, the borings were hand cleared to 5 feet bgs and then completed using the Rotosonic drill rig to depths ranging from 18 to 22 feet bgs. Soil was continuously logged and PID measurements were recorded. The soil boring logs are presented in Appendix C. PID readings ranged from 0.3 to a maximum of 587 ppm which was measured at WMU10_SB5. The sample locations were surveyed and presented on Figure 5.

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Subsurface concrete was encountered and sampled at four of the six soil boring locations; the two western most borings (WMU10_SB1 and WMU10_SB6) did not encounter the subsurface concrete pad, so a concrete sample was not collected. At all of the boring locations, soil samples were collected below the groundwater beneath potential fill materials (i.e., sand or gravel) in what was thought to be native soil (i.e., dry to moist silty clay or sand).

Two locations (WMU10_SB4 and WMU10_SB5) were observed to have a sheen visible in the saturated zones of the soil core. To investigate the potential presence of free phase product, a temporary observation well was installed at these locations. The wells were gauged approximately 3 to 4.5 hours after they were set. Measurable free product was not measured in the wells and both temporary wells were abandoned.

Soil and concrete samples were submitted for analysis to Merit Laboratories for characteristic (D001 and D008) and for the following F-listed waste analytical methods and constituents:

Characteristic (D-listed) Waste Analyses

- **USEPA Method 1010:** Ignitability (D001)
- **USEPA Method 6010 or 6020:** Lead (D008)

F-Listed Waste Analyses

- **USEPA Method 8015:** 2-Ethoxyethanol, 2-Nitropropane, Isobutanol, Methanol, and n-Butyl Alcohol
- **USEPA Method 8260:** 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1,2-Trichloro-1,2,2-Trifluoroethane, Acetone, Benzene, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chlorinated Fluorocarbons (dichlorodifluoromethane and trichlorofluoromethane), Cyclohexanone, Ethyl Acetate, Ethyl Benzene, Ethyl Ether, Methylene Chloride, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, ortho-Dichlorobenzene, Tetrachloroethylene, Toluene, Trichloroethylene, and Xylene
- **USEPA Method 8270:** Cresols, Cresylic Acid, Nitrobenzene, and Pyridine.

Due to an observed sheen and known releases in that area of WMU #10, one sample [WMU10_SB5 (18.5-19')] was also submitted for Total Petroleum Hydrocarbons (TPH) Diesel Range Organics (DRO) and Gasoline Range Organics (GRO) to aid in identifying the possible source(s) of the sheen.

2.3.2.1 Soil Sample Analytical Results

The laboratory analytical results are presented in Appendix D. The analytical data were compared to MDEQ Act 307 Type B criteria and Part 201 criteria. A summary of the exceedances is provided below:

- Soil samples - WMU10_SB1 (17.2-17.7'), WMU10_SB1A (16-16.5'), WMU10_SB2 (16-16.5'), WMU10_SB3 (15.5-16'), WMU10_SB4A (17-17.5'), WMU10_SB5 (18.5-19'), WMU10_SB6 (11.5-12'), and WMU10_SB6A (17.5-18').
 - Detected lead at concentrations ranging from 2,500 to 13,200 ug/kg, which exceed the Act 307 20 x Drinking Water criterion of 80 ug/kg and the Act 307 20 x GSI criterion of 130 ug/kg criterion; however, these detections do not exceed the MDEQ Part 201 statewide default background level of 21,000 ug/kg.
- Soil Samples - WMU10_SB6 (11.5-12') and WMU10_SB6A (17.5-18')
 - Detected methanol at concentrations of 99,000 and 110,000 ug/kg which exceed the Act 307 20 x Drinking Water criterion of 70,000 ug/kg criterion and the Part 201 Residential Drinking Water Protection (RDWP) criterion of 74,000 ug/kg.
- Sample - WMU10_SB5 (18.5-19')
 - Detected ethylbenzene at a concentration of 11,000 ug/kg which exceeds the Act 307 20 x Drinking Water criterion of 1,500 ug/kg and 20 x GSI criterion of 620 ug/kg, and the Part 201 RDWP criterion of 1,500 ug/kg and the GSI Protection (GSIP) criterion of 360 ug/kg.
 - Detected toluene detection of 118,000 ug/kg which exceeds the Act 307 20 x Drinking Water criterion of 16,000 ug/kg and 20 x GSI criterion of 2,200 ug/kg, and the Part 201 RDWP criterion of 16,000 ug/kg and the GSIP criterion of 5,400 ug/kg.
 - Detected total xylene at a concentration of 62,000 ug/kg which exceed Act 307 20 x Drinking Water criterion of 5,600 ug/kg and 20 x GSI criterion of

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1,200 ug/kg, and Part 201 RDWP criterion of 5,600 ug/kg and GSIP criterion of 820 ug/kg.

In addition WMU10_SB5 detected TPH DRO at a concentration of 11,710 milligrams per kilogram (mg/kg) and TPH GRO at a concentration at 550 mg/kg.

2.3.2.2 Concrete Sample Analytical Results

Concrete samples were collected at WMU #10 from the four locations where subsurface concrete was observed:

- Samples - WMU10_SB2C (13-13.5'), WMU10_SB3C (12.5-13'), and WMU10_SB4C (14.5-15')
 - Detected lead at concentrations ranging from 3,130 to 8,640 ug/kg which exceed the Act 307 20 x Drinking Water criterion of 80 ug/kg and the Act 307 20 x GSI criterion of 130 ug/kg criterion; however, these detections do not exceed the MDEQ Part 201 statewide default background level of 21,000 ug/kg.
- Sample - WMU10_SB5C (16.5-17')
 - Detected toluene at a concentration of 2,400 ug/kg, which exceeds the Act 307 20 x GSI criterion of 2,200 ug/kg.
 - Detected total xylene at a concentration of 1,900 ug/kg, which exceeds the Act 307 20 x GSI criterion of 1,200 ug/kg and the Part 201 GSIP criterion of 820 ug/kg.

2.3.2.3 Summary

Several samples collected at WMU #10 detected select analytes at concentrations which exceeded Act 307 and/or Part 201 residential drinking water and GSI protection criteria. RACER requests that response actions related to this WMU be deferred to the ongoing RCRA Corrective Action activities. As part of planned corrective actions at the Site the property will be restricted to non-residential use and a groundwater use restriction will be implemented at the Site.

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2.4 Additional Waste Management Procedures

Investigation-derived waste (e.g. decontamination water, waste materials, etc.) were containerized in segregated labeled 55-gallon Department of Transportation (DOT) - approved drums. All wastes were properly containerized, characterized and disposed of off-site. The laboratory analytical results for all waste characterization samples are presented in Appendix D. Copies of the shipping manifests are presented in Appendix E.

2.5 Request Determination

Based on an evaluation of the analytical data collected to date and discussions with the MDEQ the following requests for determination are made:

For WMU #7 - Building 41A, Assembly Plant Waste Storage Tank Area, it is requested that this WMU be deferred to corrective action due to the presence of sheen identified in the soil borings and the proximity of this WMU to known LNAPL plumes.

For WMU #8 - Building 02, Container Storage Area, it is requested that this WMU be clean closed.

For WMU #10 - Factory 86, Building 04, Assembly Plant Waste Storage Tanks, it is requested that this WMU be deferred to be addressed as part of the Site RCRA Corrective Action activities. In addition a restrictive covenant will be filed for this WMU documenting the potential for listed hazardous waste to be present beneath the WMU.



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3. Certification of Closure

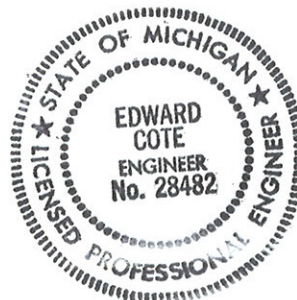
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Grant Trigger

RACER Trust

Edward Cote, PE

Principal Environmental Engineer



4. References

ARCADIS, 2011. Southend: Work Plan for Response Activities at the RCRA Waste Management Unit – Former General Motors Corporation, NAO Flint Operations Facility (Otherwise known as Buick City), Flint Michigan. July 29, 2011.

ARCADIS BBL, 2007. RCRA Waste Management Unit Closure Status Report. (April 30, 2007).

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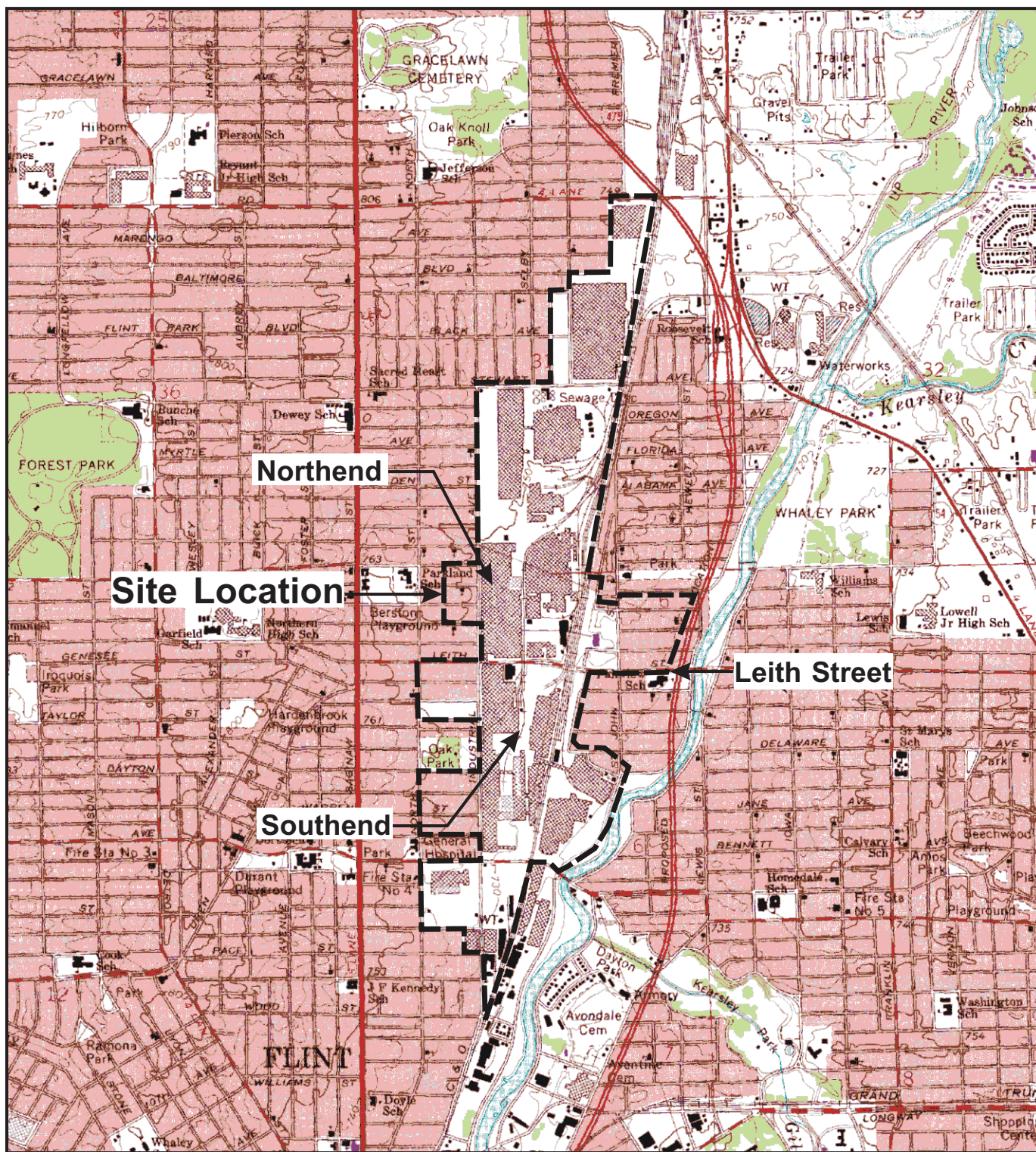
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MDEQ. 2009. Closure Status Report Review Letter for the RCRA Waste Management Unit Areas at the General Motors Corporation, NAO Flint Operations; MID 005 356 712. July 27, 2009

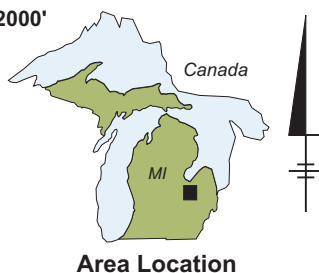


Figures



REFERENCE: Base Map Source: USGS 7.5 Min. Topo. Quad., Flint North, Mich. (1969, Photorevised 1975).

2000' 0 2000'
Approximate Scale: 1" = 2000'



RACER TRUST
FORMER GENERAL MOTORS CORPORATION
NORTH AMERICAN OPERATIONS FACILITY FLINT OPERATIONS SITE -
FLINT, MICHIGAN
SOUTHEND CERTIFICATION OF CLOSURE

SITE LOCATION MAP

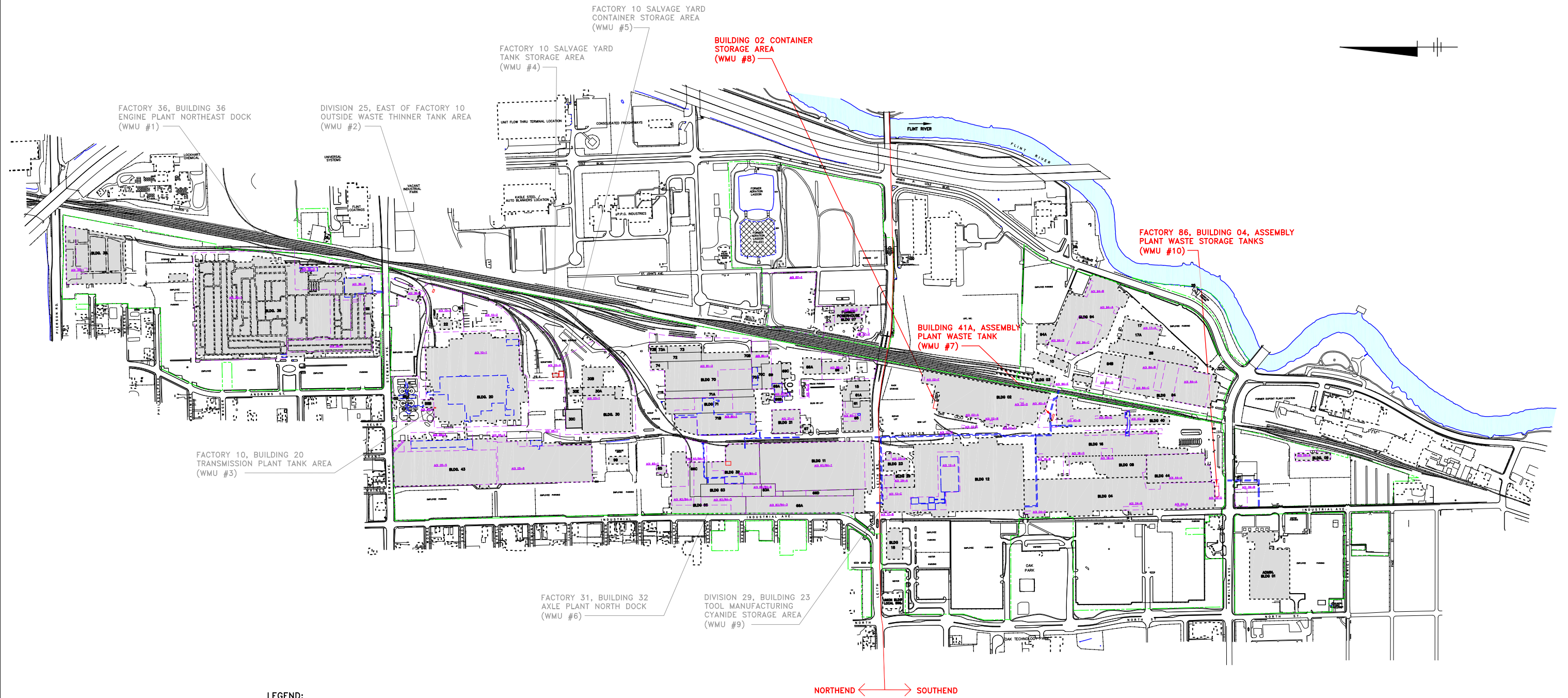


FIGURE
1

CITY: SYRACUSE DIV: GROUP: ENVCAD DB: G. STOWELL L. FORAKER LD: G. STOWELL PIC: C. PETERS PM: M. MAKI TM: M. MAKI LYR: ON* OFF: REF*
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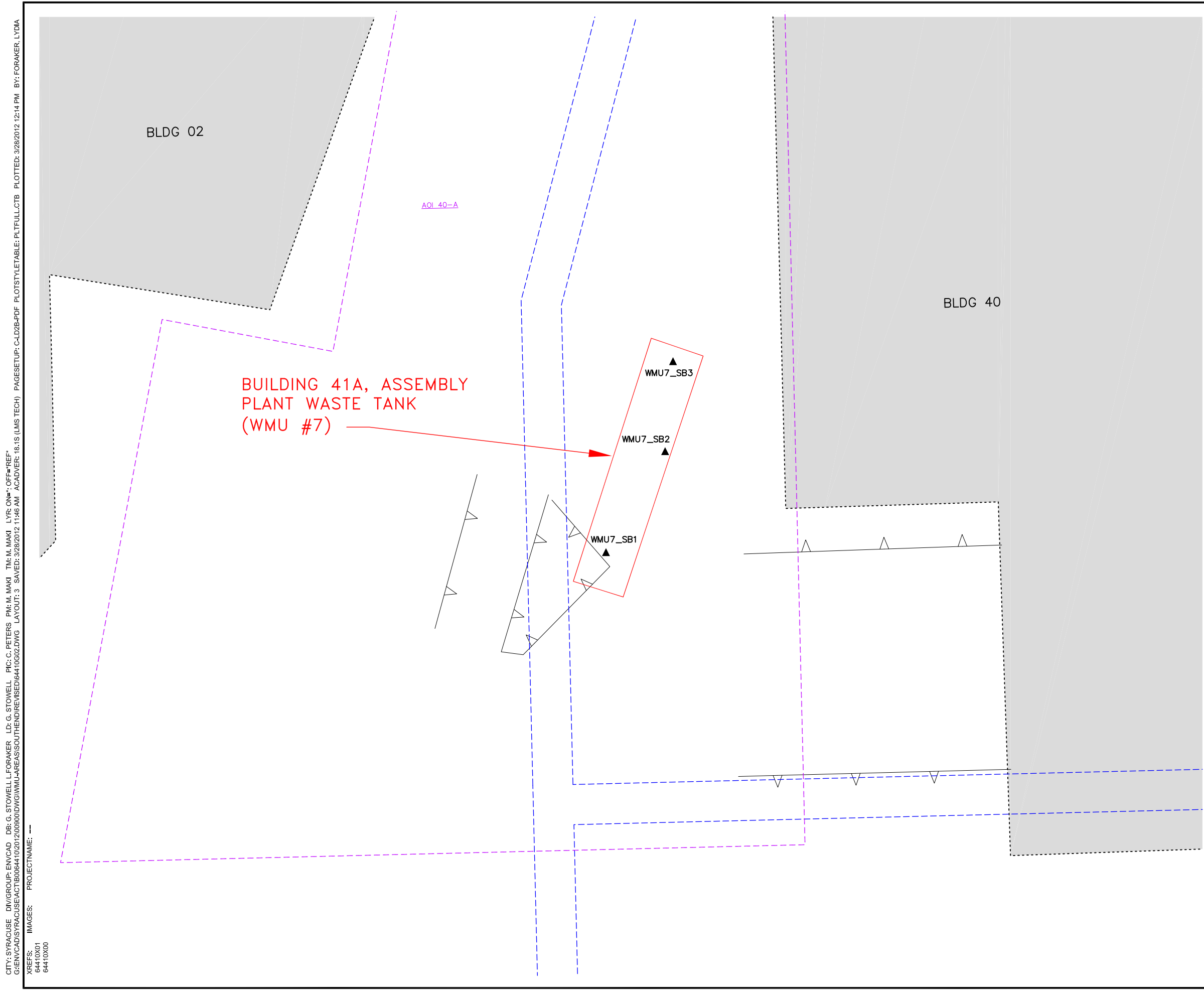
- LEGEND:**
- PROPERTY BOUNDARY
 - - - APPROXIMATE AOI BOUNDARY
 - - - BASEMENT/TUNNEL AREA
 - - - DEMOLISHED BUILDING
 - - - BUILDING CURRENTLY IDLED
 - APPROXIMATE WMU AREA ADDRESSED IN THIS CERTIFICATION OF CLOSURE
 - APPROXIMATE WMU AREA ADDRESSED IN SEPARATE CERTIFICATION OF CLOSURE

- NOTES:**
1. IN ADDITION TO THE EXISTING HISTORICAL SITE DATA, THE WASTE MANAGEMENT UNIT LOCATIONS ARE ALSO BASED ON GIS DATA PROVIDED BY THE MDNR IN JANUARY 2010.
 2. BASE MAP INFORMATION FROM A SURVEY BY BMJ INC., DATED APRIL 2001, AT A SCALE OF 1:100.

NORTHEND ← → SOUTHEND



RACER TRUST FORMER GENERAL MOTORS CORPORATION NORTH AMERICAN OPERATIONS FACILITY, FLINT OPERATIONS SITE - FLINT, MICHIGAN SOUTHEND CERTIFICATION OF CLOSURE	
SITE PLAN	
	FIGURE 2



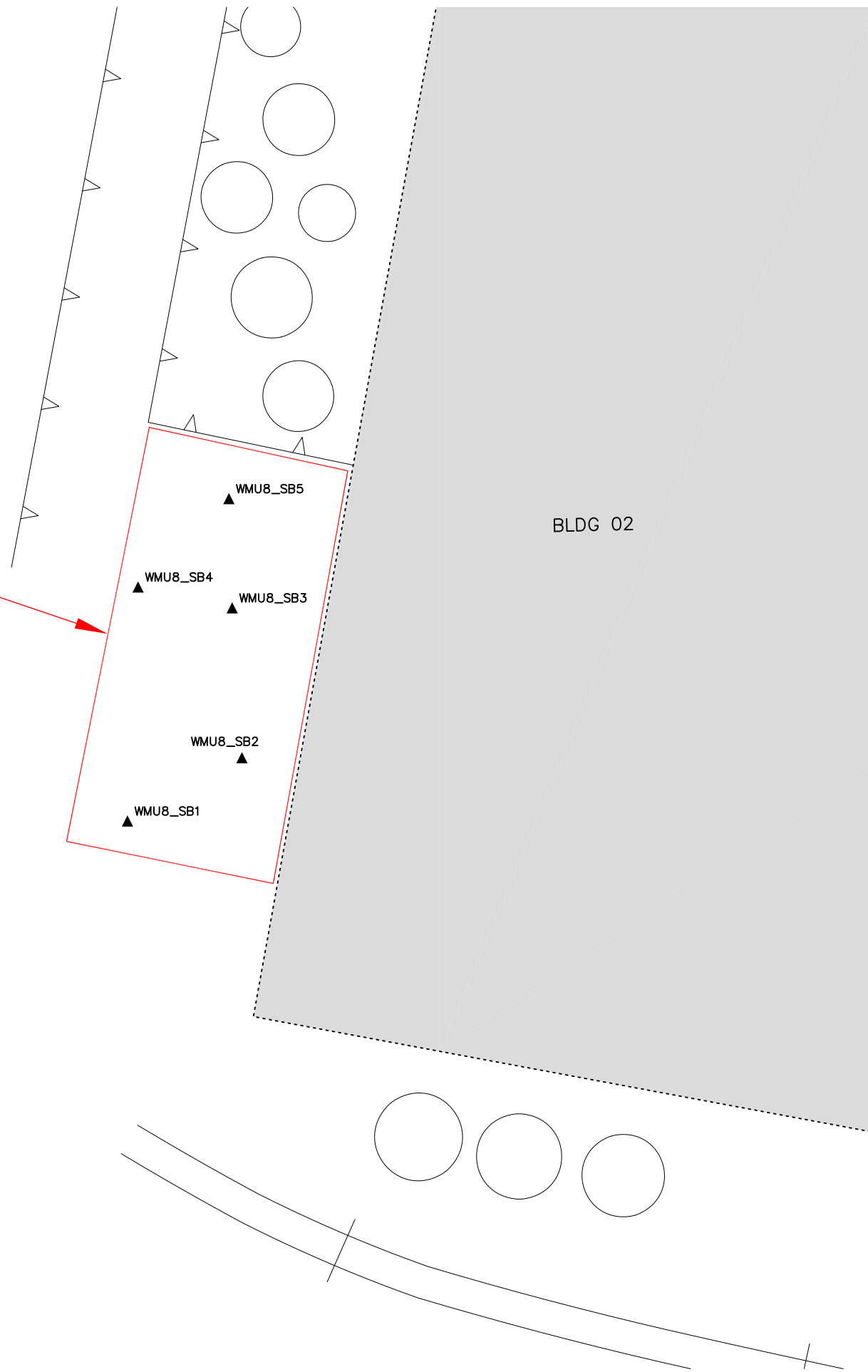
- LEGEND:**
- APPROXIMATE AOI BOUNDARY
 - APPROXIMATE WMU AREA ADDRESSED IN THIS CERTIFICATION OF CLOSURE
 - SOIL SAMPLING LOCATION

- NOTES:**
- IN ADDITION TO THE EXISTING HISTORICAL SITE DATA, THE WASTE MANAGEMENT UNIT LOCATIONS ARE ALSO BASED ON GIS DATA PROVIDED BY THE MDNRE IN JANUARY 2010.
 - BASE MAP INFORMATION FROM A SURVEY DATED APRIL 2001 (AT A SCALE OF 1:100) AND SOIL SAMPLING LOCATIONS FROM A SURVEY DATED JANUARY 2012. BOTH SURVEYS WERE COMPLETED BY BMJ INC.

RACER TRUST
FORMER GENERAL MOTORS CORPORATION
NORTH AMERICAN OPERATIONS FACILITY, FLINT OPERATIONS SITE -
FLINT, MICHIGAN
SOUTHEND CERTIFICATION OF CLOSURE

WMU # 7 SOIL SAMPLING LOCATIONS

FIGURE
3



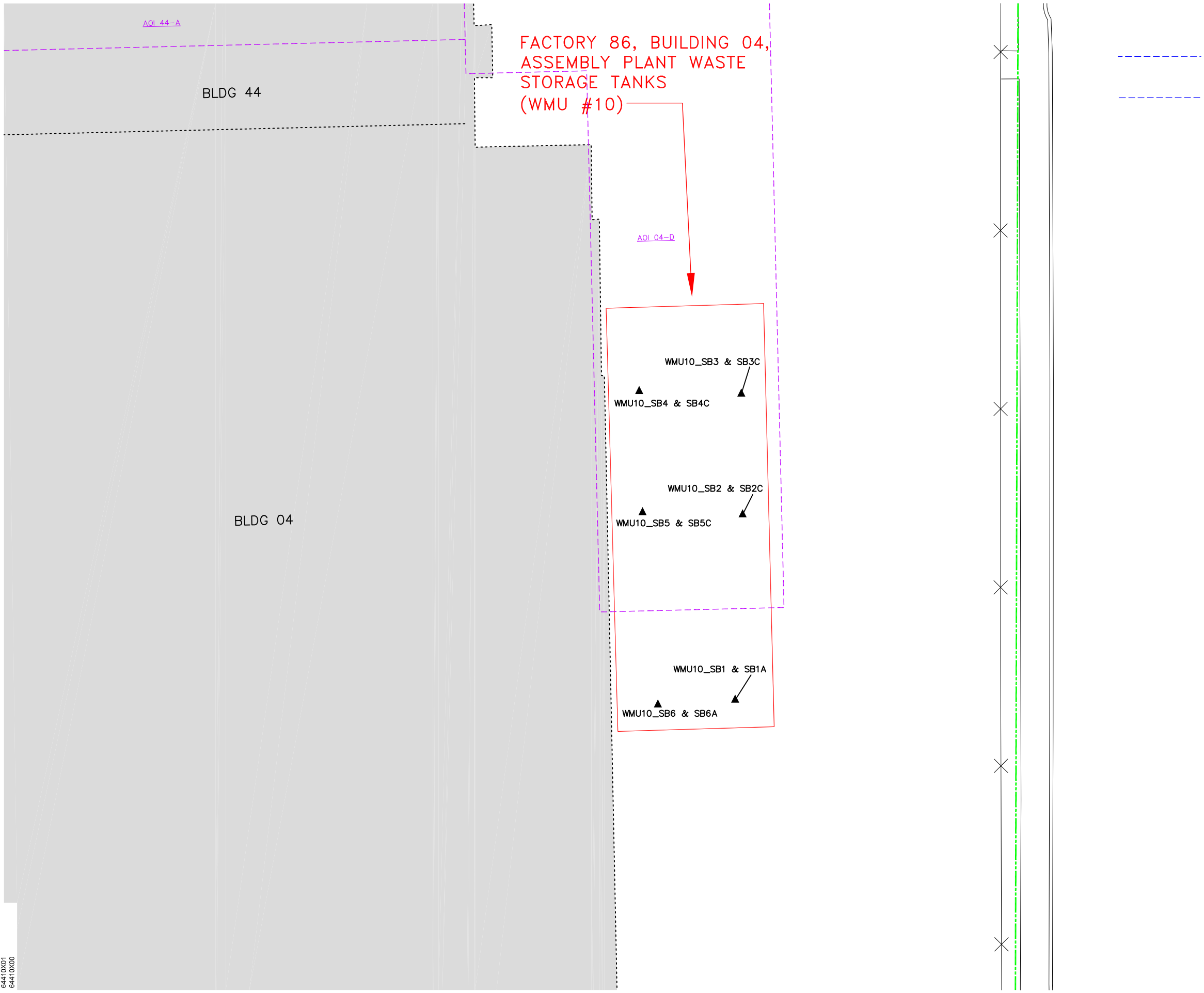
SOIL SAMPLING LOCATION

1. IN ADDITION TO THE EXISTING HISTORICAL SITE DATA, THE WASTE MANAGEMENT UNIT LOCATIONS ARE ALSO BASED ON GIS DATA PROVIDED BY THE MDNRE IN JANUARY 2010.
2. BASE MAP INFORMATION FROM A SURVEY DATED APRIL 2001 (AT A SCALE OF 1:100) AND SOIL SAMPLING LOCATIONS FROM A SURVEY DATED JANUARY 2012. BOTH SURVEYS WERE COMPLETED BY BMJ INC.



WMU # 8 SOIL SAMPLING LOCATIONS

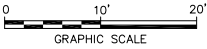




LEGEND:

- PROPERTY BOUNDARY
- - - APPROXIMATE AOI BOUNDARY
- APPROXIMATE WMU AREA ADDRESSED IN THIS CERTIFICATION OF CLOSURE
- ▲ SAMPLING LOCATIONS

- NOTES:**
1. IN ADDITION TO THE EXISTING HISTORICAL SITE DATA, THE WASTE MANAGEMENT UNIT LOCATIONS ARE ALSO BASED ON GIS DATA PROVIDED BY THE MDNRE IN JANUARY 2010.
 2. BASE MAP INFORMATION FROM A SURVEY DATED APRIL 2001 (AT A SCALE OF 1:100) AND SOIL SAMPLING LOCATIONS FROM A SURVEY DATED JANUARY 2012. BOTH SURVEYS WERE COMPLETED BY BMJ INC.
 3. TEMPORARY WELLS INSTALLED AT WMU SB4 AND WMU SB5, GROUNDWATER SAMPLE COLLECTED AT WMU SB5.



RACER TRUST FORMER GENERAL MOTORS CORPORATION NORTH AMERICAN OPERATIONS FACILITY, FLINT OPERATIONS SITE - FLINT, MICHIGAN SOUTHEND CERTIFICATION OF CLOSURE	
WMU # 10 SAMPLING LOCATIONS	
	FIGURE 5



Appendix A

MDEQ Approval of Southend Work
Plan



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



DAN WYANT
DIRECTOR

October 7, 2011

Mr. Grant Trigger
Cleanup Manager
RACER Trust
401 South Old Woodward Avenue, Suite 370
Birmingham, Michigan 48009

Dear Mr. Trigger:

SUBJECT: Approval of Southend: Work Plan for Response Activities at RCRA Waste Management Units (Work Plan); RACER Trust, Former General Motors Corporation North American Operations Facility; MID 005 356 712

The Michigan Department of Environmental Quality (MDEQ), Resource Management Division (RMD), has reviewed the July 29, 2011, Work Plan for the remaining hazardous waste management units on the south end of the site. Based on our review pursuant to Part 111, Hazardous Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and the administrative rules promulgated thereto, the RMD has determined that Work Plan is acceptable and hereby approved.

Should you require further information, please contact me at 517-373-7397; quackenbushp@michigan.gov; or MDEQ, P.O. Box 30241, Lansing, Michigan 48909-7741.

Sincerely,

Peter Quackenbush
Hazardous Waste Section
Resource Management Division
517-373-7397

Enclosure

cc: Mr. Chris Peters, ARCADIS
Mr. Dave Favero, RACER Trust
Mr. Chris Black, U.S. Environmental Protection Agency, Region 5
Mr. Dale Bridgford/Mr. Peter Quackenbush, MDEQ
HWS-C&E File



Appendix B

Photo Summary Log

PHOTOGRAPHIC LOG

Project: WMU Southend Soil Sampling		Location: Flint, Michigan	Project No. B0064410.2012.00900
Photo No. 1	Date: 12-7-2011		
Direction Photo Taken: Facing west.			
Description: View of WMU 7 during GPRS investigation. The surveyed WMU edges are marked with pink paint and the proposed soil boring locations are marked with orange paint.			


PHOTOGRAPHIC LOG

Project: WMU Southend Soil Sampling		Location: Flint, Michigan	Project No. B0064410.2012.00900
Photo No. 2	Date: 1-23-2011		
Direction Photo Taken: Facing east.			
Description: View of WMU 7 during soil sampling event. Coring through concrete at WMU7_SB1.			


PHOTOGRAPHIC LOG

Project: WMU Southend Soil Sampling		Location: Flint, Michigan	Project No. B0064410.2012.00900
Photo No. 3	Date: 12-7-2011		
Direction Photo Taken: Facing northeast.			
Description: View of WMU 8, with the WMU area edges marked with pink paint. The proposed soil boring locations are marked by pink pin flags.			

PHOTOGRAPHIC LOG

Project: WMU Southend Soil Sampling		Location: Flint, Michigan	Project No. B0064410.2012.00900
Photo No. 4	Date: 12-7-2011		
Direction Photo Taken: Facing east.			
Description: View of WMU 8 during GPRS investigation. The proposed soil boring locations are indicated by pink flags.			

PHOTOGRAPHIC LOG

Project: WMU Southend Soil Sampling		Location: Flint, Michigan	Project No. B0064410.2012.00900
Photo No. 5	Date: 12-7-2011		
Direction Photo Taken: Facing west.			
Description: View of WMU 10, with the edge of the WMU marked with pink paint. The proposed soil boring locations can be seen marked with orange paint and pink pin flags (on berm to north).			

PHOTOGRAPHIC LOG

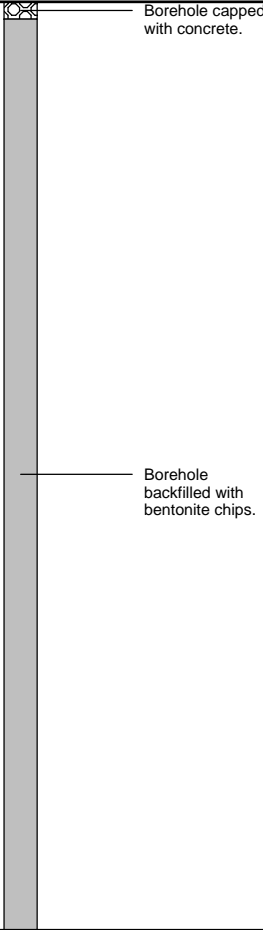
Project: WMU Southend Soil Sampling		Location: Flint, Michigan	Project No. B0064410.2012.00900
Photo No. 6	Date: 12-7-2011		
Direction Photo Taken: Facing north.			
Description: View of WMU 10, with the WMU edges marked with a wooden stake. Also, a water line identified by the GPRS is marked by orange paint.			




Appendix C


Soil Boring and Well Logs


Date Start/Finish: 1/23/2012 Drilling Company: Boart Longyear Driller's Name: Steve Argue Drilling Method: Rotosonic/HA/Vac Truck Sampling Method: Core Rig Type: NA	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 16' bgs Surface Elevation: NA Descriptions By: Megan Meckley	Well/Boring ID: WMU7_SB1 Client: RACER Trust Location: RACER Buick City Flint, Michigan
---	---	---

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								
		1	0-5	5.0	1.7		(0-1) CONCRETE		
					0.6		(1-2) SAND; medium, trace medium granule, subrounded, well sorted; dry, light yellow brown (10YR 4/6).		
					0.1		(2-4) SAND; medium, little clay, trace medium granule, subrounded, poorly sorted; dry, light yellow brown (10YR 4/6).		
-5	-5						(4-6) SAND; medium, little silt, small to large granule, subrounded to subangular, poorly sorted; dry, light yellow brown (10YR 4/6).		
		2	5-10	3.0	0.3		(6-11.5) SAND; medium to coarse, little small to medium granule, trace silt, subrounded to subangular, poorly sorted; moist, light yellow brown (10YR 4/4).		
					11.7		NOTE: wet at 9' bgs.		
-10	-10				0.1				
		3	10-15	5.5	7.8		(11.5-12.5) SAND; coarse, little medium to large granule, trace silt, subrounded, poorly sorted; wet, gray brown (2.5YR 4/3).		
							(12.5-13.8) SILT; high plasticity, rapid dilatancy, some sand, very fine to fine, soft; wet, gray (GLEYS 3/N). NOTE: odor and sheen.		
					0.3		(13.8-16) SILT; some clay, low plasticity, no dilatancy, medium stiff; dry, light gray (5YR 4/1).		
-15	-15	4	15-16	1.5					
					2.3			End of boring 16' bgs.	


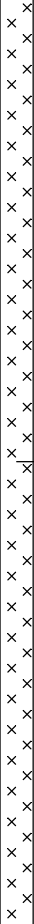








	Remarks: bgs = below ground surface Hand auger 0-5' bgs Groundwater encountered at 9' bgs
--	--


Date Start/Finish: 1/23/2012 Drilling Company: Boart Longyear Driller's Name: Steve Argue Drilling Method: Rotosonic/HA/Vac Truck Sampling Method: Sonic Core Rig Type: NA	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 16' bgs Surface Elevation: NA Descriptions By: Megan Meckley	Well/Boring ID: WMU7_SB2 Client: RACER Trust Location: RACER Buick City Flint, Michigan
---	---	---

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								
		1	0-5	5.0	0.2		(0-1) CONCRETE		 <p>Borehole capped with concrete.</p> <p>Borehole backfilled with bentonite chips.</p>
					0.2		(1-2) SAND; fine to medium, trace clay, trace small granule, subangular, poorly sorted; dry, brown (10YR 4/4).		
					0.2		(2-4) SAND; fine to medium, trace small granule, subrounded, well sorted; dry, brown (10YR 4/4).		
					0.5		(4-11.5) SAND; fine to coarse, trace small to large granule, subrounded to subangular; dry, brown (10YR 4/4).		
-5	-5	2	5-10	1.9	0.3		NOTE: wet at 8.5' bgs		
					0.6				
					0.6				
					0.7				
		3	10-15	6.2	0.7		(11.5-12.5) SAND; medium, trace silt, trace clay, trace small granule, poorly sorted; wet, brown (2.5YR 4/5) with dark brown (5YR 4/2).		
							(12.5-13.2) SAND; fine to medium, trace small to large granule, subrounded, trace silt; moist, dark brown to black (7.5YR 2.5/1).		
							(13.2-14.2) CLAY; some silt, low plasticity, no dilatancy; dry, very stiff, light gray (10YR 4/1).		
-15	-15	4	15-16	1.7	0.9		(14.2-16) SILT, some clay, low plasticity, no dilatancy; dry, stiff, light gray (10YR 5/1).		
							End of boring 16' bgs.		

	Remarks: bgs = below ground surface HA = Hand auger Hand auger 0-5' bgs Groundwater encountered at 8.5' bgs
--	---


Date Start/Finish: 1/24/2012 Drilling Company: Boart Longyear Driller's Name: Steve Argue Drilling Method: Rotosonic/HA/Vac Truck Sampling Method: Sonic Core Rig Type: NA	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 16' bgs Surface Elevation: NA Descriptions By: Megan Meckley	Well/Boring ID: WMU7_SB3 Client: RACER Trust Location: RACER Buick City Flint, Michigan
---	---	---

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								
		1	0-5	5.0	0.1			(0-1) CONCRETE	 Borehole backfilled with soil cuttings.
					2.9			(1-2) SAND; medium to coarse, trace small granule, trace large pebble, subrounded to subangular, poorly sorted; dry, brown (10YR 4/4).	
					0.6			(2-7) SAND; fine to medium ,trace silt, well sorted; dry, light brown (10YR 5/4).	
-5	-5							NOTE: wet at 6.5' bgs	
		2	5-10	3.9	1.7			(7-8.2') SAND, fine to medium, little silt, trace small granule, subangular, wet, gray to brown (10yr, 4/2).	
					0.3			(8.2-11') SAND, medium to coarse, little small to medium granule, subangular, poorly sorted, wet, gray to black (10yr, 3/1).	
-10	-10				1.2			(11-12') SAND, medium to coarse, trace clay, little small to medium granule, subangular, poorly sorted, wet, dark gray brown (10yr, 2/1).	
		3	10-15	NA	0.5			(12-15') SAND, coarse, little small granule, trace clay, trace large pebble, subrounded, poorly sorted, wet (10yr, 3/1).	
					0.6				
-15	-15	4	15-16	NA	0.3			(15-16') SILT and CLAY; trace fine sand, medium plasticity, no dilatancy, medium stiff, dry, light gray (2.5yr, 4/1).	
								End of boring 16' bgs.	






	Remarks: bgs = below ground surface HA = Hand auger Hand auger 0-5' bgs Groundwater encountered at 6.5' bgs
--	---


Date Start/Finish: 1/24/2012 Drilling Company: Boart Longyear Driller's Name: Steve Argue Drilling Method: Rotosonic/HA/Vac Truck Sampling Method: Hand Auger Rig Type: NA	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 2.8' bgs Surface Elevation: NA Descriptions By: Megan Meckley	Well/Boring ID: WMU8_SB1 Client: RACER Trust Location: RACER Buick City Flint, Michigan
---	--	---

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								
		1	0-2.8	2.7	0.2		<div> <div></div> <div></div> <div></div> </div>	(0-0.9) CONCRETE (0.9-1.5) CLAY; medium plasticity, no dilatancy, and sand, very fine to fine, trace large pebble, subrounded; dry, medium stiff, brown (10YR 4/2). (1.5-2.8) CLAY; medium plasticity, slow dilatancy, little silt, little sand; dry, medium stiff, brown (10YR 4/1). NOTE: trace organic material (wood).	<div> <div></div> <div></div> </div>
					0.2			End of boring 2.8' bgs.	
-5	-5								
-10	-10								
-15	-15								








	Remarks: bgs = below ground surface Hand auger 0-2.8' bgs Groundwater not encountered No odor or staining observed
--	--


Date Start/Finish: 1/24/2012 Drilling Company: Boart Longyear Driller's Name: Steve Argue Drilling Method: Rotosonic/HA/Vac Truck Sampling Method: Hand Auger Rig Type: NA	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 3.2' bgs Surface Elevation: NA Descriptions By: Megan Meckley	Well/Boring ID: WMU8_SB2 Client: RACER Trust Location: RACER Buick City Flint, Michigan
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								
		1	0-3.2	3.0	1.3	X	 (0-1.2) CONCRETE		 Borehole capped with concrete.
					0.6		 (1.2-2.2) SAND, medium, little clay, trace small to large granule, trace small pebble, subangular to subrounded; dry, dark brown (7.5YR 2.5/1).		 Borehole backfilled with bentonite chips.
							 (2.2-3.2) SAND; medium, and clay, trace small granule, subangular, poorly sorted; moist, dark brown (10YR 4/2).		
-5	-5							End of boring 3.2' bgs.	
-10	-10								
-15	-15								

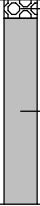
	Remarks: bgs = below ground surface HA - Hand auger Hand auger from 0-3.2' bgs Groundwater not encountered No odor or staining observed
--	--


Date Start/Finish: 1/24/2012 Drilling Company: Boart Longyear Driller's Name: Steve Argue Drilling Method: Rotosonic/HA/Vac Truck Sampling Method: Hand Auger Rig Type: NA	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 4' bgs Surface Elevation: NA Descriptions By: Megan Meckley	Well/Boring ID: WMU8_SB3 Client: RACER Trust Location: RACER Buick City Flint, Michigan
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								
		1	0-4	4.0	0.6			(0-1.2) CONCRETE	 <div>Borehole capped with concrete.</div> <div>Borehole backfilled with bentonite chips.</div>
								(1.2-1.5) SAND; well sorted, dark brown.	
								(1.5-2.5) CONCRETE	
					1.8			(2.5-3.5) SAND; fine to medium, concrete, trace large pebble, subangular, poorly sorted; dry, light gray and brown (10YR 4/2).	
								(3.5-4) CLAY; high plasticity, rapid dilatancy, some sand, fine to medium, trace silt; dry, soft to medium stiff, light brown (10YR 5/2).	
-5	-5							End of boring 4' bgs.	
-10	-10								
-15	-15								

	Remarks: bgs = below ground surface HA - Hand auger Hand auger from 0-4' bgs Groundwater not encountered No odor or staining observed
--	--


Date Start/Finish: 1/24/2012 Drilling Company: Boart Longyear Driller's Name: Steve Argue Drilling Method: Rotosonic/HA/Vac Truck Sampling Method: Hand Auger Rig Type: NA	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 3.2' bgs Surface Elevation: NA Descriptions By: Megan Meckley	Well/Boring ID: WMU8_SB4 Client: RACER Trust Location: RACER Buick City Flint, Michigan
---	--	---

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								
		1	0-3.2	3.2	0.8	X		(0-1.2) CONCRETE	
					0.5			(1.2-2.2) SAND; fine to coarse, trace silt, subrounded to subangular, poorly sorted; dry, brown (10YR 4/4).	
								(2.2-3.2) SAND; medium to coarse, little small to medium granule, subangular, poorly sorted; moist, dark brown (10YR 3/2).	
-5	-5							End of boring 3.2' bgs.	
-10	-10								
-15	-15								


	Remarks: bgs = below ground surface HA - Hand Auger Hand auger from 0-3.2' bgs Groundwater not encountered No odor or staining observed
--	--


Date Start/Finish: 1/24/2012 Drilling Company: Boart Longyear Driller's Name: Steve Argue Drilling Method: Rotosonic/HA/Vac Truck Sampling Method: Hand Auger Rig Type: NA	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 5' bgs Surface Elevation: NA Descriptions By: Megan Meckley	Well/Boring ID: WMU8_SB5 Client: RACER Trust Location: RACER Buick City Flint, Michigan
---	--	---

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								
		1	0-5	5.0	0.6		<div><div></div><div>(0-2) CONCRETE</div></div>		<div><div></div><div>Borehole capped with concrete.</div></div>
					1.0		<div><div></div><div>(2-2.5) SAND; fine to coarse, little small to large granule, subrounded to subangular, trace silt, poorly sorted; dry, dark brown (10YR 2/2).</div></div>		
					0.5		<div><div></div><div>(2.5-4) CONCRETE debris.</div></div>		<div><div></div><div>Borehole backfilled with bentonite chips.</div></div>
5	5						<div><div></div><div>(4-4.5) SAND; very fine to medium, concrete debris, trace small to medium granule, subrounded, light gray (10YR 6/1).</div></div>		
							<div><div></div><div>(4.5-5) SILT; no plasticity, no dilatancy, little sand, very fine to fine, trace medium to large granule, soft, dry, light gray (10YR 5/1).</div></div>		
							End of boring 5' bgs.		
-10	-10								
-15	-15								


	Remarks: bgs = below ground surface HA - Hand Auger Hand auger from 0-5' bgs Groundwater not encountered No odor or staining observed
--	--


Date Start/Finish: 1/24/2012 Drilling Company: Boart Longyear Driller's Name: Steve Argue Drilling Method: Rotosonic/HA/Vac Truck Sampling Method: Sonic Core Rig Type: NA	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 18' bgs Surface Elevation: NA Descriptions By: Megan Meckley	Well/Boring ID: WMU10_SB1 Client: RACER Trust Location: RACER Buick City Flint, Michigan
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								
		1	0-5	5.0	0.7			(0-1) CONCRETE	 <p>Borehole capped with concrete.</p> <p>Borehole backfilled with bentonite chips.</p>
					1.9			(1-5) SAND; medium, trace clay, well sorted; dry, brown (10YR 5/8).	
-5	-5	2	5-10	3	1.2			(5-15.2) SAND; medium, trace clay, trace small to medium granule, subangular, poorly sorted; dry, brown (10YR 5/8)	
					1.0			NOTE: wet at 8.5' bgs	
		3	10-15	3	0.7				
					1.0				
-10	-10				0.3				
					0.7				
		4	15-18	4	1.8			(15.2-15.8) GRAVEL; small to medium granule, subrounded; wet, gray to black. NOTE: sheen.	
-15	-15							(15.8-17) SAND; very fine to fine, little clay, trace silt, trace small to medium granule, subrounded to subangular; wet, gray to brown (2.5YR 4/2). NOTE: sheen.	
								(17-17.2) SAND; very fine to fine, little clay, trace coarse sand, trace silt, trace small to medium granule, subrounded to subangular; wet, gray to brown (2.5YR 4/2).	
					1.2			(17.2-18) SILT; some clay, low plasticity, no dilatancy, little very fine sand; dry, stiff to very hard, gray (2.5YR 4/1).	
								End of boring 18' bgs.	

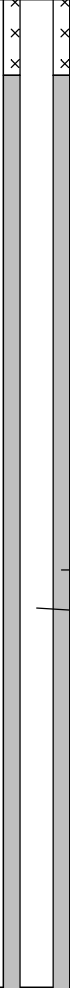

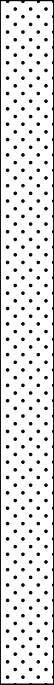

	Remarks: bgs = below ground surface HA - Hand Auger Hand auger from 0-5' bgs Groundwater encountered at 8.5' bgs No order observed
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Date Start/Finish: 1/24/2012 Drilling Company: Boart Longyear Driller's Name: Steve Argue Drilling Method: Rotosonic/HA/Vac Truck Sampling Method: Sonic Core Rig Type: NA	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 18' bgs Surface Elevation: NA Descriptions By: Megan Meckley	Well/Boring ID: WMU10_SB3 Client: RACER Trust Location: RACER Buick City Flint, Michigan
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								
		1	0-5	5.0	0.6			(0-1) CONCRETE	 Borehole capped with concrete. Borehole backfilled with bentonite chips.
					1.3			(1-3) SAND; fine to medium, trace clay, well sorted; dry, brown (10YR 4/4).	
								(3-10) SAND; medium, trace clay, trace small to large pebble, subrounded, poorly sorted; moist, brown (10YR 4/6).	
-5	-5				0.5				
		2	5-10	1.3	0.7				
					0.8				
-10	-10				2.6			(10-11.5) SAND; medium, trace clay, trace small to large pebble, subrounded, poorly sorted; wet, brown (10YR 4/6). NOTE: wet at 10' bgs	
		3	10-15	7.0	1.3			(11.5-12) SAND; coarse, trace silt, little small to large granule, subangular, trace clay, poorly sorted; moist, light gray.	
								(12-14) CONCRETE	
								(14-14.5) SILT; low plasticity, some sand, fine to medium, soft to medium stiff, gray.	
-15	-15				103.3			(14.5-15) SAND; coarse, little small to medium granule, subangular, trace silt, poorly sorted; moist, gray.	
		4	15-18	2.5	10.9			(15-18) SILT; low to no plasticity, no dilatancy, little sand, very fine to fine, trace medium granule, subrounded, dry, gray.	
								End of boring 18' bgs.	


	Remarks: bgs = below ground surface HA - Hand Auger Hand auger from 0-5' bgs Groundwater encountered at 10' bgs No odor or staining observed
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Date Start/Finish: 1-25-2012 Drilling Company: Boart Longyear Driller's Name: Steve Argue Drilling Method: Rotosonic/HA/Vac Truck Sampling Method: Macrocore Rig Type: NA	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 22' bgs Surface Elevation: NA Descriptions By: Megan Meckley	Well/Boring ID: WMU10_SB4 Client: RACER Trust Location: RACER Buick City Flint, Michigan
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







DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								
		1	0-5	5.0				(0-3) GRAVEL FILL	 <p>Bentonite (1-14' bgs) 2" well casing (0-16' bgs)</p>
					0.6			(3-4) CONCRETE	
5	-5				0.4			(4-14) SAND; medium, trace clay, well sorted; dry, brown (10YR 4/6).	
		2	5-10	2.3	0.3				
					0.7				
10	-10							NOTE: wet at 10' bgs.	
					0.4				
								Remarks: bgs = below ground surface HA - Hand Auger Hand auger from 0-5' bgs Groundwater encountered at 10' bgs 1/25/12: Temporary Monitoring Well installed to monitor the presence of free product (screened from 16-21' bgs). 1/26/12: Tempory well pulled and boring abandoned.	


Date Start/Finish: 1-25-2012 Drilling Company: Boart Longyear Driller's Name: Steve Argue Drilling Method: Rotasonic/HA/Vac Truck Sampling Method: Macrocore Rig Type: NA	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 22' bgs Surface Elevation: NA Descriptions By: Megan Meckley	Well/Boring ID: WMU10_SB4 Client: RACER Trust Location: RACER Buick City Flint, Michigan
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
15	-15	3	10-18	7.9	0.7			(14-16) CONCRETE	
					5.2	X		(16-16.3) SAND; medium, well sorted; wet, black (GLEY 2.5/N). NOTE: odor and sheen.	
					7.7	X		(16.3-17.5) SAND; fine to medium, little silt, trace clay, trace small to medium granule, subrounded; wet to saturated, gray (GLEY 4/N) with dark gray to black (GLEY 2.5/N). (17.5-17.8) SILT; some sand, very fine to fine, little clay, high plasticity, rapid dilatancy; wet to saturated, soft, dark gray (GLEY, 4/N). NOTE: odor.	
20	-20	4	18-22	4.8	0.7			(17.8-18.1) SAND; fine to medium, little silt, trace clay, trace small to medium granule, subrounded, wet to saturated, gray (GLEY 4/N) with dark gray to black (GLEY 2.5/N). NOTE: odor and sheen.	
						X		(18.1-20) SAND; very fine to fine, some silt, trace clay, trace small granule, subangular to subrounded, poorly sorted, wet, gray (2.5YR 5/1).	2" PVC 10 slot well screen (16 to 21' bgs)
					0.6			(20-20.2) SAND; medium to coarse, trace silt, trace small granule, subrounded, poorly sorted; wet, gray (2.5YR 5/1). (20.2-22) SAND; very fine to medium, trace small granule, subangular, trace silt, trace clay, poorly sorted; wet, gray (10YR 5/1).	Sand Pack (14 to 21' bgs)
25	-25							End of boring 22' bgs.	

	Remarks: bgs = below ground surface HA - Hand Auger Hand auger from 0-5' bgs Groundwater encountered at 10' bgs 1/25/12: Temporary Monitoring Well installed to monitor the presence of free product (screened from 16-21' bgs). 1/26/12: Tempory well pulled and boring abandoned.
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Date Start/Finish: 1/25/2012 Drilling Company: Boart Longyear Driller's Name: Steve Argue Drilling Method: Rotosonic/HA/Vac Truck Sampling Method: Sonic core Rig Type: NA	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 19' bgs Surface Elevation: NA Descriptions By: Megan Meckley	Well/Boring ID: WMU10_SB5 Client: RACER Trust Location: RACER Buick City Flint, Michigan
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								
		1	0-5	5.0	0.8			(0-2.5) GRAVEL FILL	Borehole capped with concrete.
								(2.5-3.5) CONCRETE	
					0.9			(3.5-13.5) SAND; medium, trace silt, trace clay, well sorted, dry, brown (10yr, 4/6).	Borehole backfilled with bentonite.
-5	-5				0.6				
					2.3				
-10	-10				4.1			NOTE: wet at 10' bgs	
					45.3				
		2	5-19	7.7	236			(13.5-15) SAND; fine to medium, trace silt, trace small to large granule, subangular; moist, dark gray to black (GLEY, 2.5/N). NOTE: odor, sheen and staining.	
-15	-15							(15-17) CONCRETE	
					587			(17-17.5) SAND; fine, trace clay, well sorted; moist, black (GLEY 2.5/N). NOTE: odor.	
								(17.5-18) SILT; high plasticity, rapid dilatancy, little sand, very fine, trace clay, trace medium to large granule, subrounded; wet, soft, (GLEY 4/N).	
								(18-18.7) SAND; medium to coarse, little small granule, trace silt, poorly sorted; moist, gray (5YR 4/1).	
-20	-20							(18.7-19) SAND; medium, little silt, trace clay, trace small to medium granule, subangular; dry, gray (5YR 4/2).	
								End of boring 19' bgs.	

	Remarks: bgs = below ground surface HA - Hand Auger Hand auger from 0-5' bgs. Groundwater encountered at 10' bgs. Groundwater sample collected from temporary well. 1/24/12 Temporary Monitoring Well installed to monitor the presence of free product (screen from 14-19' bgs).
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Date Start/Finish: 1/25/2012 Drilling Company: Boart Longyear Driller's Name: Steve Argue Drilling Method: Rotosonic/HA/Vac Truck Sampling Method: Sonic core Rig Type: NA	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 18' bgs Surface Elevation: NA Descriptions By: Megan Meckley	Well/Boring ID: WMU10_SB6 Client: RACER Trust Location: RACER Buick City Flint, Michigan
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								
		1	0-5	5.0	0.6			(0-1') CONCRETE	Borehole capped with concrete.
					0.5			(1-10') SAND; medium, trace clay, trace medium to large granule, subrounded, poorly sorted, dry, brown (10yr, 4/6). NOTE: odor from 5-7' bgs.	
-5	-5				9.3			NOTE: wet at 6' bgs	Borehole backfilled with bentonite chips.
		2	5-10	4.2	3.3				
					2.0				
-10	-10				132			(10-12') SAND; medium, trace clay, trace medium to large granule, subrounded, poorly sorted, moist, brown (10yr, 4/6)	
					243			(12-14') CLAY; little silt, high to medium plasticity, slow dilatancy, medium stiff, trace very fine sand, trace small granule, subangular, dry, gray and brown with staining (2.5yr, 4/2 and 2.5yr, 3/1). NOTE: odor and staining.	
-15	-15	3	10-20	NA	24.4			(14-16.5') SILT; trace clay, medium plasticity, rapid dilatancy, little sand, very fine, trace small to medium granule, subangular, soft to medium stiff, dry, gray (5yr, 4/1).	
					18.5			(16.5-17.6') SAND; fine to very coarse, trace silt, trace small granule to medium pebble, poorly sorted, wet, dark gray (GLEY, 4/1)	
								(17.6-18') SAND; very fine to fine, some silt, trace medium to large granule, subrounded, poorly sorted, moist, gray (GLEY, 4/1). End of boring 18' bgs	

	Remarks: bgs = below ground surface HA - Hand Auger Hand auger from 0-5' bgs. Groundwater encountered at 6' bgs
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Appendix D

Laboratory Data



Analytical Laboratory Report

Report ID: S51410.01(01)
Generated on 02/01/2012

Report to

Attention: Mike Brennan
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Michael.Brennan@arcadis-us.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): S51410.01-S51410.23
Project: B0064410.2012.00900 / Buick City / Flint MI
Collected Date: 01/23/2012 - 01/25/2012
Submitted Date/Time: 01/25/2012 14:00
Sampled by: Megan Meckley
P.O. #: MLT1295

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.
Samples are held by the lab for 30 days from the sample submittal date unless a written request to hold longer is provided by the client.
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



Analytical Laboratory Report

Sample Summary (23 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S51410.01	WMU2_SB1_01232012 (3'-3.5')	Soil	01/23/2012 11:10
S51410.02	WMU7_SB1_01232012 (15.5-16')	Soil	01/23/2012 13:40
S51410.03	WMU7_SB2_01232012 (14.5-15')	Soil	01/23/2012 16:25
S51410.04	WMU7_SB3_01242012 (15.5-16')	Soil	01/24/2012 09:55
S51410.05	WMU8_SB1_01242012 (2-2.8')	Soil	01/24/2012 10:40
S51410.06	WMU8_SB2_01242012 (1.5-2')	Soil	01/24/2012 10:55
S51410.07	WMU8_SB3_01242012 (3.5-4')	Soil	01/24/2012 11:20
S51410.08	WMU8_SB4_01242012 (1.2-1.7')	Soil	01/24/2012 11:10
S51410.09	WMU8_SB5_01242012 (4.2-5')	Soil	01/24/2012 11:50
S51410.10	WMU10_SB1_01242012 (17.2-17.7)	Soil	01/24/2012 14:30
S51410.11	WMU10_SB2_01242012 (16-16.5)	Soil	01/24/2012 15:45
S51410.12	WMU10_SB3_01242012 (15.5-16)	Soil	01/24/2012 16:40
S51410.13	WMU10_SB4_01242012 (20-20.5)	Soil	01/25/2012 10:20
S51410.14	WMU10_SB5_01242012 (18.5-19)	Soil	01/25/2012 12:00
S51410.15	WMU10_SB5A_01242012 (17.5-18')	Soil	01/25/2012 11:55
S51410.16	WMU10_SB1A_01242012 (16-16.5')	Soil	01/24/2012 14:45
S51410.17	WMU10_SB2C_01242012 (13-13.5')	Soil	01/24/2012 15:35
S51410.18	WMU10_SB3C_01242012 (12.5-13')	Soil	01/24/2012 16:30
S51410.19	WMU10_SB4C_01242012 (14.5-15')	Soil	01/25/2012 09:55
S51410.20	WMU10_SB5C_01242012 (16.5-17')	Soil	01/25/2012 11:50
S51410.21	WMU10_SB5B_01252012 (14.5-15')	Soil	01/25/2012 12:05
S51410.22	TB1_01232011	Methanol	01/23/2012 09:00
S51410.23	WMU10_SB4A_01252012 (17-17.5')	Soil	01/25/2012 10:30



Analytical Laboratory Report

Lab Sample ID: S51410.01
Sample Tag: WMU2_SB1_01232012 (3'-3.5')
Collected Date/Time: 01/23/2012 11:10
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/27/12 17:41	EMR		
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Inorganics

Total Solids	82	%	1	Std M 2540 B	01/26/12 11:00	SLR		
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/30/12 15:10	PL	95-48-7	
p,m-Cresol	Not detected	ug/kg	300	8270C	01/30/12 15:10	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	300	8270C	01/30/12 15:10	PL	95-48-7	
Nitrobenzene	Not detected	ug/kg	300	8270C	01/30/12 15:10	PL	98-95-3	
Pyridine	Not detected	ug/kg	300	8270C	01/30/12 15:10	PL	110-86-1	

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 15:42	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	70,000	8260M	01/30/12 16:03	JGH		
Cyclohexanone	Not detected	ug/kg	7,000	8260M	01/30/12 16:03	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	7,000	8260M	01/30/12 16:03	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	70,000	8260M	01/30/12 16:03	JGH		
2-Nitropropane	Not detected	ug/kg	7,000	8260M	01/30/12 16:03	JGH	79-46-9	

F Scan

Benzene	320	ug/kg	70	8260M	01/30/12 16:03	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	70	8260M	01/30/12 16:03	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	70	8260M	01/30/12 16:03	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	70	8260M	01/30/12 16:03	JGH	95-50-1	
Ethylbenzene	670	ug/kg	70	8260M	01/30/12 16:03	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	70	8260M	01/30/12 16:03	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	70	8260M	01/30/12 16:03	JGH	127-18-4	
Toluene	6,160	ug/kg	70	8260M	01/30/12 16:03	JGH	108-88-3	
1,1,1-Trichloroethane	100	ug/kg	70	8260M	01/30/12 16:03	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	70	8260M	01/30/12 16:03	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	70	8260M	01/30/12 16:03	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	70	8260M	01/30/12 16:03	JGH	75-69-4	
p,m-Xylene	1,870	ug/kg	70	8260M	01/30/12 16:03	JGH		
o-Xylene	680	ug/kg	70	8260M	01/30/12 16:03	JGH	95-47-6	
Acetone	Not detected	ug/kg	7,000	8260M	01/30/12 16:03	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	7,000	8260M	01/30/12 16:03	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	7,000	8260M	01/30/12 16:03	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	7,000	8260M	01/30/12 16:03	JGH	60-29-7	



Analytical Laboratory Report

Lab Sample ID: S51410.01 (continued)

Sample Tag: WMU2_SB1_01232012 (3'-3.5')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	7,000	8260M	01/30/12 16:03	JGH	108-10-1	
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	70	8260B	01/30/12 16:03	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	70	8260B	01/30/12 16:03	JGH	76-13-1	
Other / Misc.								
Methanol	30,000	ug/kg	4,400	8015M	01/30/12 12:00	Fiber		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51410.02

Sample Tag: WMU7_SB1_01232012 (15.5-16")

Collected Date/Time: 01/23/2012 13:40

Matrix: Soil

COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/27/12 17:41	EMR		
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Inorganics

Total Solids	85	%	1	Std M 2540 B	01/26/12 11:00	SLR		
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/30/12 15:29	PL	95-48-7	
p,m-Cresol	Not detected	ug/kg	300	8270C	01/30/12 15:29	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	300	8270C	01/30/12 15:29	PL	95-48-7	
Nitrobenzene	Not detected	ug/kg	300	8270C	01/30/12 15:29	PL	98-95-3	
Pyridine	Not detected	ug/kg	300	8270C	01/30/12 15:29	PL	110-86-1	

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 15:58	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	70,000	8260M	01/30/12 16:22	JGH		
Cyclohexanone	Not detected	ug/kg	7,000	8260M	01/30/12 16:22	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	7,000	8260M	01/30/12 16:22	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	70,000	8260M	01/30/12 16:22	JGH		
2-Nitropropane	Not detected	ug/kg	7,000	8260M	01/30/12 16:22	JGH	79-46-9	

F Scan

Benzene	Not detected	ug/kg	70	8260M	01/30/12 16:22	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	70	8260M	01/30/12 16:22	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	70	8260M	01/30/12 16:22	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	70	8260M	01/30/12 16:22	JGH	95-50-1	
Ethylbenzene	Not detected	ug/kg	70	8260M	01/30/12 16:22	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	70	8260M	01/30/12 16:22	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	70	8260M	01/30/12 16:22	JGH	127-18-4	
Toluene	Not detected	ug/kg	70	8260M	01/30/12 16:22	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/kg	70	8260M	01/30/12 16:22	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	70	8260M	01/30/12 16:22	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	70	8260M	01/30/12 16:22	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	70	8260M	01/30/12 16:22	JGH	75-69-4	
p,m-Xylene	Not detected	ug/kg	70	8260M	01/30/12 16:22	JGH		
o-Xylene	Not detected	ug/kg	70	8260M	01/30/12 16:22	JGH	95-47-6	
Acetone	Not detected	ug/kg	7,000	8260M	01/30/12 16:22	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	7,000	8260M	01/30/12 16:22	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	7,000	8260M	01/30/12 16:22	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	7,000	8260M	01/30/12 16:22	JGH	60-29-7	



Analytical Laboratory Report

Lab Sample ID: S51410.02 (continued)

Sample Tag: WMU7_SB1_01232012 (15.5-16')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	7,000	8260M	01/30/12 16:22	JGH	108-10-1	
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	70	8260B	01/30/12 16:22	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	70	8260B	01/30/12 16:22	JGH	76-13-1	
Other / Misc.								
Methanol	13,000	ug/kg	4,400	8015M	01/26/12 12:00	Fiber		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51410.03

Sample Tag: WMU7_SB2_01232012 (14.5-15')

Collected Date/Time: 01/23/2012 16:25

Matrix: Soil

COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/27/12 17:41	EMR		
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Inorganics

Total Solids	84	%	1	Std M 2540 B	01/26/12 11:00	SLR		
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/30/12 15:48	PL	95-48-7	
p,m-Cresol	Not detected	ug/kg	300	8270C	01/30/12 15:48	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	300	8270C	01/30/12 15:48	PL	95-48-7	
Nitrobenzene	Not detected	ug/kg	300	8270C	01/30/12 15:48	PL	98-95-3	
Pyridine	Not detected	ug/kg	300	8270C	01/30/12 15:48	PL	110-86-1	

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 16:15	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	70,000	8260M	01/30/12 16:40	JGH		
Cyclohexanone	Not detected	ug/kg	7,000	8260M	01/30/12 16:40	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	7,000	8260M	01/30/12 16:40	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	70,000	8260M	01/30/12 16:40	JGH		
2-Nitropropane	Not detected	ug/kg	7,000	8260M	01/30/12 16:40	JGH	79-46-9	

F Scan

Benzene	Not detected	ug/kg	70	8260M	01/30/12 16:40	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	70	8260M	01/30/12 16:40	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	70	8260M	01/30/12 16:40	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	70	8260M	01/30/12 16:40	JGH	95-50-1	
Ethylbenzene	Not detected	ug/kg	70	8260M	01/30/12 16:40	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	70	8260M	01/30/12 16:40	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	70	8260M	01/30/12 16:40	JGH	127-18-4	
Toluene	Not detected	ug/kg	70	8260M	01/30/12 16:40	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/kg	70	8260M	01/30/12 16:40	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	70	8260M	01/30/12 16:40	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	70	8260M	01/30/12 16:40	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	70	8260M	01/30/12 16:40	JGH	75-69-4	
p,m-Xylene	Not detected	ug/kg	70	8260M	01/30/12 16:40	JGH		
o-Xylene	Not detected	ug/kg	70	8260M	01/30/12 16:40	JGH	95-47-6	
Acetone	Not detected	ug/kg	7,000	8260M	01/30/12 16:40	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	7,000	8260M	01/30/12 16:40	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	7,000	8260M	01/30/12 16:40	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	7,000	8260M	01/30/12 16:40	JGH	60-29-7	



Analytical Laboratory Report

Lab Sample ID: S51410.03 (continued)

Sample Tag: WMU7_SB2_01232012 (14.5-15')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	7,000	8260M	01/30/12 16:40	JGH	108-10-1	
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	70	8260B	01/30/12 16:40	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	70	8260B	01/30/12 16:40	JGH	76-13-1	
Other / Misc.								
Methanol	10,000	ug/kg	4,400	8015M	01/26/12 12:00	Fiber		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51410.04

Sample Tag: WMU7_SB3_01242012 (15.5-16")

Collected Date/Time: 01/24/2012 09:55

Matrix: Soil

COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/27/12 17:41	EMR		
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Inorganics

Total Solids	81	%	1	Std M 2540 B	01/26/12 11:00	SLR		
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/30/12 16:07	PL	95-48-7	
p,m-Cresol	Not detected	ug/kg	300	8270C	01/30/12 16:07	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	300	8270C	01/30/12 16:07	PL	95-48-7	
Nitrobenzene	Not detected	ug/kg	300	8270C	01/30/12 16:07	PL	98-95-3	
Pyridine	Not detected	ug/kg	300	8270C	01/30/12 16:07	PL	110-86-1	

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 16:31	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	70,000	8260M	01/30/12 16:59	JGH		
Cyclohexanone	Not detected	ug/kg	7,000	8260M	01/30/12 16:59	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	7,000	8260M	01/30/12 16:59	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	70,000	8260M	01/30/12 16:59	JGH		
2-Nitropropane	Not detected	ug/kg	7,000	8260M	01/30/12 16:59	JGH	79-46-9	

F Scan

Benzene	Not detected	ug/kg	70	8260M	01/30/12 16:59	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	70	8260M	01/30/12 16:59	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	70	8260M	01/30/12 16:59	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	70	8260M	01/30/12 16:59	JGH	95-50-1	
Ethylbenzene	Not detected	ug/kg	70	8260M	01/30/12 16:59	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	70	8260M	01/30/12 16:59	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	70	8260M	01/30/12 16:59	JGH	127-18-4	
Toluene	Not detected	ug/kg	70	8260M	01/30/12 16:59	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/kg	70	8260M	01/30/12 16:59	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	70	8260M	01/30/12 16:59	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	70	8260M	01/30/12 16:59	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	70	8260M	01/30/12 16:59	JGH	75-69-4	
p,m-Xylene	Not detected	ug/kg	70	8260M	01/30/12 16:59	JGH		
o-Xylene	Not detected	ug/kg	70	8260M	01/30/12 16:59	JGH	95-47-6	
Acetone	Not detected	ug/kg	7,000	8260M	01/30/12 16:59	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	7,000	8260M	01/30/12 16:59	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	7,000	8260M	01/30/12 16:59	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	7,000	8260M	01/30/12 16:59	JGH	60-29-7	



Analytical Laboratory Report

Lab Sample ID: S51410.04 (continued)

Sample Tag: WMU7_SB3_01242012 (15.5-16')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	7,000	8260M	01/30/12 16:59	JGH	108-10-1	
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	70	8260B	01/30/12 16:59	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	70	8260B	01/30/12 16:59	JGH	76-13-1	
Other / Misc.								
Methanol	10,000	ug/kg	4,400	8015M	01/26/12 12:00	Fiber		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51410.05
Sample Tag: WMU8_SB1_01242012 (2-2.8')
Collected Date/Time: 01/24/2012 10:40
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/27/12 17:41	EMR		
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Inorganics

Total Solids	83	%	1	Std M 2540 B	01/26/12 11:00	SLR		
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/30/12 16:26	PL	95-48-7	
p,m-Cresol	Not detected	ug/kg	300	8270C	01/30/12 16:26	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	300	8270C	01/30/12 16:26	PL	95-48-7	
Nitrobenzene	Not detected	ug/kg	300	8270C	01/30/12 16:26	PL	98-95-3	
Pyridine	Not detected	ug/kg	300	8270C	01/30/12 16:26	PL	110-86-1	

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 16:47	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	70,000	8260M	01/30/12 17:17	JGH		
Cyclohexanone	Not detected	ug/kg	7,000	8260M	01/30/12 17:17	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	7,000	8260M	01/30/12 17:17	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	70,000	8260M	01/30/12 17:17	JGH		
2-Nitropropane	Not detected	ug/kg	7,000	8260M	01/30/12 17:17	JGH	79-46-9	

F Scan

Benzene	Not detected	ug/kg	70	8260M	01/30/12 17:17	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	70	8260M	01/30/12 17:17	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	70	8260M	01/30/12 17:17	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	70	8260M	01/30/12 17:17	JGH	95-50-1	
Ethylbenzene	Not detected	ug/kg	70	8260M	01/30/12 17:17	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	70	8260M	01/30/12 17:17	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	70	8260M	01/30/12 17:17	JGH	127-18-4	
Toluene	Not detected	ug/kg	70	8260M	01/30/12 17:17	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/kg	70	8260M	01/30/12 17:17	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	70	8260M	01/30/12 17:17	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	70	8260M	01/30/12 17:17	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	70	8260M	01/30/12 17:17	JGH	75-69-4	
p,m-Xylene	Not detected	ug/kg	70	8260M	01/30/12 17:17	JGH		
o-Xylene	Not detected	ug/kg	70	8260M	01/30/12 17:17	JGH	95-47-6	
Acetone	Not detected	ug/kg	7,000	8260M	01/30/12 17:17	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	7,000	8260M	01/30/12 17:17	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	7,000	8260M	01/30/12 17:17	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	7,000	8260M	01/30/12 17:17	JGH	60-29-7	



Analytical Laboratory Report

Lab Sample ID: S51410.05 (continued)

Sample Tag: WMU8_SB1_01242012 (2-2.8')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	7,000	8260M	01/30/12 17:17	JGH	108-10-1	
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	70	8260B	01/30/12 17:17	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	70	8260B	01/30/12 17:17	JGH	76-13-1	
Other / Misc.								
Methanol	29,000	ug/kg	4,400	8015M	01/26/12 12:00	Fiber		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51410.06
Sample Tag: WMU8_SB2_01242012 (1.5-2')
Collected Date/Time: 01/24/2012 10:55
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/27/12 17:41	EMR		
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Inorganics

Total Solids	87	%	1	Std M 2540 B	01/26/12 11:00	SLR		
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/30/12 19:56	PL	95-48-7	
p,m-Cresol	Not detected	ug/kg	300	8270C	01/30/12 19:56	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	300	8270C	01/30/12 19:56	PL	95-48-7	
Nitrobenzene	Not detected	ug/kg	300	8270C	01/30/12 19:56	PL	98-95-3	
Pyridine	Not detected	ug/kg	300	8270C	01/30/12 19:56	PL	110-86-1	

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 17:03	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	60,000	8260M	01/30/12 17:35	JGH		
Cyclohexanone	Not detected	ug/kg	6,000	8260M	01/30/12 17:35	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	6,000	8260M	01/30/12 17:35	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	60,000	8260M	01/30/12 17:35	JGH		
2-Nitropropane	Not detected	ug/kg	6,000	8260M	01/30/12 17:35	JGH	79-46-9	

F Scan

Benzene	Not detected	ug/kg	60	8260M	01/30/12 17:35	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	60	8260M	01/30/12 17:35	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	8260M	01/30/12 17:35	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	60	8260M	01/30/12 17:35	JGH	95-50-1	
Ethylbenzene	80	ug/kg	60	8260M	01/30/12 17:35	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	60	8260M	01/30/12 17:35	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	60	8260M	01/30/12 17:35	JGH	127-18-4	
Toluene	220	ug/kg	60	8260M	01/30/12 17:35	JGH	108-88-3	
1,1,1-Trichloroethane	70	ug/kg	60	8260M	01/30/12 17:35	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	60	8260M	01/30/12 17:35	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	60	8260M	01/30/12 17:35	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	60	8260M	01/30/12 17:35	JGH	75-69-4	
p,m-Xylene	290	ug/kg	60	8260M	01/30/12 17:35	JGH		
o-Xylene	210	ug/kg	60	8260M	01/30/12 17:35	JGH	95-47-6	
Acetone	Not detected	ug/kg	6,000	8260M	01/30/12 17:35	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	6,000	8260M	01/30/12 17:35	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	6,000	8260M	01/30/12 17:35	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	6,000	8260M	01/30/12 17:35	JGH	60-29-7	



Analytical Laboratory Report

Lab Sample ID: S51410.06 (continued)

Sample Tag: WMU8_SB2_01242012 (1.5-2')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	6,000	8260M	01/30/12 17:35	JGH	108-10-1	
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	60	8260B	01/30/12 17:35	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	60	8260B	01/30/12 17:35	JGH	76-13-1	
Other / Misc.								
Methanol	Not detected	ug/kg	4,400	8015M	01/26/12 12:00	Fiber		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51410.07
Sample Tag: WMU8_SB3_01242012 (3.5-4')
Collected Date/Time: 01/24/2012 11:20
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/27/12 17:41	EMR		
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Inorganics

Total Solids	84	%	1	Std M 2540 B	01/26/12 11:00	SLR		
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/30/12 16:45	PL	95-48-7	
p,m-Cresol	Not detected	ug/kg	300	8270C	01/30/12 16:45	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	300	8270C	01/30/12 16:45	PL	95-48-7	
Nitrobenzene	Not detected	ug/kg	300	8270C	01/30/12 16:45	PL	98-95-3	
Pyridine	Not detected	ug/kg	300	8270C	01/30/12 16:45	PL	110-86-1	

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 17:19	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	70,000	8260M	01/30/12 17:54	JGH		
Cyclohexanone	Not detected	ug/kg	7,000	8260M	01/30/12 17:54	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	7,000	8260M	01/30/12 17:54	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	70,000	8260M	01/30/12 17:54	JGH		
2-Nitropropane	Not detected	ug/kg	7,000	8260M	01/30/12 17:54	JGH	79-46-9	

F Scan

Benzene	Not detected	ug/kg	70	8260M	01/30/12 17:54	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	70	8260M	01/30/12 17:54	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	70	8260M	01/30/12 17:54	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	70	8260M	01/30/12 17:54	JGH	95-50-1	
Ethylbenzene	Not detected	ug/kg	70	8260M	01/30/12 17:54	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	70	8260M	01/30/12 17:54	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	70	8260M	01/30/12 17:54	JGH	127-18-4	
Toluene	Not detected	ug/kg	70	8260M	01/30/12 17:54	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/kg	70	8260M	01/30/12 17:54	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	70	8260M	01/30/12 17:54	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	70	8260M	01/30/12 17:54	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	70	8260M	01/30/12 17:54	JGH	75-69-4	
p,m-Xylene	Not detected	ug/kg	70	8260M	01/30/12 17:54	JGH		
o-Xylene	Not detected	ug/kg	70	8260M	01/30/12 17:54	JGH	95-47-6	
Acetone	Not detected	ug/kg	7,000	8260M	01/30/12 17:54	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	7,000	8260M	01/30/12 17:54	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	7,000	8260M	01/30/12 17:54	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	7,000	8260M	01/30/12 17:54	JGH	60-29-7	



Analytical Laboratory Report

Lab Sample ID: S51410.07 (continued)

Sample Tag: WMU8_SB3_01242012 (3.5-4')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	7,000	8260M	01/30/12 17:54	JGH	108-10-1	
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	70	8260B	01/30/12 17:54	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	70	8260B	01/30/12 17:54	JGH	76-13-1	
Other / Misc.								
Methanol	26,000	ug/kg	4,400	8015M	01/26/12 12:00	Fiber		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51410.08

Sample Tag: WMU8_SB4_01242012 (1.2-1.7')

Collected Date/Time: 01/24/2012 11:10

Matrix: Soil

COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/27/12 17:41	EMR		
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Inorganics

Total Solids	92	%	1	Std M 2540 B	01/26/12 11:00	SLR		
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/30/12 17:04	PL	95-48-7	
p,m-Cresol	Not detected	ug/kg	300	8270C	01/30/12 17:04	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	300	8270C	01/30/12 17:04	PL	95-48-7	
Nitrobenzene	Not detected	ug/kg	300	8270C	01/30/12 17:04	PL	98-95-3	
Pyridine	Not detected	ug/kg	300	8270C	01/30/12 17:04	PL	110-86-1	

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 17:35	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	60,000	8260M	01/30/12 18:12	JGH		
Cyclohexanone	Not detected	ug/kg	6,000	8260M	01/30/12 18:12	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	6,000	8260M	01/30/12 18:12	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	60,000	8260M	01/30/12 18:12	JGH		
2-Nitropropane	Not detected	ug/kg	6,000	8260M	01/30/12 18:12	JGH	79-46-9	

F Scan

Benzene	Not detected	ug/kg	60	8260M	01/30/12 18:12	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	60	8260M	01/30/12 18:12	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	8260M	01/30/12 18:12	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	60	8260M	01/30/12 18:12	JGH	95-50-1	
Ethylbenzene	Not detected	ug/kg	60	8260M	01/30/12 18:12	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	60	8260M	01/30/12 18:12	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	60	8260M	01/30/12 18:12	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	8260M	01/30/12 18:12	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/kg	60	8260M	01/30/12 18:12	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	60	8260M	01/30/12 18:12	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	60	8260M	01/30/12 18:12	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	60	8260M	01/30/12 18:12	JGH	75-69-4	
p,m-Xylene	Not detected	ug/kg	60	8260M	01/30/12 18:12	JGH		
o-Xylene	Not detected	ug/kg	60	8260M	01/30/12 18:12	JGH	95-47-6	
Acetone	Not detected	ug/kg	6,000	8260M	01/30/12 18:12	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	6,000	8260M	01/30/12 18:12	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	6,000	8260M	01/30/12 18:12	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	6,000	8260M	01/30/12 18:12	JGH	60-29-7	



Analytical Laboratory Report

Lab Sample ID: S51410.08 (continued)

Sample Tag: WMU8_SB4_01242012 (1.2-1.7')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	6,000	8260M	01/30/12 18:12	JGH	108-10-1	
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	60	8260B	01/30/12 18:12	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	60	8260B	01/30/12 18:12	JGH	76-13-1	
Other / Misc.								
Methanol	Not detected	ug/kg	4,400	8015M	01/26/12 12:00	Fiber		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51410.09

Sample Tag: WMU8_SB5_01242012 (4.2-5')

Collected Date/Time: 01/24/2012 11:50

Matrix: Soil

COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/27/12 17:41	EMR		
FScan Extraction (Replicate 01)	Completed			3550B	01/31/12 12:52	PL		

Inorganics

Total Solids	91	%	1	Std M 2540 B	01/26/12 11:00	SLR		
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/30/12 17:23	PL	95-48-7	S
p,m-Cresol	Not detected	ug/kg	300	8270C	01/30/12 17:23	PL	3/4-Cresol	S
o-Cresol	Not detected	ug/kg	300	8270C	01/30/12 17:23	PL	95-48-7	S
Nitrobenzene	Not detected	ug/kg	300	8270C	01/30/12 17:23	PL	98-95-3	S
Pyridine	Not detected	ug/kg	300	8270C	01/30/12 17:23	PL	110-86-1	S

F-Scan (Replicate 01)

Cresylic Acid	Not detected	ug/kg	300	8270C	01/31/12 15:15	PL	95-48-7	S
p,m-Cresol	Not detected	ug/kg	300	8270C	01/31/12 15:15	PL	3/4-Cresol	S
o-Cresol	Not detected	ug/kg	300	8270C	01/31/12 15:15	PL	95-48-7	S
Nitrobenzene	Not detected	ug/kg	300	8270C	01/31/12 15:15	PL	98-95-3	S
Pyridine	Not detected	ug/kg	300	8270C	01/31/12 15:15	PL	110-86-1	S

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 17:51	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	60,000	8260M	01/30/12 18:30	JGH		
Cyclohexanone	Not detected	ug/kg	6,000	8260M	01/30/12 18:30	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	6,000	8260M	01/30/12 18:30	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	60,000	8260M	01/30/12 18:30	JGH		
2-Nitropropane	Not detected	ug/kg	6,000	8260M	01/30/12 18:30	JGH	79-46-9	

F Scan

Benzene	Not detected	ug/kg	60	8260M	01/30/12 18:30	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	60	8260M	01/30/12 18:30	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	8260M	01/30/12 18:30	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	60	8260M	01/30/12 18:30	JGH	95-50-1	
Ethylbenzene	Not detected	ug/kg	60	8260M	01/30/12 18:30	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	60	8260M	01/30/12 18:30	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	60	8260M	01/30/12 18:30	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	8260M	01/30/12 18:30	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/kg	60	8260M	01/30/12 18:30	JGH	71-55-6	

S-Surrogate recovery outside of control limits



Analytical Laboratory Report

Lab Sample ID: S51410.09 (continued)

Sample Tag: WMU8_SB5_01242012 (4.2-5')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
1,1,2-Trichloroethane	Not detected	ug/kg	60	8260M	01/30/12 18:30	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	60	8260M	01/30/12 18:30	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	60	8260M	01/30/12 18:30	JGH	75-69-4	
p,m-Xylene	Not detected	ug/kg	60	8260M	01/30/12 18:30	JGH		
o-Xylene	Not detected	ug/kg	60	8260M	01/30/12 18:30	JGH	95-47-6	
Acetone	Not detected	ug/kg	6,000	8260M	01/30/12 18:30	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	6,000	8260M	01/30/12 18:30	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	6,000	8260M	01/30/12 18:30	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	6,000	8260M	01/30/12 18:30	JGH	60-29-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	6,000	8260M	01/30/12 18:30	JGH	108-10-1	
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	60	8260B	01/30/12 18:30	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	60	8260B	01/30/12 18:30	JGH	76-13-1	
Other / Misc.								
Methanol	50,000	ug/kg	4,400	8015M	01/26/12 12:00	Fiber		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51410.10

Sample Tag: WMU10_SB1_01242012 (17.2-17.7)

Collected Date/Time: 01/24/2012 14:30

Matrix: Soil

COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/27/12 17:41	EMR		
Metal Digestion	Completed			3050B	01/30/12 10:00	PER		

Inorganics

Flashpoint for Solids	Not detected	mm/sec	2.2	1030	01/27/12 14:18	PL		
Total Solids	90	%	1	Std M 2540 B	01/26/12 11:00	SLR		

Metals

Lead	2.98	mg/kg	0.30	6020	01/30/12 12:42	PER	7439-92-1	
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/30/12 17:42	PL	95-48-7	
p,m-Cresol	Not detected	ug/kg	300	8270C	01/30/12 17:42	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	300	8270C	01/30/12 17:42	PL	95-48-7	
Nitrobenzene	Not detected	ug/kg	300	8270C	01/30/12 17:42	PL	98-95-3	
Pyridine	Not detected	ug/kg	300	8270C	01/30/12 17:42	PL	110-86-1	

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 18:07	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	60,000	8260M	01/30/12 18:48	JGH		
Cyclohexanone	Not detected	ug/kg	6,000	8260M	01/30/12 18:48	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	6,000	8260M	01/30/12 18:48	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	60,000	8260M	01/30/12 18:48	JGH		
2-Nitropropane	Not detected	ug/kg	6,000	8260M	01/30/12 18:48	JGH	79-46-9	

F Scan

Benzene	Not detected	ug/kg	60	8260M	01/30/12 18:48	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	60	8260M	01/30/12 18:48	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	8260M	01/30/12 18:48	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	60	8260M	01/30/12 18:48	JGH	95-50-1	
Ethylbenzene	Not detected	ug/kg	60	8260M	01/30/12 18:48	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	60	8260M	01/30/12 18:48	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	60	8260M	01/30/12 18:48	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	8260M	01/30/12 18:48	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/kg	60	8260M	01/30/12 18:48	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	60	8260M	01/30/12 18:48	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	60	8260M	01/30/12 18:48	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	60	8260M	01/30/12 18:48	JGH	75-69-4	
p,m-Xylene	Not detected	ug/kg	60	8260M	01/30/12 18:48	JGH		



Analytical Laboratory Report

Lab Sample ID: S51410.10 (continued)

Sample Tag: WMU10_SB1_01242012 (17.2-17.7)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
o-Xylene	Not detected	ug/kg	60	8260M	01/30/12 18:48	JGH	95-47-6	
Acetone	Not detected	ug/kg	6,000	8260M	01/30/12 18:48	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	6,000	8260M	01/30/12 18:48	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	6,000	8260M	01/30/12 18:48	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	6,000	8260M	01/30/12 18:48	JGH	60-29-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	6,000	8260M	01/30/12 18:48	JGH	108-10-1	
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	60	8260B	01/30/12 18:48	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	60	8260B	01/30/12 18:48	JGH	76-13-1	
Other / Misc.								
Methanol	Not detected	ug/kg	4,400	8015M	01/26/12 12:00	Fiber		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51410.11

Sample Tag: WMU10_SB2_01242012 (16-16.5)

Collected Date/Time: 01/24/2012 15:45

Matrix: Soil

COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/27/12 17:41	EMR		
Metal Digestion	Completed			3050B	01/30/12 10:00	PER		

Inorganics

Flashpoint for Solids	Not detected	mm/sec	2.2	1030	01/27/12 14:18	PL		
Total Solids	91	%	1	Std M 2540 B	01/26/12 11:00	SLR		

Metals

Lead	3.03	mg/kg	0.30	6020	01/30/12 12:44	PER	7439-92-1	
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/30/12 18:01	PL	95-48-7	
p,m-Cresol	Not detected	ug/kg	300	8270C	01/30/12 18:01	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	300	8270C	01/30/12 18:01	PL	95-48-7	
Nitrobenzene	Not detected	ug/kg	300	8270C	01/30/12 18:01	PL	98-95-3	
Pyridine	Not detected	ug/kg	300	8270C	01/30/12 18:01	PL	110-86-1	

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 18:23	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	60,000	8260M	01/30/12 19:06	JGH		
Cyclohexanone	Not detected	ug/kg	6,000	8260M	01/30/12 19:06	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	6,000	8260M	01/30/12 19:06	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	60,000	8260M	01/30/12 19:06	JGH		
2-Nitropropane	Not detected	ug/kg	6,000	8260M	01/30/12 19:06	JGH	79-46-9	

F Scan

Benzene	Not detected	ug/kg	60	8260M	01/30/12 19:06	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	60	8260M	01/30/12 19:06	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	8260M	01/30/12 19:06	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	60	8260M	01/30/12 19:06	JGH	95-50-1	
Ethylbenzene	Not detected	ug/kg	60	8260M	01/30/12 19:06	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	60	8260M	01/30/12 19:06	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	60	8260M	01/30/12 19:06	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	8260M	01/30/12 19:06	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/kg	60	8260M	01/30/12 19:06	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	60	8260M	01/30/12 19:06	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	60	8260M	01/30/12 19:06	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	60	8260M	01/30/12 19:06	JGH	75-69-4	
p,m-Xylene	Not detected	ug/kg	60	8260M	01/30/12 19:06	JGH		



Analytical Laboratory Report

Lab Sample ID: S51410.11 (continued)

Sample Tag: WMU10_SB2_01242012 (16-16.5)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
o-Xylene	Not detected	ug/kg	60	8260M	01/30/12 19:06	JGH	95-47-6	
Acetone	Not detected	ug/kg	6,000	8260M	01/30/12 19:06	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	6,000	8260M	01/30/12 19:06	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	6,000	8260M	01/30/12 19:06	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	6,000	8260M	01/30/12 19:06	JGH	60-29-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	6,000	8260M	01/30/12 19:06	JGH	108-10-1	
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	60	8260B	01/30/12 19:06	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	60	8260B	01/30/12 19:06	JGH	76-13-1	
Other / Misc.								
Methanol	19,000	ug/kg	4,400	8015M	01/26/12 12:00	Fiber		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51410.12

Sample Tag: WMU10_SB3_01242012 (15.5-16)

Collected Date/Time: 01/24/2012 16:40

Matrix: Soil

COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/27/12 17:41	EMR		
Metal Digestion	Completed			3050B	01/30/12 10:00	PER		

Inorganics

Flashpoint for Solids	Not detected	mm/sec	2.2	1030	01/27/12 14:18	PL		
Total Solids	91	%	1	Std M 2540 B	01/26/12 11:00	SLR		

Metals

Lead	2.50	mg/kg	0.30	6020	01/30/12 12:45	PER	7439-92-1	
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/30/12 18:20	PL	95-48-7	
p,m-Cresol	Not detected	ug/kg	300	8270C	01/30/12 18:20	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	300	8270C	01/30/12 18:20	PL	95-48-7	
Nitrobenzene	Not detected	ug/kg	300	8270C	01/30/12 18:20	PL	98-95-3	
Pyridine	Not detected	ug/kg	300	8270C	01/30/12 18:20	PL	110-86-1	

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 18:39	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	60,000	8260M	01/30/12 19:24	JGH		
Cyclohexanone	Not detected	ug/kg	6,000	8260M	01/30/12 19:24	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	6,000	8260M	01/30/12 19:24	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	60,000	8260M	01/30/12 19:24	JGH		
2-Nitropropane	Not detected	ug/kg	6,000	8260M	01/30/12 19:24	JGH	79-46-9	

F Scan

Benzene	Not detected	ug/kg	60	8260M	01/30/12 19:24	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	60	8260M	01/30/12 19:24	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	8260M	01/30/12 19:24	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	60	8260M	01/30/12 19:24	JGH	95-50-1	
Ethylbenzene	Not detected	ug/kg	60	8260M	01/30/12 19:24	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	60	8260M	01/30/12 19:24	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	60	8260M	01/30/12 19:24	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	8260M	01/30/12 19:24	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/kg	60	8260M	01/30/12 19:24	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	60	8260M	01/30/12 19:24	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	60	8260M	01/30/12 19:24	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	60	8260M	01/30/12 19:24	JGH	75-69-4	
p,m-Xylene	Not detected	ug/kg	60	8260M	01/30/12 19:24	JGH		



Analytical Laboratory Report

Lab Sample ID: S51410.12 (continued)

Sample Tag: WMU10_SB3_01242012 (15.5-16)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
o-Xylene	Not detected	ug/kg	60	8260M	01/30/12 19:24	JGH	95-47-6	
Acetone	Not detected	ug/kg	6,000	8260M	01/30/12 19:24	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	6,000	8260M	01/30/12 19:24	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	6,000	8260M	01/30/12 19:24	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	6,000	8260M	01/30/12 19:24	JGH	60-29-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	6,000	8260M	01/30/12 19:24	JGH	108-10-1	
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	60	8260B	01/30/12 19:24	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	60	8260B	01/30/12 19:24	JGH	76-13-1	
Other / Misc.								
Methanol	9,400	ug/kg	4,400	8015M	01/26/12 12:00	Fiber		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51410.13

Sample Tag: WMU10_SB4_01242012 (20-20.5)

Collected Date/Time: 01/25/2012 10:20

Matrix: Soil

COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Other / Misc.

Hold until notified	Completed				01/25/12 17:00	PCS		
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Analytical Laboratory Report

Lab Sample ID: S51410.14

Sample Tag: WMU10_SB5_01242012 (18.5-19)

Collected Date/Time: 01/25/2012 12:00

Matrix: Soil

COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
DRO Extraction	Completed			3510C	01/27/12 17:44	EMR		
FScan Extraction	Completed			3550B	01/27/12 17:41	EMR		
Metal Digestion	Completed			3050B	01/30/12 10:00	PER		
Inorganics								
Flashpoint for Solids	Not detected	mm/sec	2.2	1030	01/27/12 14:18	PL		
Total Solids	89	%	1	Std M 2540 B	01/26/12 11:00	SLR		
Metals								
Lead	13.2	mg/kg	0.30	6020	01/30/12 12:53	PER	7439-92-1	
Organics - Semi-Volatiles								
TPH DRO (C10-C28)	11,710,000	ug/kg	562,000	8015M	01/31/12 14:39	PL		XY
F-Scan								
Cresylic Acid	Not detected	ug/kg	300	8270C	01/30/12 20:15	PL	95-48-7	
p,m-Cresol	Not detected	ug/kg	300	8270C	01/30/12 20:15	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	300	8270C	01/30/12 20:15	PL	95-48-7	
Nitrobenzene	Not detected	ug/kg	300	8270C	01/30/12 20:15	PL	98-95-3	
Pyridine	Not detected	ug/kg	300	8270C	01/30/12 20:15	PL	110-86-1	
Organics - Volatiles								
2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 20:48	JGH	110-80-5	
TPH GRO (C6-C10)	550,000	ug/kg	60,000	8015M	01/31/12 17:53	JGH		Y
F Scan								
1-Butanol	Not detected	ug/kg	1,000,000	8260M	01/30/12 21:51	JGH		X
Cyclohexanone	Not detected	ug/kg	100,000	8260M	01/30/12 21:51	JGH	108-94-1	X
Ethyl Acetate	Not detected	ug/kg	100,000	8260M	01/30/12 21:51	JGH	141-78-6	X
Isobutanol	Not detected	ug/kg	1,000,000	8260M	01/30/12 21:51	JGH		X
2-Nitropropane	Not detected	ug/kg	100,000	8260M	01/30/12 21:51	JGH	79-46-9	X
F Scan								
Benzene	Not detected	ug/kg	1,000	8260M	01/30/12 21:51	JGH	71-43-2	Y
Carbon tetrachloride	Not detected	ug/kg	1,000	8260M	01/30/12 21:51	JGH	56-23-5	Y
Chlorobenzene	Not detected	ug/kg	1,000	8260M	01/30/12 21:51	JGH	108-90-7	Y
1,2-Dichlorobenzene	Not detected	ug/kg	1,000	8260M	01/30/12 21:51	JGH	95-50-1	Y
Ethylbenzene	11,000	ug/kg	1,000	8260M	01/30/12 21:51	JGH	100-41-4	Y
Methylene chloride	Not detected	ug/kg	1,000	8260M	01/30/12 21:51	JGH	75-09-2	Y
Tetrachloroethene	Not detected	ug/kg	1,000	8260M	01/30/12 21:51	JGH	127-18-4	Y
Toluene	118,000	ug/kg	1,000	8260M	01/30/12 21:51	JGH	108-88-3	Y

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



Analytical Laboratory Report

Lab Sample ID: S51410.14 (continued)

Sample Tag: WMU10_SB5_01242012 (18.5-19)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
1,1,1-Trichloroethane	Not detected	ug/kg	1,000	8260M	01/30/12 21:51	JGH	71-55-6	Y
1,1,2-Trichloroethane	Not detected	ug/kg	1,000	8260M	01/30/12 21:51	JGH	79-00-5	Y
Trichloroethene	Not detected	ug/kg	1,000	8260M	01/30/12 21:51	JGH	79-01-6	Y
Trichlorofluoromethane	Not detected	ug/kg	1,000	8260M	01/30/12 21:51	JGH	75-69-4	Y
p,m-Xylene	46,000	ug/kg	1,000	8260M	01/30/12 21:51	JGH		Y
o-Xylene	16,000	ug/kg	1,000	8260M	01/30/12 21:51	JGH	95-47-6	Y
Acetone	Not detected	ug/kg	100,000	8260M	01/30/12 21:51	JGH	67-64-1	Y
2-Butanone (MEK)	Not detected	ug/kg	100,000	8260M	01/30/12 21:51	JGH	78-93-3	Y
Carbon disulfide	Not detected	ug/kg	100,000	8260M	01/30/12 21:51	JGH	75-15-0	Y
Diethyl ether	Not detected	ug/kg	100,000	8260M	01/30/12 21:51	JGH	60-29-7	Y
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	100,000	8260M	01/30/12 21:51	JGH	108-10-1	Y
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	1,000	8260B	01/30/12 21:51	JGH	75-71-8	Y
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	1,000	8260B	01/30/12 21:51	JGH	76-13-1	Y
Other / Misc.								
Methanol	Not detected	ug/kg	4,400	8015M	01/26/12 12:00	Fiber		O

Y-Elevated reporting limit due to high target concentration

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51410.15

Sample Tag: WMU10_SB5A_01242012 (17.5-18')

Collected Date/Time: 01/25/2012 11:55

Matrix: Soil

COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Other / Misc.

Hold until notified	Completed				01/25/12 17:00	PCS		
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Analytical Laboratory Report

Lab Sample ID: S51410.16

Sample Tag: WMU10_SB1A_01242012 (16-16.5')

Collected Date/Time: 01/24/2012 14:45

Matrix: Soil

COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/27/12 17:41	EMR		
Metal Digestion	Completed			3050B	01/30/12 10:00	PER		

Inorganics

Flashpoint for Solids	Not detected	mm/sec	2.2	1030	01/27/12 14:18	PL		
Total Solids	83	%	1	Std M 2540 B	01/26/12 11:00	SLR		

Metals

Lead	5.83	mg/kg	0.30	6020	01/30/12 12:55	PER	7439-92-1	
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/30/12 18:39	PL	95-48-7	
p,m-Cresol	Not detected	ug/kg	300	8270C	01/30/12 18:39	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	300	8270C	01/30/12 18:39	PL	95-48-7	
Nitrobenzene	Not detected	ug/kg	300	8270C	01/30/12 18:39	PL	98-95-3	
Pyridine	Not detected	ug/kg	300	8270C	01/30/12 18:39	PL	110-86-1	

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 18:55	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	70,000	8260M	01/30/12 19:42	JGH		
Cyclohexanone	Not detected	ug/kg	7,000	8260M	01/30/12 19:42	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	7,000	8260M	01/30/12 19:42	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	70,000	8260M	01/30/12 19:42	JGH		
2-Nitropropane	Not detected	ug/kg	7,000	8260M	01/30/12 19:42	JGH	79-46-9	

F Scan

Benzene	Not detected	ug/kg	70	8260M	01/30/12 19:42	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	70	8260M	01/30/12 19:42	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	70	8260M	01/30/12 19:42	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	70	8260M	01/30/12 19:42	JGH	95-50-1	
Ethylbenzene	Not detected	ug/kg	70	8260M	01/30/12 19:42	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	70	8260M	01/30/12 19:42	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	70	8260M	01/30/12 19:42	JGH	127-18-4	
Toluene	Not detected	ug/kg	70	8260M	01/30/12 19:42	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/kg	70	8260M	01/30/12 19:42	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	70	8260M	01/30/12 19:42	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	70	8260M	01/30/12 19:42	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	70	8260M	01/30/12 19:42	JGH	75-69-4	
p,m-Xylene	Not detected	ug/kg	70	8260M	01/30/12 19:42	JGH		



Analytical Laboratory Report

Lab Sample ID: S51410.16 (continued)

Sample Tag: WMU10_SB1A_01242012 (16-16.5')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
o-Xylene	Not detected	ug/kg	70	8260M	01/30/12 19:42	JGH	95-47-6	
Acetone	Not detected	ug/kg	7,000	8260M	01/30/12 19:42	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	7,000	8260M	01/30/12 19:42	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	7,000	8260M	01/30/12 19:42	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	7,000	8260M	01/30/12 19:42	JGH	60-29-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	7,000	8260M	01/30/12 19:42	JGH	108-10-1	
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	70	8260B	01/30/12 19:42	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	70	8260B	01/30/12 19:42	JGH	76-13-1	
Other / Misc.								
Methanol	Not detected	ug/kg	4,400	8015M	01/26/12 12:00	Fiber		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51410.17

Sample Tag: WMU10_SB2C_01242012 (13-13.5')

Collected Date/Time: 01/24/2012 15:35

Matrix: Soil

COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/27/12 17:41	EMR		
FScan Extraction (Replicate 01)	Completed			3550B	01/31/12 12:52	PL		
Metal Digestion	Completed			3050B	01/30/12 10:00	PER		

Inorganics

Flashpoint for Solids	Not detected	mm/sec	2.2	1030	01/27/12 14:18	PL		
Total Solids	92	%	1	Std M 2540 B	01/26/12 11:00	SLR		

Metals

Lead	3.13	mg/kg	0.30	6020	01/30/12 12:56	PER	7439-92-1	
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/30/12 18:58	PL	95-48-7	S
p,m-Cresol	Not detected	ug/kg	300	8270C	01/30/12 18:58	PL	3/4-Cresol	S
o-Cresol	Not detected	ug/kg	300	8270C	01/30/12 18:58	PL	95-48-7	S
Nitrobenzene	Not detected	ug/kg	300	8270C	01/30/12 18:58	PL	98-95-3	S
Pyridine	Not detected	ug/kg	300	8270C	01/30/12 18:58	PL	110-86-1	S

F-Scan (Replicate 01)

Cresylic Acid	Not detected	ug/kg	300	8270C	01/31/12 15:34	PL	95-48-7	S
p,m-Cresol	Not detected	ug/kg	300	8270C	01/31/12 15:34	PL	3/4-Cresol	S
o-Cresol	Not detected	ug/kg	300	8270C	01/31/12 15:34	PL	95-48-7	S
Nitrobenzene	Not detected	ug/kg	300	8270C	01/31/12 15:34	PL	98-95-3	S
Pyridine	Not detected	ug/kg	300	8270C	01/31/12 15:34	PL	110-86-1	S

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 19:11	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	60,000	8260M	01/30/12 20:00	JGH		
Cyclohexanone	Not detected	ug/kg	6,000	8260M	01/30/12 20:00	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	6,000	8260M	01/30/12 20:00	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	60,000	8260M	01/30/12 20:00	JGH		
2-Nitropropane	Not detected	ug/kg	6,000	8260M	01/30/12 20:00	JGH	79-46-9	

F Scan

Benzene	Not detected	ug/kg	60	8260M	01/30/12 20:00	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	60	8260M	01/30/12 20:00	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	8260M	01/30/12 20:00	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	60	8260M	01/30/12 20:00	JGH	95-50-1	

S-Surrogate recovery outside of control limits



Analytical Laboratory Report

Lab Sample ID: S51410.17 (continued)

Sample Tag: WMU10_SB2C_01242012 (13-13.5')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
Ethylbenzene	Not detected	ug/kg	60	8260M	01/30/12 20:00	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	60	8260M	01/30/12 20:00	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	60	8260M	01/30/12 20:00	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	8260M	01/30/12 20:00	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/kg	60	8260M	01/30/12 20:00	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	60	8260M	01/30/12 20:00	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	60	8260M	01/30/12 20:00	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	60	8260M	01/30/12 20:00	JGH	75-69-4	
p,m-Xylene	60	ug/kg	60	8260M	01/30/12 20:00	JGH		
o-Xylene	Not detected	ug/kg	60	8260M	01/30/12 20:00	JGH	95-47-6	
Acetone	Not detected	ug/kg	6,000	8260M	01/30/12 20:00	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	6,000	8260M	01/30/12 20:00	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	6,000	8260M	01/30/12 20:00	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	6,000	8260M	01/30/12 20:00	JGH	60-29-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	6,000	8260M	01/30/12 20:00	JGH	108-10-1	
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	60	8260B	01/30/12 20:00	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	60	8260B	01/30/12 20:00	JGH	76-13-1	
Other / Misc.								
Methanol	6,100	ug/kg	4,400	8015M	01/26/12 12:00	Fiber		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51410.18

Sample Tag: WMU10_SB3C_01242012 (12.5-13')

Collected Date/Time: 01/24/2012 16:30

Matrix: Soil

COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/27/12 17:41	EMR		
FScan Extraction (Replicate 01)	Completed			3550B	01/31/12 12:52	PL		
Metal Digestion	Completed			3050B	01/30/12 10:00	PER		

Inorganics

Flashpoint for Solids	Not detected	mm/sec	2.2	1030	01/27/12 14:18	PL		
Total Solids	93	%	1	Std M 2540 B	01/26/12 11:00	SLR		

Metals

Lead	4.83	mg/kg	0.30	6020	01/30/12 12:57	PER	7439-92-1	
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/30/12 19:17	PL	95-48-7	S
p,m-Cresol	Not detected	ug/kg	300	8270C	01/30/12 19:17	PL	3/4-Cresol	S
o-Cresol	Not detected	ug/kg	300	8270C	01/30/12 19:17	PL	95-48-7	S
Nitrobenzene	Not detected	ug/kg	300	8270C	01/30/12 19:17	PL	98-95-3	S
Pyridine	Not detected	ug/kg	300	8270C	01/30/12 19:17	PL	110-86-1	S

F-Scan (Replicate 01)

Cresylic Acid	Not detected	ug/kg	300	8270C	01/31/12 15:53	PL	95-48-7	S
p,m-Cresol	Not detected	ug/kg	300	8270C	01/31/12 15:53	PL	3/4-Cresol	S
o-Cresol	Not detected	ug/kg	300	8270C	01/31/12 15:53	PL	95-48-7	S
Nitrobenzene	Not detected	ug/kg	300	8270C	01/31/12 15:53	PL	98-95-3	S
Pyridine	Not detected	ug/kg	300	8270C	01/31/12 15:53	PL	110-86-1	S

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 19:28	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	60,000	8260M	01/30/12 20:18	JGH		
Cyclohexanone	Not detected	ug/kg	6,000	8260M	01/30/12 20:18	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	6,000	8260M	01/30/12 20:18	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	60,000	8260M	01/30/12 20:18	JGH		
2-Nitropropane	Not detected	ug/kg	6,000	8260M	01/30/12 20:18	JGH	79-46-9	

F Scan

Benzene	Not detected	ug/kg	60	8260M	01/30/12 20:18	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	60	8260M	01/30/12 20:18	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	8260M	01/30/12 20:18	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	60	8260M	01/30/12 20:18	JGH	95-50-1	

S-Surrogate recovery outside of control limits



Analytical Laboratory Report

Lab Sample ID: S51410.18 (continued)

Sample Tag: WMU10_SB3C_01242012 (12.5-13')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
Ethylbenzene	Not detected	ug/kg	60	8260M	01/30/12 20:18	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	60	8260M	01/30/12 20:18	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	60	8260M	01/30/12 20:18	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	8260M	01/30/12 20:18	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/kg	60	8260M	01/30/12 20:18	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	60	8260M	01/30/12 20:18	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	60	8260M	01/30/12 20:18	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	60	8260M	01/30/12 20:18	JGH	75-69-4	
p,m-Xylene	Not detected	ug/kg	60	8260M	01/30/12 20:18	JGH		
o-Xylene	Not detected	ug/kg	60	8260M	01/30/12 20:18	JGH	95-47-6	
Acetone	Not detected	ug/kg	6,000	8260M	01/30/12 20:18	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	6,000	8260M	01/30/12 20:18	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	6,000	8260M	01/30/12 20:18	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	6,000	8260M	01/30/12 20:18	JGH	60-29-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	6,000	8260M	01/30/12 20:18	JGH	108-10-1	
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	60	8260B	01/30/12 20:18	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	60	8260B	01/30/12 20:18	JGH	76-13-1	
Other / Misc.								
Methanol	19,000	ug/kg	4,400	8015M	01/26/12 12:00	Fiber		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51410.19

Sample Tag: WMU10_SB4C_01242012 (14.5-15')

Collected Date/Time: 01/25/2012 09:55

Matrix: Soil

COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/27/12 17:41	EMR		
FScan Extraction (Replicate 01)	Completed			3550B	01/31/12 12:52	PL		
Metal Digestion	Completed			3050B	01/30/12 10:00	PER		

Inorganics

Flashpoint for Solids	Not detected	mm/sec	2.2	1030	01/27/12 14:18	PL		
Total Solids	91	%	1	Std M 2540 B	01/26/12 11:00	SLR		

Metals

Lead	8.46	mg/kg	0.30	6020	01/30/12 12:59	PER	7439-92-1	
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/30/12 19:37	PL	95-48-7	S
p,m-Cresol	Not detected	ug/kg	300	8270C	01/30/12 19:37	PL	3/4-Cresol	S
o-Cresol	Not detected	ug/kg	300	8270C	01/30/12 19:37	PL	95-48-7	S
Nitrobenzene	Not detected	ug/kg	300	8270C	01/30/12 19:37	PL	98-95-3	S
Pyridine	Not detected	ug/kg	300	8270C	01/30/12 19:37	PL	110-86-1	S

F-Scan (Replicate 01)

Cresylic Acid	Not detected	ug/kg	300	8270C	01/31/12 16:12	PL	95-48-7	S
p,m-Cresol	Not detected	ug/kg	300	8270C	01/31/12 16:12	PL	3/4-Cresol	S
o-Cresol	Not detected	ug/kg	300	8270C	01/31/12 16:12	PL	95-48-7	S
Nitrobenzene	Not detected	ug/kg	300	8270C	01/31/12 16:12	PL	98-95-3	S
Pyridine	Not detected	ug/kg	300	8270C	01/31/12 16:12	PL	110-86-1	S

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 20:16	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	600,000	8260M	01/30/12 21:14	JGH		X
Cyclohexanone	Not detected	ug/kg	60,000	8260M	01/30/12 21:14	JGH	108-94-1	X
Ethyl Acetate	Not detected	ug/kg	60,000	8260M	01/30/12 21:14	JGH	141-78-6	X
Isobutanol	Not detected	ug/kg	600,000	8260M	01/30/12 21:14	JGH		X
2-Nitropropane	Not detected	ug/kg	60,000	8260M	01/30/12 21:14	JGH	79-46-9	X

F Scan

Benzene	Not detected	ug/kg	600	8260M	01/30/12 21:14	JGH	71-43-2	X
Carbon tetrachloride	Not detected	ug/kg	600	8260M	01/30/12 21:14	JGH	56-23-5	X
Chlorobenzene	Not detected	ug/kg	600	8260M	01/30/12 21:14	JGH	108-90-7	X

S-Surrogate recovery outside of control limits

X-Elevated reporting limit due to matrix interference



Analytical Laboratory Report

Lab Sample ID: S51410.19 (continued)

Sample Tag: WMU10_SB4C_01242012 (14.5-15')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
1,2-Dichlorobenzene	Not detected	ug/kg	600	8260M	01/30/12 21:14	JGH	95-50-1	X
Ethylbenzene	Not detected	ug/kg	600	8260M	01/30/12 21:14	JGH	100-41-4	X
Methylene chloride	Not detected	ug/kg	600	8260M	01/30/12 21:14	JGH	75-09-2	X
Tetrachloroethene	Not detected	ug/kg	600	8260M	01/30/12 21:14	JGH	127-18-4	X
Toluene	900	ug/kg	600	8260M	01/30/12 21:14	JGH	108-88-3	X
1,1,1-Trichloroethane	Not detected	ug/kg	600	8260M	01/30/12 21:14	JGH	71-55-6	X
1,1,2-Trichloroethane	Not detected	ug/kg	600	8260M	01/30/12 21:14	JGH	79-00-5	X
Trichloroethene	Not detected	ug/kg	600	8260M	01/30/12 21:14	JGH	79-01-6	X
Trichlorofluoromethane	Not detected	ug/kg	600	8260M	01/30/12 21:14	JGH	75-69-4	X
p,m-Xylene	Not detected	ug/kg	600	8260M	01/30/12 21:14	JGH		X
o-Xylene	Not detected	ug/kg	600	8260M	01/30/12 21:14	JGH	95-47-6	X
Acetone	Not detected	ug/kg	60,000	8260M	01/30/12 21:14	JGH	67-64-1	X
2-Butanone (MEK)	Not detected	ug/kg	60,000	8260M	01/30/12 21:14	JGH	78-93-3	X
Carbon disulfide	Not detected	ug/kg	60,000	8260M	01/30/12 21:14	JGH	75-15-0	X
Diethyl ether	Not detected	ug/kg	60,000	8260M	01/30/12 21:14	JGH	60-29-7	X
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	60,000	8260M	01/30/12 21:14	JGH	108-10-1	X
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	600	8260B	01/30/12 21:14	JGH	75-71-8	X
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	600	8260B	01/30/12 21:14	JGH	76-13-1	X
Other / Misc.								
Methanol	Not detected	ug/kg	4,400	8015M	01/26/12 12:00	Fiber		O

X-Elevated reporting limit due to matrix interference

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51410.20

Sample Tag: WMU10_SB5C_01242012 (16.5-17')

Collected Date/Time: 01/25/2012 11:50

Matrix: Soil

COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/30/12 22:33	EMR		
Metal Digestion	Completed			3050B	01/30/12 10:00	PER		

Inorganics

Flashpoint for Solids	Not detected	mm/sec	2.2	1030	01/27/12 14:18	PL		
Total Solids	92	%	1	Std M 2540 B	01/26/12 11:00	SLR		

Metals

Lead	8.64	mg/kg	0.30	6020	01/30/12 13:00	PER	7439-92-1	
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	700	8270C	01/31/12 17:47	PL	95-48-7	X
p,m-Cresol	Not detected	ug/kg	700	8270C	01/31/12 17:47	PL	3/4-Cresol	X
o-Cresol	Not detected	ug/kg	400	8270C	01/31/12 17:47	PL	95-48-7	X
Nitrobenzene	Not detected	ug/kg	400	8270C	01/31/12 17:47	PL	98-95-3	X
Pyridine	Not detected	ug/kg	400	8270C	01/31/12 17:47	PL	110-86-1	X

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 20:32	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	600,000	8260M	01/30/12 21:33	JGH		X
Cyclohexanone	Not detected	ug/kg	60,000	8260M	01/30/12 21:33	JGH	108-94-1	X
Ethyl Acetate	Not detected	ug/kg	60,000	8260M	01/30/12 21:33	JGH	141-78-6	X
Isobutanol	Not detected	ug/kg	600,000	8260M	01/30/12 21:33	JGH		X
2-Nitropropane	Not detected	ug/kg	60,000	8260M	01/30/12 21:33	JGH	79-46-9	X

F Scan

Benzene	Not detected	ug/kg	600	8260M	01/30/12 21:33	JGH	71-43-2	X
Carbon tetrachloride	Not detected	ug/kg	600	8260M	01/30/12 21:33	JGH	56-23-5	X
Chlorobenzene	Not detected	ug/kg	600	8260M	01/30/12 21:33	JGH	108-90-7	X
1,2-Dichlorobenzene	Not detected	ug/kg	600	8260M	01/30/12 21:33	JGH	95-50-1	X
Ethylbenzene	Not detected	ug/kg	600	8260M	01/30/12 21:33	JGH	100-41-4	X
Methylene chloride	Not detected	ug/kg	600	8260M	01/30/12 21:33	JGH	75-09-2	X
Tetrachloroethene	Not detected	ug/kg	600	8260M	01/30/12 21:33	JGH	127-18-4	X
Toluene	2,400	ug/kg	600	8260M	01/30/12 21:33	JGH	108-88-3	X
1,1,1-Trichloroethane	Not detected	ug/kg	600	8260M	01/30/12 21:33	JGH	71-55-6	X
1,1,2-Trichloroethane	Not detected	ug/kg	600	8260M	01/30/12 21:33	JGH	79-00-5	X
Trichloroethene	Not detected	ug/kg	600	8260M	01/30/12 21:33	JGH	79-01-6	X
Trichlorofluoromethane	Not detected	ug/kg	600	8260M	01/30/12 21:33	JGH	75-69-4	X

X-Elevated reporting limit due to matrix interference



Analytical Laboratory Report

Lab Sample ID: S51410.20 (continued)

Sample Tag: WMU10_SB5C_01242012 (16.5-17')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
p,m-Xylene	1,300	ug/kg	600	8260M	01/30/12 21:33	JGH		X
o-Xylene	600	ug/kg	600	8260M	01/30/12 21:33	JGH	95-47-6	X
Acetone	Not detected	ug/kg	60,000	8260M	01/30/12 21:33	JGH	67-64-1	X
2-Butanone (MEK)	Not detected	ug/kg	60,000	8260M	01/30/12 21:33	JGH	78-93-3	X
Carbon disulfide	Not detected	ug/kg	60,000	8260M	01/30/12 21:33	JGH	75-15-0	X
Diethyl ether	Not detected	ug/kg	60,000	8260M	01/30/12 21:33	JGH	60-29-7	X
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	60,000	8260M	01/30/12 21:33	JGH	108-10-1	X
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	600	8260B	01/30/12 21:33	JGH	75-71-8	X
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	600	8260B	01/30/12 21:33	JGH	76-13-1	X
Other / Misc.								
Methanol	Not detected	ug/kg	4,400	8015M	01/26/12 12:00	Fiber		O

X-Elevated reporting limit due to matrix interference

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51410.21

Sample Tag: WMU10_SB5B_01252012 (14.5-15')

Collected Date/Time: 01/25/2012 12:05

Matrix: Soil

COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Other / Misc.								
Hold until notified	Completed				01/25/12 17:00	PCS		



Analytical Laboratory Report

Lab Sample ID: S51410.22
Sample Tag: TB1_01232011
Collected Date/Time: 01/23/2012 09:00
Matrix: Methanol
COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 19:44	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	50,000	8260M	01/31/12 16:39	JGH		
Cyclohexanone	Not detected	ug/kg	5,000	8260M	01/31/12 16:39	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	5,000	8260M	01/31/12 16:39	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	50,000	8260M	01/31/12 16:39	JGH		
2-Nitropropane	Not detected	ug/kg	5,000	8260M	01/31/12 16:39	JGH	79-46-9	

F Scan

Benzene	Not detected	ug/kg	50	8260M	01/31/12 16:39	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	50	8260M	01/31/12 16:39	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	50	8260M	01/31/12 16:39	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	50	8260M	01/31/12 16:39	JGH	95-50-1	
Ethylbenzene	Not detected	ug/kg	50	8260M	01/31/12 16:39	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	50	8260M	01/31/12 16:39	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	50	8260M	01/31/12 16:39	JGH	127-18-4	
Toluene	Not detected	ug/kg	50	8260M	01/31/12 16:39	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/kg	50	8260M	01/31/12 16:39	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	50	8260M	01/31/12 16:39	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	50	8260M	01/31/12 16:39	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	50	8260M	01/31/12 16:39	JGH	75-69-4	
p,m-Xylene	Not detected	ug/kg	50	8260M	01/31/12 16:39	JGH		
o-Xylene	Not detected	ug/kg	50	8260M	01/31/12 16:39	JGH	95-47-6	
Acetone	Not detected	ug/kg	5,000	8260M	01/31/12 16:39	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	5,000	8260M	01/31/12 16:39	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	5,000	8260M	01/31/12 16:39	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	5,000	8260M	01/31/12 16:39	JGH	60-29-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	5,000	8260M	01/31/12 16:39	JGH	108-10-1	

Volatile Halocarbons

Dichlorodifluoromethane	Not detected	ug/kg	50	8260B	01/31/12 16:39	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	50	8260B	01/31/12 16:39	JGH	76-13-1	



Analytical Laboratory Report

Lab Sample ID: S51410.23

Sample Tag: WMU10_SB4A_01252012 (17-17.5')

Collected Date/Time: 01/25/2012 10:30

Matrix: Soil

COC Reference: BC012512.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.7	IR
2	4oz Glass	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/30/12 22:33	EMR		
Metal Digestion	Completed			3050B	01/30/12 10:00	PER		

Inorganics

Flashpoint for Solids	Not detected	mm/sec	2.2	1030	01/27/12 14:18	PL		
Total Solids	89	%	1	Std M 2540 B	01/26/12 11:00	SLR		

Metals

Lead	9.63	mg/kg	0.30	6020	01/30/12 13:02	PER	7439-92-1	
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/31/12 16:31	PL	95-48-7	
p,m-Cresol	Not detected	ug/kg	300	8270C	01/31/12 16:31	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	300	8270C	01/31/12 16:31	PL	95-48-7	
Nitrobenzene	Not detected	ug/kg	300	8270C	01/31/12 16:31	PL	98-95-3	
Pyridine	Not detected	ug/kg	300	8270C	01/31/12 16:31	PL	110-86-1	

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/26/12 20:00	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	600,000	8260M	01/31/12 18:10	JGH		X
Cyclohexanone	Not detected	ug/kg	60,000	8260M	01/31/12 18:10	JGH	108-94-1	X
Ethyl Acetate	Not detected	ug/kg	60,000	8260M	01/31/12 18:10	JGH	141-78-6	X
Isobutanol	Not detected	ug/kg	600,000	8260M	01/31/12 18:10	JGH		X
2-Nitropropane	Not detected	ug/kg	60,000	8260M	01/31/12 18:10	JGH	79-46-9	X

F Scan

Benzene	Not detected	ug/kg	600	8260M	01/31/12 18:10	JGH	71-43-2	X
Carbon tetrachloride	Not detected	ug/kg	600	8260M	01/31/12 18:10	JGH	56-23-5	X
Chlorobenzene	Not detected	ug/kg	600	8260M	01/31/12 18:10	JGH	108-90-7	X
1,2-Dichlorobenzene	Not detected	ug/kg	600	8260M	01/31/12 18:10	JGH	95-50-1	X
Ethylbenzene	Not detected	ug/kg	600	8260M	01/31/12 18:10	JGH	100-41-4	X
Methylene chloride	Not detected	ug/kg	600	8260M	01/31/12 18:10	JGH	75-09-2	X
Tetrachloroethene	Not detected	ug/kg	600	8260M	01/31/12 18:10	JGH	127-18-4	X
Toluene	Not detected	ug/kg	600	8260M	01/31/12 18:10	JGH	108-88-3	X
1,1,1-Trichloroethane	Not detected	ug/kg	600	8260M	01/31/12 18:10	JGH	71-55-6	X
1,1,2-Trichloroethane	Not detected	ug/kg	600	8260M	01/31/12 18:10	JGH	79-00-5	X
Trichloroethene	Not detected	ug/kg	600	8260M	01/31/12 18:10	JGH	79-01-6	X
Trichlorofluoromethane	Not detected	ug/kg	600	8260M	01/31/12 18:10	JGH	75-69-4	X

X-Elevated reporting limit due to matrix interference



Analytical Laboratory Report

Lab Sample ID: S51410.23 (continued)

Sample Tag: WMU10_SB4A_01252012 (17-17.5')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
p,m-Xylene	Not detected	ug/kg	600	8260M	01/31/12 18:10	JGH		X
o-Xylene	Not detected	ug/kg	600	8260M	01/31/12 18:10	JGH	95-47-6	X
Acetone	Not detected	ug/kg	60,000	8260M	01/31/12 18:10	JGH	67-64-1	X
2-Butanone (MEK)	Not detected	ug/kg	60,000	8260M	01/31/12 18:10	JGH	78-93-3	X
Carbon disulfide	Not detected	ug/kg	60,000	8260M	01/31/12 18:10	JGH	75-15-0	X
Diethyl ether	Not detected	ug/kg	60,000	8260M	01/31/12 18:10	JGH	60-29-7	X
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	60,000	8260M	01/31/12 18:10	JGH	108-10-1	X
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	600	8260B	01/31/12 18:10	JGH	75-71-8	X
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	600	8260B	01/31/12 18:10	JGH	76-13-1	X
Other / Misc.								
Methanol	Not detected	ug/kg	4,400	8015M	01/26/12 12:00	Fiber		O

X-Elevated reporting limit due to matrix interference

O-Analysis performed by outside laboratory. See attached report.

Contact & Company Name:		Telephone:	Preservative:		E	F	E	E			KEYS		
Mike Brennan ARCADIS		248-994-2276	Filtered (✓)	NA	NA	NA	NA					Preservation Key:	Container Information Key:
Address:		Fax:	# of Containers	1	1	1	1					A. H ₂ SO ₄	1. 40 mL VOA
10559 Citation Dr, Suite 100		810-229-8837	Container Information	10	1	10	10					B. HCL	2. 1 L Amber
City State Zip		E-mail Address:	PARAMETER ANALYSIS & METHOD										
Brighton, MI 48116		micheel.brennan@arcadis-us.com										C. NaOH	3. 125 mL Plastic
Project Name/Location (City, State):		Project #:										D. HNO ₃	4. 250 mL Plastic
Buick City/ Flint, MI		B0064410.2012.00900										E. None	5. 500 mL Plastic
Sampler's Printed Name:		Sampler's Signature:										F. MeOH	6. 1 L Plastic
Megan Meckley		<i>Megan Meckley</i>										G.	7. 2 oz. Glass
Sample ID		Collection	Type	Matrix								H.	8. 32 oz. Glass
		Date Time	Comp	Grab									9. 8 oz. Glass
													10. Other:
WMU2_SB1_01232012 (3-3.5')		1/23/12 1110	X	SO									
WMU7_SB1_01232012 (15.5-16')		1/23/12 1340	X	SO									
WMU7_SB2_01232012 (14.5-15')		1/23/12 1625	X	SO									
WMU7_SB3_01242012 (15.5-16')		1/24/12 955	x	SO									
WMU8_SB1_01242012 (2-2.8')		1/24/12 1040	x	SO									
WMU8_SB2_01242012 (1.5-2')		1/24/12 1055	x	SO									
WMU8_SB3_01242012 (3.5-4')		1/24/12 1120	x	SO									
WMU8_SB4_01242012 (1.2-1.7')		1/24/12 1110	x	SO									
WMU8_SB5_01242012 (4.5-5')		1/24/12 1150	x	SO									
WMU10_SB1_01242012 (17.2-17.7')		1/24/12 1430	x	SO									
WMU10_SB2_01242012 (16-16.5')		1/24/12 1545	x	SO									
WMU10_SB3_01242012 (15.5-16')		1/24/12 1640	x	SO									
WMU10_SB4_01242012 (20-20.5')		1/25/12 1020	x	SO									
WMU10_SB5_01242012 (18.5-19')		1/25/12 1200	x	SO									
WMU10_SB5A_01242012 (17.5-18')		1/25/12 1155	x	SO									
WMU10_SB1A_01242012 (16-16.5')		1/24/12 1445	x	SO									
WMU10_SB2C_01242012 (13-13.5)		1/24/12 1535	x	SO									
WMU10_SB3C_01242012 (12.5-13')		1/24/12 1630	x	SO									
WMU10_SB4C_01242012 (14.5-15')		1/25/12 955	x	SO									
WMU10_SB5C_01242012 (16.5-17')		1/25/12 1150	x	SO									

Special Instructions/Comments: Invoice to: Ms. Monica Wallingford, Racer Trust, 2930 Ecorse Road, Ypsilanti, MI 48198, (313) 486.2928, P.O.No: MT1295A - Please also send copy of Invoicing to Micki Maki (ARCADIS).

Special QA/QC Instructions: Standard deliverable with EDD Requested.

Laboratory Information and Receipt		Relinquished By		Received By		Laboratory Received By	
Lab Name:	Cooler Custody Seal	Printed Name:		Printed Name:		Printed Name:	
Merit	<input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	<i>Megan Meckley</i>		<i>Chris Paulina</i>		<i>Paula Star</i>	
<input checked="" type="checkbox"/> Cooler packed with ice (✓)		<i>Megan Meckley</i>		<i>Chris Paulina</i>		<i>Paula Star</i>	



Tuesday, January 31, 2012

Fibertec Project Number: 48342
Project Identification: 51410 /
Submittal Date: 01/25/2012

Ms. Paula Shaw
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Dear Ms. Shaw,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

Samples were received at 17 degrees Celsius.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

A handwritten signature in black ink, appearing to read "Daryl Strandbergh", with a stylized, flowing script.

Daryl P. Strandbergh
Laboratory Director

DPS/kc

Enclosures

1914 Holloway Drive
11766 E. Grand River
8660 S. Mackinaw Trail

Holt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: 48342
Laboratory Sample Number: 48342-001

Order: 48342
Page: 2 of 21
Date: 01/31/12

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.01	Chain of Custody:	64412
Client Project Name:	51410	Sample No:	1	Collect Date:	01/23/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	11:10
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-001		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	13		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-001		Matrix: Soil/Solid		Analyst: BDA	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	30000		µg/kg	4400	1.0	01/26/12	PS12A26B	01/30/12	SD12A30A

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Cadillac, MI 49601

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F: (810) 220-3311
F: (231) 775-8584

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.02	Chain of Custody:	64412
Client Project Name:	51410	Sample No:	2	Collect Date:	01/23/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	13:40
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-002		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	15		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-002		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	13000		µg/kg	4400	1.0	01/26/12	PS12A26B	01/26/12	S812A26A

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.03	Chain of Custody:	64412
Client Project Name:	51410	Sample No:	3	Collect Date:	01/23/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	16:25
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-003		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	15		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-003		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	10000		µg/kg	4400	1.0	01/26/12	PS12A26B	01/26/12	S812A26A

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.04	Chain of Custody:	64412
Client Project Name:	51410	Sample No:	4	Collect Date:	01/24/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	09:55
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-004		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	17		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-004		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	10000		µg/kg	4400	1.0	01/26/12	PS12A26B	01/26/12	S812A26A

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.05	Chain of Custody:	64412
Client Project Name:	51410	Sample No:	5	Collect Date:	01/24/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	10:40
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-005		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	15		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-005		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	29000		µg/kg	4400	1.0	01/26/12	PS12A26B	01/26/12	S812A26A

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.06	Chain of Custody:	64412
Client Project Name:	51410	Sample No:	6	Collect Date:	01/24/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	10:55
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-006		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	10		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-006		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	U		µg/kg	4400	1.0	01/26/12	PS12A26B	01/26/12	S812A26A

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.07	Chain of Custody:	64412
Client Project Name:	51410	Sample No:	7	Collect Date:	01/24/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	11:20
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-007		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	17		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-007		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	26000		µg/kg	4400	1.0	01/26/12	PS12A26B	01/26/12	S812A26A

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.08	Chain of Custody:	64412
Client Project Name:	51410	Sample No:	8	Collect Date:	01/24/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	11:10
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-008		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	6.8		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-008		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	U		µg/kg	4400	1.0	01/26/12	PS12A26B	01/26/12	S812A26A

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.09	Chain of Custody:	64412
Client Project Name:	51410	Sample No:	9	Collect Date:	01/24/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	11:50
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-009		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	8.7		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-009		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	50000		µg/kg	4400	1.0	01/26/12	PS12A26B	01/26/12	S812A26A

Analytical Laboratory Report
Laboratory Project Number: 48342
Laboratory Sample Number: 48342-010

Order: 48342
Page: 11 of 21
Date: 01/31/12

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.10	Chain of Custody:	64412
Client Project Name:	51410	Sample No:	10	Collect Date:	01/24/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	14:30
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-010		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	9.6		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-010		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	U		µg/kg	4400	1.0	01/26/12	PS12A26B	01/26/12	S812A26A

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T: (231) 775-8368

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F: (810) 220-3311
F: (231) 775-8584

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.11	Chain of Custody:	64412
Client Project Name:	51410	Sample No:	11	Collect Date:	01/24/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	15:45
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-011		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	8.0		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-011		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	19000		µg/kg	4400	1.0	01/26/12	PS12A26B	01/26/12	S812A26A

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.12	Chain of Custody:	64412
Client Project Name:	51410	Sample No:	12	Collect Date:	01/24/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	16:40
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-012		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	7.1		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-012		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	9400		µg/kg	4400	1.0	01/26/12	PS12A26B	01/26/12	S812A26A

Analytical Laboratory Report
Laboratory Project Number: 48342
Laboratory Sample Number: 48342-013

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Date: 01/31/12

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.14	Chain of Custody:	64413
Client Project Name:	51410	Sample No:	13	Collect Date:	01/25/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	12:00
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-013		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	11		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-013		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	U		µg/kg	4400	1.0	01/26/12	PS12A26B	01/26/12	S812A26A

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Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.16	Chain of Custody:	64413
Client Project Name:	51410	Sample No:	14	Collect Date:	01/24/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	14:45
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-014		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	14		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-014		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	U		µg/kg	4400	1.0	01/26/12	PS12A26B	01/26/12	S812A26A

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.17	Chain of Custody:	64413
Client Project Name:	51410	Sample No:	15	Collect Date:	01/24/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	15:35
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-015		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	8.7		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-015		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	6100		µg/kg	4400	1.0	01/26/12	PS12A26B	01/26/12	S812A26A

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.18	Chain of Custody:	64413
Client Project Name:	51410	Sample No:	16	Collect Date:	01/24/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	16:30
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-016		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	6.4		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-016		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	19000		µg/kg	4400	1.0	01/26/12	PS12A26B	01/26/12	S812A26A

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.19	Chain of Custody:	64413
Client Project Name:	51410	Sample No:	17	Collect Date:	01/25/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	09:55
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-017		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	6.5		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-017		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	U		µg/kg	4400	1.0	01/26/12	PS12A26B	01/26/12	S812A26A

Analytical Laboratory Report
Laboratory Project Number: 48342
Laboratory Sample Number: 48342-018

Order: 48342
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Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.20	Chain of Custody:	64413
Client Project Name:	51410	Sample No:	18	Collect Date:	01/25/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	11:50
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-018		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	7.9		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-018		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	U		µg/kg	4400	1.0	01/26/12	PS12A26B	01/26/12	S812A26A

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Client Identification:	Merit Laboratories, Inc.	Sample Description:	51410.23	Chain of Custody:	64413
Client Project Name:	51410	Sample No:	19	Collect Date:	01/25/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	10:30
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48342-019		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	12		%	0.1	1.0	01/27/12	MC120127	01/30/12	MC120127

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48342-019		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	U		µg/kg	4400	1.0	01/26/12	PS12A26B	01/26/12	S812A26A

Definitions/ Qualifiers:

- A:** Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QA limits

Exception Summary:





Analytical Laboratory Report

Report ID: S51442.01(01)
Generated on 02/02/2012

Report to

Attention: Mike Brennan
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Michael.Brennan@arcadis-us.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): S51442.01-S51442.06
Project: B0064410.2012.00900 / Buick City / Flint MI
Collected Date: 01/25/2012 - 01/26/2012
Submitted Date/Time: 01/27/2012 13:00
Sampled by: Megan Meckley
P.O. #: MLT1295

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.

Samples are held by the lab for 30 days from the sample submittal date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:

Michigan DNRE (#9956), DOD/ISO 17025 (#L11-184), WBENC (#2005110032)

Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814), NELAC FL (#E871045)

Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S51442.01	WMU10_SB5_01252012	Groundwater	01/25/2012 15:45
S51442.02	WMU2_SB3_01262012 (2-2.2')	Soil	01/26/2012 11:30
S51442.03	Tripblank2_01252012	Water	01/25/2012 16:00
S51442.04	Tripblank_01252012	Methonal	01/25/2012 13:00
S51442.05	WMU10_SB6_01252012 (11.5-12)	Soil	01/25/2012 14:55
S51442.06	WMU10_SB6A_01252012 (17.5-18')	Soil	01/25/2012 15:00



Analytical Laboratory Report

Lab Sample ID: S51442.01

Sample Tag: WMU10_SB5_01252012

Collected Date/Time: 01/25/2012 15:45

Matrix: Groundwater

COC Reference: BC012712.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	None	Yes	4.4	IR
1	4oz Glass	None	Yes	4.4	IR
2	40ml Glass	HCL	Yes	4.4	IR
4	1L Amber	None	Yes	4.4	IR
1	125ml Plastic	HNO3	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Flash Point	Not detected	oF	180	ASTM D3278	01/27/12 14:18	PL		



Analytical Laboratory Report

Lab Sample ID: S51442.02
Sample Tag: WMU2_SB3_01262012 (2-2.2')
Collected Date/Time: 01/26/2012 11:30
Matrix: Soil
COC Reference: BC012712.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.4	IR
2	4oz Glass	None	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/30/12 22:33	EMR		
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Inorganics

Total Solids	92	%	1	Std M 2540 B	01/30/12 12:00	WAR		
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/31/12 16:50	PL	95-48-7	
p,m-Cresol	Not detected	ug/kg	300	8270C	01/31/12 16:50	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	300	8270C	01/31/12 16:50	PL	95-48-7	
Nitrobenzene	Not detected	ug/kg	300	8270C	01/31/12 16:50	PL	98-95-3	
Pyridine	Not detected	ug/kg	300	8270C	01/31/12 16:50	PL	110-86-1	

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/27/12 15:26	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	60,000	8260M	01/31/12 16:57	JGH		
Cyclohexanone	Not detected	ug/kg	6,000	8260M	01/31/12 16:57	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	6,000	8260M	01/31/12 16:57	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	60,000	8260M	01/31/12 16:57	JGH		
2-Nitropropane	Not detected	ug/kg	6,000	8260M	01/31/12 16:57	JGH	79-46-9	

F Scan

Benzene	Not detected	ug/kg	60	8260M	01/31/12 16:57	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	60	8260M	01/31/12 16:57	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	8260M	01/31/12 16:57	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	60	8260M	01/31/12 16:57	JGH	95-50-1	
Ethylbenzene	Not detected	ug/kg	60	8260M	01/31/12 16:57	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	60	8260M	01/31/12 16:57	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	60	8260M	01/31/12 16:57	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	8260M	01/31/12 16:57	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/kg	60	8260M	01/31/12 16:57	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	60	8260M	01/31/12 16:57	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	60	8260M	01/31/12 16:57	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	60	8260M	01/31/12 16:57	JGH	75-69-4	
p,m-Xylene	320	ug/kg	60	8260M	01/31/12 16:57	JGH		
o-Xylene	140	ug/kg	60	8260M	01/31/12 16:57	JGH	95-47-6	
Acetone	Not detected	ug/kg	6,000	8260M	01/31/12 16:57	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	6,000	8260M	01/31/12 16:57	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	6,000	8260M	01/31/12 16:57	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	6,000	8260M	01/31/12 16:57	JGH	60-29-7	



Analytical Laboratory Report

Lab Sample ID: S51442.02 (continued)

Sample Tag: WMU2_SB3_01262012 (2-2.2')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	6,000	8260M	01/31/12 16:57	JGH	108-10-1	
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	60	8260B	01/31/12 16:57	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	60	8260B	01/31/12 16:57	JGH	76-13-1	
Other / Misc.								
Methanol	6,400	ug/kg	4,400	8015M	01/30/12 12:00	Fiber		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51442.03
Sample Tag: Tripblank2_01252012
Collected Date/Time: 01/25/2012 16:00
Matrix: Water
COC Reference: BC012712.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Organics - Volatiles

Volatile Organics - DEQ List

Diethyl ether	Not detected	ug/L	10	8260B	01/30/12 17:46	JGH	60-29-7	
Acetone	Not detected	ug/L	50	8260B	01/30/12 17:46	JGH	67-64-1	
Methyl iodide	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	74-88-4	
Carbon disulfide	Not detected	ug/L	5	8260B	01/30/12 17:46	JGH	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	8260B	01/30/12 17:46	JGH	1634-04-4	
Acrylonitrile	Not detected	ug/L	2	8260B	01/30/12 17:46	JGH	107-13-1	
2-Butanone (MEK)	Not detected	ug/L	25	8260B	01/30/12 17:46	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	5	8260B	01/30/12 17:46	JGH	75-71-8	
Chloromethane	Not detected	ug/L	5	8260B	01/30/12 17:46	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	75-01-4	
Bromomethane	Not detected	ug/L	5	8260B	01/30/12 17:46	JGH	74-83-9	
Chloroethane	Not detected	ug/L	5	8260B	01/30/12 17:46	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	5	8260B	01/30/12 17:46	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	156-59-2	
Tetrahydrofuran	Not detected	ug/L	90	8260B	01/30/12 17:46	JGH	109-99-9	
Chloroform	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	67-66-3	
Bromochloromethane	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	50	8260B	01/30/12 17:46	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	50	8260B	01/30/12 17:46	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	56-23-5	
Benzene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	75-27-4	
Dibromomethane	Not detected	ug/L	5	8260B	01/30/12 17:46	JGH	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	110-57-6	
Dibromochloromethane	Not detected	ug/L	5	8260B	01/30/12 17:46	JGH	124-48-1	
1,2-Dibromoethane	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	106-93-4	
Chlorobenzene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	630-20-6	
Ethylbenzene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	100-41-4	



Analytical Laboratory Report

Lab Sample ID: S51442.03 (continued)

Sample Tag: Tripblank2_01252012

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	01/30/12 17:46	JGH		
o-Xylene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	95-47-6	
Styrene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	5	8260B	01/30/12 17:46	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	96-18-4	
n-Propylbenzene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	103-65-1	
Bromobenzene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	108-67-8	
tert-Butylbenzene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	95-63-6	
sec-Butylbenzene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	135-98-8	
p-Isopropyltoluene	Not detected	ug/L	5	8260B	01/30/12 17:46	JGH	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	526-73-8	
n-Butylbenzene	Not detected	ug/L	1	8260B	01/30/12 17:46	JGH	104-51-8	
Hexachloroethane	Not detected	ug/L	5	8260B	01/30/12 17:46	JGH	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	5	8260B	01/30/12 17:46	JGH	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/L	5	8260B	01/30/12 17:46	JGH	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/L	5	8260B	01/30/12 17:46	JGH	87-61-6	
Naphthalene	Not detected	ug/L	5	8260B	01/30/12 17:46	JGH	91-20-3	
2-Methylnaphthalene	Not detected	ug/L	5	8260B	01/30/12 17:46	JGH	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S51442.04
Sample Tag: Tripblank_01252012
Collected Date/Time: 01/25/2012 13:00
Matrix: Methonal
COC Reference: BC012712.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Organics - Volatiles

Volatile Organics 5035

Diethyl ether	Not detected	ug/kg	200	8260B/5035	01/31/12 17:16	JGH	60-29-7	
Acetone	Not detected	ug/kg	1,000	8260B/5035	01/31/12 17:16	JGH	67-64-1	
Methyl iodide	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	74-88-4	
Carbon disulfide	Not detected	ug/kg	300	8260B/5035	01/31/12 17:16	JGH	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	200	8260B/5035	01/31/12 17:16	JGH	1634-04-4	
Acrylonitrile	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	107-13-1	
2-Butanone (MEK)	Not detected	ug/kg	750	8260B/5035	01/31/12 17:16	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	300	8260B/5035	01/31/12 17:16	JGH	75-71-8	
Chloromethane	Not detected	ug/kg	300	8260B/5035	01/31/12 17:16	JGH	74-87-3	
Vinyl chloride	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	75-01-4	
Bromomethane	Not detected	ug/kg	200	8260B/5035	01/31/12 17:16	JGH	74-83-9	
Chloroethane	Not detected	ug/kg	300	8260B/5035	01/31/12 17:16	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	75-35-4	
Methylene chloride	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	156-59-2	
Tetrahydrofuran	Not detected	ug/kg	1,000	8260B/5035	01/31/12 17:16	JGH	109-99-9	
Chloroform	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	67-66-3	
Bromochloromethane	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	8260B/5035	01/31/12 17:16	JGH	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	8260B/5035	01/31/12 17:16	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	56-23-5	
Benzene	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	107-06-2	
Trichloroethene	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	75-27-4	
Dibromomethane	Not detected	ug/kg	300	8260B/5035	01/31/12 17:16	JGH	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	10061-01-5	
Toluene	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	110-57-6	
Dibromochloromethane	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	106-93-4	
Chlorobenzene	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	630-20-6	
Ethylbenzene	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	100-41-4	



Analytical Laboratory Report

Lab Sample ID: S51442.04 (continued)

Sample Tag: Tripblank_01252012

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
p,m-Xylene	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH		
o-Xylene	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	95-47-6	
Styrene	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/kg	300	8260B/5035	01/31/12 17:16	JGH	98-82-8	
Bromoform	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	96-18-4	
n-Propylbenzene	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	103-65-1	
Bromobenzene	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	108-67-8	
tert-Butylbenzene	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	95-63-6	
sec-Butylbenzene	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	135-98-8	
p-Isopropyltoluene	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	01/31/12 17:16	JGH	526-73-8	
n-Butylbenzene	Not detected	ug/kg	50	8260B/5035	01/31/12 17:16	JGH	104-51-8	
Hexachloroethane	Not detected	ug/kg	300	8260B/5035	01/31/12 17:16	JGH	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	300	8260B/5035	01/31/12 17:16	JGH	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	330	8260B/5035	01/31/12 17:16	JGH	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/kg	330	8260B/5035	01/31/12 17:16	JGH	87-61-6	
Naphthalene	Not detected	ug/kg	330	8260B/5035	01/31/12 17:16	JGH	91-20-3	
2-Methylnaphthalene	Not detected	ug/kg	330	8260B/5035	01/31/12 17:16	JGH	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S51442.05

Sample Tag: WMU10_SB6_01252012 (11.5-12)

Collected Date/Time: 01/25/2012 14:55

Matrix: Soil

COC Reference: BC012712.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.4	IR
2	4oz Glass	None	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/30/12 22:33	EMR		
Metal Digestion	Completed			3050B	02/01/12 01:00	SLR		

Inorganics

Flashpoint for Solids	Not detected	mm/sec	2.2	1030	01/27/12 14:18	PL		
Total Solids	92	%	1	Std M 2540 B	01/30/12 12:00	WAR		

Metals

Lead	2.62	mg/kg	0.30	6020	02/02/12 15:44	PER	7439-92-1	
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/31/12 17:09	PL	95-48-7	
p,m-Cresol	Not detected	ug/kg	300	8270C	01/31/12 17:09	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	300	8270C	01/31/12 17:09	PL	95-48-7	
Nitrobenzene	Not detected	ug/kg	300	8270C	01/31/12 17:09	PL	98-95-3	
Pyridine	Not detected	ug/kg	300	8270C	01/31/12 17:09	PL	110-86-1	

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	1,000	8260M	01/27/12 15:58	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	60,000	8260M	01/31/12 17:34	JGH		
Cyclohexanone	Not detected	ug/kg	6,000	8260M	01/31/12 17:34	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	6,000	8260M	01/31/12 17:34	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	60,000	8260M	01/31/12 17:34	JGH		
2-Nitropropane	Not detected	ug/kg	6,000	8260M	01/31/12 17:34	JGH	79-46-9	

F Scan

Benzene	Not detected	ug/kg	60	8260M	01/31/12 17:34	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	60	8260M	01/31/12 17:34	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	8260M	01/31/12 17:34	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	60	8260M	01/31/12 17:34	JGH	95-50-1	
Ethylbenzene	Not detected	ug/kg	60	8260M	01/31/12 17:34	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	60	8260M	01/31/12 17:34	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	60	8260M	01/31/12 17:34	JGH	127-18-4	
Toluene	Not detected	ug/kg	60	8260M	01/31/12 17:34	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/kg	60	8260M	01/31/12 17:34	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	60	8260M	01/31/12 17:34	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	60	8260M	01/31/12 17:34	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	60	8260M	01/31/12 17:34	JGH	75-69-4	
p,m-Xylene	Not detected	ug/kg	60	8260M	01/31/12 17:34	JGH		



Analytical Laboratory Report

Lab Sample ID: S51442.05 (continued)

Sample Tag: WMU10_SB6_01252012 (11.5-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
o-Xylene	Not detected	ug/kg	60	8260M	01/31/12 17:34	JGH	95-47-6	
Acetone	Not detected	ug/kg	6,000	8260M	01/31/12 17:34	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	6,000	8260M	01/31/12 17:34	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	6,000	8260M	01/31/12 17:34	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	6,000	8260M	01/31/12 17:34	JGH	60-29-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	6,000	8260M	01/31/12 17:34	JGH	108-10-1	
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	60	8260B	01/31/12 17:34	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	60	8260B	01/31/12 17:34	JGH	76-13-1	
Other / Misc.								
Methanol	99,000	ug/kg	13,000	8015M	01/30/12 12:00	Fiber		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S51442.06

Sample Tag: WMU10_SB6A_01252012 (17.5-18')

Collected Date/Time: 01/25/2012 15:00

Matrix: Soil

COC Reference: BC012712.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.4	IR
2	4oz Glass	None	Yes	4.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

FScan Extraction	Completed			3550B	01/30/12 22:33	EMR		
Metal Digestion	Completed			3050B	02/01/12 01:00	SLR		

Inorganics

Flashpoint for Solids	Not detected	mm/sec	2.2	1030	01/27/12 14:18	PL		
Total Solids	82	%	1	Std M 2540 B	01/30/12 12:00	WAR		

Metals

Lead	2.61	mg/kg	0.30	6020	02/02/12 15:47	PER	7439-92-1	
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Organics - Semi-Volatiles

F-Scan

Cresylic Acid	Not detected	ug/kg	300	8270C	01/31/12 17:28	PL	95-48-7	
p,m-Cresol	Not detected	ug/kg	300	8270C	01/31/12 17:28	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	300	8270C	01/31/12 17:28	PL	95-48-7	
Nitrobenzene	Not detected	ug/kg	300	8270C	01/31/12 17:28	PL	98-95-3	
Pyridine	Not detected	ug/kg	300	8270C	01/31/12 17:28	PL	110-86-1	

Organics - Volatiles

2-Ethoxyethanol	Not detected	ug/kg	2,000	8260M	01/27/12 16:15	JGH	110-80-5	
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F Scan

1-Butanol	Not detected	ug/kg	80,000	8260M	01/31/12 17:52	JGH		
Cyclohexanone	Not detected	ug/kg	8,000	8260M	01/31/12 17:52	JGH	108-94-1	
Ethyl Acetate	Not detected	ug/kg	8,000	8260M	01/31/12 17:52	JGH	141-78-6	
Isobutanol	Not detected	ug/kg	80,000	8260M	01/31/12 17:52	JGH		
2-Nitropropane	Not detected	ug/kg	8,000	8260M	01/31/12 17:52	JGH	79-46-9	

F Scan

Benzene	Not detected	ug/kg	80	8260M	01/31/12 17:52	JGH	71-43-2	
Carbon tetrachloride	Not detected	ug/kg	80	8260M	01/31/12 17:52	JGH	56-23-5	
Chlorobenzene	Not detected	ug/kg	80	8260M	01/31/12 17:52	JGH	108-90-7	
1,2-Dichlorobenzene	Not detected	ug/kg	80	8260M	01/31/12 17:52	JGH	95-50-1	
Ethylbenzene	Not detected	ug/kg	80	8260M	01/31/12 17:52	JGH	100-41-4	
Methylene chloride	Not detected	ug/kg	80	8260M	01/31/12 17:52	JGH	75-09-2	
Tetrachloroethene	Not detected	ug/kg	80	8260M	01/31/12 17:52	JGH	127-18-4	
Toluene	Not detected	ug/kg	80	8260M	01/31/12 17:52	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/kg	80	8260M	01/31/12 17:52	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	80	8260M	01/31/12 17:52	JGH	79-00-5	
Trichloroethene	Not detected	ug/kg	80	8260M	01/31/12 17:52	JGH	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	80	8260M	01/31/12 17:52	JGH	75-69-4	
p,m-Xylene	Not detected	ug/kg	80	8260M	01/31/12 17:52	JGH		



Analytical Laboratory Report

Lab Sample ID: S51442.06 (continued)

Sample Tag: WMU10_SB6A_01252012 (17.5-18')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
F Scan (continued)								
o-Xylene	Not detected	ug/kg	80	8260M	01/31/12 17:52	JGH	95-47-6	
Acetone	Not detected	ug/kg	8,000	8260M	01/31/12 17:52	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/kg	8,000	8260M	01/31/12 17:52	JGH	78-93-3	
Carbon disulfide	Not detected	ug/kg	8,000	8260M	01/31/12 17:52	JGH	75-15-0	
Diethyl ether	Not detected	ug/kg	8,000	8260M	01/31/12 17:52	JGH	60-29-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	8,000	8260M	01/31/12 17:52	JGH	108-10-1	
Volatile Halocarbons								
Dichlorodifluoromethane	Not detected	ug/kg	80	8260B	01/31/12 17:52	JGH	75-71-8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	80	8260B	01/31/12 17:52	JGH	76-13-1	
Other / Misc.								
Methanol	110,000	ug/kg	15,000	8015M	01/30/12 12:00	Fiber		O

O-Analysis performed by outside laboratory. See attached report.



CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

eCOC ID: BC012712.1

Send Results To:	Contact & Company Name:	Telephone:	Preservative	E	F	E	E	B	D	E	E		
	Mike Brennan ARCADIS	248-994-2276	Filtered (✓)	NA	NA	NA	NA	NA	NA	NA	NA		
	Address:	Fax:	# of Containers	1	1	1	4	2	1	1	1		
	10559 Citation Dr, Suite 100	810-229-8837	Container Information	10	1	10	2	1	3	10	10		
City	State	Zip	PARAMETER ANALYSIS & METHOD										
Brighton, MI	48116												
Project Name/Location (City, State):			Project #:										
Buick City/ Flint, MI			B0064410.2012.00900										
Sampler's Printed Name:			Sampler's Signature:										
Megan Meckley			<i>Megan Meckley</i>										
Sample ID	Collectionw2		Type	Matrix	Fecan SVOCs, Total Solids	Fecan VOCs plus 1,1,2-Trichloro-1,2,2-Trifluoroethane and dichlorodifluoromethane	Methanol	PCB/SVOCs	VOCs	Total Metals	Ignitability	Fecan SVOCs, Total Solids, Ignitability, Lead	REMARKS
	Date	Time											
WMU10_SB5_01252012	1/25/12	1545	X	GW			X		X	X	X		
WMU2_SB3_01262012 (2-2.2)	1/26/12	1130	X	SO	X	X	X						Lab filled water VOA
TRIPBLANK2_01252012	1/25/12	1600	X	W					X				
TRIPBLANK_01252012	1/25/12	1300	X	W			X						
WMU10_SB5_01252012 (11.5-12)	1/25/12	1455	X	SO		X	X					X	
WMU10_SB6A_01252012 (17.5-18)	1/25/12	1500	X	SO		X	X					X	
Special Instructions/Comments: Invoice to: Ms. Monica Wallingford, Racer Trust, 2930 Ecorse Road, Ypsilanti, MI 48198, (313) 486.2928, P.O.No: MT1295a - Please also send copy of Invoicing to Micki Maki (ARCADIS).													
Special QA/QC Instructions: Standard deliverable with EDD Requested.													
Laboratory Information and Receipt				Relinquished By				Received By				Laboratory Received By	
Lab Name:		Cooler Custody Seal		Printed Name:		Printed Name:		Printed Name:		Printed Name:		Printed Name:	
Merit		<input type="checkbox"/> Intact <input type="checkbox"/> Not Intact		Megan Meckley		<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>	
<input checked="" type="checkbox"/> Cooler packed with ice (✓)				Signature:		Signature:		Signature:		Signature:		Signature:	
Specify Turnaround Requirements:		Sample Receipt		ARCADIS		Firm:		Firm:		Firm:		Firm:	
5-day TAT						Date/Time:		Date/Time:		Date/Time:		Date/Time:	
Fed-Ex Tracking #		Condition/Cooler Temp:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:	
Not Applicable		4.4°		1/27/2012 1200		1-27-12 1200		1-27-12 1200		27 JAN 12 1300		27 JAN 12 1300	



Thursday, February 02, 2012

Fibertec Project Number: 48376
Project Identification: 51442 /
Submittal Date: 01/27/2012

Ms. Paula Shaw
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Dear Ms. Shaw,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

A handwritten signature in black ink, appearing to read "Daryl Strandbergh", with a stylized, flowing script.

Daryl P. Strandbergh
Laboratory Director

DPS/kc

Enclosures

1914 Holloway Drive
11766 E. Grand River
8660 S. Mackinaw Trail

Holt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51442.02	Chain of Custody:	64414
Client Project Name:	51442	Sample No:	1	Collect Date:	01/26/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	11:30
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48376-001		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	8.2		%	0.1	1.0	01/30/12	MC120130	01/31/12	MC120130

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48376-001		Matrix: Soil/Solid		Analyst: BDA	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	6400		µg/kg	4400	1.0	01/30/12	PS12A30A	01/30/12	SD12A30A

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51442.05	Chain of Custody:	64414
Client Project Name:	51442	Sample No:	2	Collect Date:	01/25/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	14:55
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48376-002		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	7.1		%	0.1	1.0	01/30/12	MC120130	01/31/12	MC120130

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48376-002		Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	99000		µg/kg	13000	5.0	01/30/12	S812A30A	01/30/12	S812A30A

Client Identification:	Merit Laboratories, Inc.	Sample Description:	51442.06	Chain of Custody:	64414
Client Project Name:	51442	Sample No:	3	Collect Date:	01/25/12
Client Project No:	NA	Sample Matrix:	Soil/Solid	Collect Time:	15:00
Sample Comments:	Soil results have been calculated and reported on a dry weight basis unless otherwise noted.				
Definitions:	Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.				

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 48376-003		Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	18		%	0.1	1.0	01/30/12	MC120130	01/31/12	MC120130

Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)				Aliquot ID: 48376-003		Matrix: Soil/Solid		Analyst: BDA	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Methanol	110000		µg/kg	15000	5.0	01/30/12	PS12A30A	01/30/12	SD12A30A

Definitions/ Qualifiers:

- A:** Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QA limits

Exception Summary:





Analytical Laboratory Report

Report ID: S51446.01(01)
Generated on 02/14/2012

Report to

Attention: Mike Brennan
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Michael.Brennan@arcadis-us.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): S51446.01-S51446.02
Project: B0064410.2012.00900 / Buick City / Flint MI
Collected Date: 01/27/2012
Submitted Date/Time: 01/30/2012 08:25
Sampled by: Megan Meckley
P.O. #: MLT1295

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.

Samples are held by the lab for 30 days from the sample submittal date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:

Michigan DNRE (#9956), DOD/ISO 17025 (#L11-184), WBENC (#2005110032)

Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814), NELAC FL (#E871045)

Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S51446.01	IDW_01272012	Methanol	01/27/2012 17:25
S51446.02	Tripblank_01272012	Methanol	01/27/2012 17:00



Analytical Laboratory Report

Lab Sample ID: S51446.01
Sample Tag: IDW_01272012
Collected Date/Time: 01/27/2012 17:25
Matrix: Methanol
COC Reference: BCO12712.2

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Amber	None	Yes	10.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
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Extraction / Prep.

Extraction, PCB	Completed			3550B	01/30/12 15:48	CCM		
Mercury Digestion	Completed			7471A	02/10/12 11:15	JRH		
Metal Digestion	Completed			3015A	02/13/12 11:00	PER		
TCLP Zero Headspace Ext.	Completed			1311	02/07/12 15:30	WAR		
TCLP/SPLP BNA Extraction	Completed			3510C	02/09/12 20:34	EMR		

TCLP Extraction

Initial Sample pH	10.83			1311	02/08/12 15:30	WAR		
pH after 3.5 ml HCl	5.20			1311	02/08/12 15:30	WAR		
% Solids	100			1311	02/08/12 15:30	WAR		
Sample Used g	100			1311	02/08/12 15:30	WAR		
Final Volume mL	2,000			1311	02/08/12 15:30	WAR		
TCLP Extraction Fluid	2			1311	02/08/12 15:30	WAR		
Final Extract pH	5.19			1311	02/08/12 15:30	WAR		

Inorganics

Flashpoint for Solids	Not detected	mm/sec	2.2	1030	02/03/12 14:01	PL		
Total Solids	65	%	1	Std M 2540 B	02/01/12 14:00	WAR		

Metals

Arsenic, TCLP	Not detected	mg/L	0.02	6020	02/13/12 14:16	PER	5.0	
Barium, TCLP	0.50	mg/L	0.05	6020	02/13/12 14:16	PER	100.0	
Cadmium, TCLP	Not detected	mg/L	0.005	6020	02/13/12 14:16	PER	1.0	
Chromium, TCLP	Not detected	mg/L	0.05	6020	02/13/12 14:16	PER	5.0	
Lead, TCLP	0.06	mg/L	0.03	6020	02/13/12 14:16	PER	5.0	
Mercury, TCLP	Not detected	mg/L	0.0002	7471A	02/10/12 15:55	JRT	0.2	
Selenium, TCLP	Not detected	mg/L	0.05	6020	02/13/12 14:16	PER	1.0	
Silver, TCLP	Not detected	mg/L	0.005	6020	02/13/12 14:16	PER	5.0	

Organics - PCBs/Pesticides

PCB List

PCB-1016	Not detected	ug/kg	330	8082A	01/30/12 19:37	JANB		
PCB-1242	Not detected	ug/kg	330	8082A	01/30/12 19:37	JANB		
PCB-1221	Not detected	ug/kg	330	8082A	01/30/12 19:37	JANB		
PCB-1232	Not detected	ug/kg	330	8082A	01/30/12 19:37	JANB		
PCB-1248	Not detected	ug/kg	330	8082A	01/30/12 19:37	JANB		
PCB-1254	Not detected	ug/kg	330	8082A	01/30/12 19:37	JANB		
PCB-1260	Not detected	ug/kg	330	8082A	01/30/12 19:37	JANB		

Organics - Semi-Volatiles

TCLP Semi Volatiles

o-Cresol	Not detected	ug/L	1,000	8270C	02/10/12 13:38	PL	200,000	
p,m-Cresol	Not detected	ug/L	1,000	8270C	02/10/12 13:38	PL	200,000	



Analytical Laboratory Report

Lab Sample ID: S51446.01 (continued)

Sample Tag: IDW_01272012

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
Organics - Semi-Volatiles (continued)								
TCLP Semi Volatiles (continued)								
Pentachlorophenol	Not detected	ug/L	1,000	8270C	02/10/12 13:38	PL	100,000	
2,4,5-Trichlorophenol	Not detected	ug/L	1,000	8270C	02/10/12 13:38	PL	400,000	
2,4,6-Trichlorophenol	Not detected	ug/L	1,000	8270C	02/10/12 13:38	PL	2,000	
2,4-Dinitrotoluene	Not detected	ug/L	90	8270C	02/10/12 13:38	PL	130	
Hexachlorobenzene	Not detected	ug/L	90	8270C	02/10/12 13:38	PL	130	
Hexachlorobutadiene	Not detected	ug/L	100	8270C	02/10/12 13:38	PL	500	
Hexachloroethane	Not detected	ug/L	100	8270C	02/10/12 13:38	PL	3,000	
Nitrobenzene	Not detected	ug/L	100	8270C	02/10/12 13:38	PL	2,000	
Pyridine	Not detected	ug/L	100	8270C	02/10/12 13:38	PL	5,000	
Organics - Volatiles								
TCLP Volatiles								
Benzene	Not detected	ug/L	100	8260B	02/10/12 16:52	WAT	500	
Carbon tetrachloride	Not detected	ug/L	100	8260B	02/10/12 16:52	WAT	500	
Chlorobenzene	Not detected	ug/L	100	8260B	02/10/12 16:52	WAT	100,000	
Chloroform	Not detected	ug/L	100	8260B	02/10/12 16:52	WAT	6,000	
1,4-Dichlorobenzene	Not detected	ug/L	100	8260B	02/10/12 16:52	WAT	7,500	
1,2-Dichloroethane	Not detected	ug/L	100	8260B	02/10/12 16:52	WAT	500	
1,1-Dichloroethene	Not detected	ug/L	100	8260B	02/10/12 16:52	WAT	700	
2-Butanone (MEK)	Not detected	ug/L	1,000	8260B	02/10/12 16:52	WAT	200,000	
Tetrachloroethene	Not detected	ug/L	100	8260B	02/10/12 16:52	WAT	700	
Trichloroethene	Not detected	ug/L	100	8260B	02/10/12 16:52	WAT	500	
Vinyl chloride	Not detected	ug/L	100	8260B	02/10/12 16:52	WAT	200	



Analytical Laboratory Report

Lab Sample ID: S51446.02

Sample Tag: Tripblank_01272012

Collected Date/Time: 01/27/2012 17:00

Matrix: Methanol

COC Reference: BCO12712.2

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	10.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
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Other / Misc.

No Analyses	Completed				01/31/12 08:45	PCS		
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[illegible]

Laboratory Information and Receipt		Relinquished By	Received By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal	Printed Name: Megan Mockley	Printed Name: Merit Prep Box	Printed Name: Andrew Ball
<input checked="" type="checkbox"/> Cooler packed with ice (✓) NO	<input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Signature: Megan Mockley	Signature:	Signature: Andrew Ball
Specify Turnaround Requirements:	Sample Receipt:	ARCADIS	Firm:	Firm: MERIT
Standard TAT				
Fed-Ex Tracking #:	Condition/Cooler Temp:	Date/Time:	Date/Time:	Date/Time:
Not Applicable	10.0	1-27-12 - 1845		30 JAN 12 0825



Appendix E

Waste Manifests

GENERATOR