Prepared for:
Wisconsin Department of Transportation
Madison, Wisconsin

Phase 2.5 Hazardous Materials Assessment Report for the Fox Auto Salvage Site 2423 Racine Ave (STH 32) Village of Mt. Pleasant Racine County, Wisconsin

WisDOT I.D. 3240-05-03

AECOM, Inc.
October 2009
Document No.: 10702-040

AECOM

AECOM
11425 West Lake Park Drive, Suite 100, Milwaukee, WI 53224
T 414.359.3030 F 414.359.0822 www.aecom.com

October 20, 2009

Ms. Shar TeBeest
Wisconsin Department of Transportation
4802 Sheboygan Avenue, 451
Madison, Wisconsin 53707

Subject: Phase 2.5 Hazardous Materials Assessment Report for the Fox Auto Salvage Site, 2423 Racine Ave. (STH 32), Village of Mt. Pleasant, Racine County, Wisconsin – WisDOT I.D. 3240-05-03, AECOM Project No. 10702-040

Dear Ms. TeBeest,

AECOM, Inc. (AECOM) is pleased to submit this Phase 2.5 Hazardous Materials Assessment Report for the above-referenced site. This report contains a summary of the information collected during the site assessment and includes our interpretation and recommendations regarding this information.

We appreciate the opportunity to be of service to you and we look forward to continuing working with you on this project. Please contact Bryan Bergmann or Dennis Lawton at (414) 359-3030 if you have any questions or comments regarding this report or this project.

Yours sincerely,

Bryan J. Bergmann, P.G
Project Hydrogeologist
bryan.bergmann@aecom.com

Dennis R. Lawton, P.G.
Associate Hydrogeologist
dennis.lawton@aecom.com

Cc: Ken Wade, WisDOT Southeast Region, 141 NW Barstow, Waukesha, WI 53187
Darius Wright, Edwards Engineering Consultants, LLC, 7665 N. Port Washington Rd., Suite 103, Milwaukee, WI 53217-3175
Victoria Stovall, WDNR, 2300 N. Dr. Martin Luther King Jr. Dr., Milwaukee, WI 53212
Kenny Fox, 2423 Racine Ave., Racine, WI 53405

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Executive Summary

AECOM, Inc. (AECOM) has prepared this report on behalf of the Wisconsin Department of Transportation (WisDOT) to document Phase 2.5 Hazardous Materials Assessment (HMA) activities near the Fox Auto Salvage site located at 2423 Racine Ave. (STH 32) in the Village of Mt. Pleasant, Racine County, Wisconsin.

Reconstruction of Racine Ave. will occur in 2010. Proposed construction work includes removing old storm sewer and installing new storm sewer, and paving.

In October 2000, Himalayan Consultants, LLC (Himalayan) completed a Phase 1 HMA on behalf of the WisDOT. According to Mr. Kenny Fox, the site owner's brother, the site was used as a gasoline service station until the late 1970s. In 1979, one 500-gallon unleaded gasoline underground storage tank (UST) was removed from the site. The date of installation and the location of the UST were unknown.

In May 2002, Kapur & Associates, Inc. (Kapur) completed a Phase 2 HMA for the site on behalf of the WisDOT. Two soil borings (B-1 and B-2) were advanced along the west side of the property. Two soil samples were collected from each soil boring for laboratory analysis of gasoline range organics (GRO), diesel range organics (DRO), volatile organic compounds (VOCs), and lead. Temporary groundwater monitoring wells (B-1W and B-2W) were installed in soil borings B-1 and B-2. Groundwater samples were collected for laboratory analysis of GRO, DRO, VOCs, and lead. GRO, DRO, VOC and lead concentrations in soil exceeded the respective Wisconsin Department of Natural Resources (WDNR) NR 720 generic residual contaminant levels (RCLs) for the protection of groundwater pathway (GRO, DRO, VOCs) and the direct contact pathway (lead). VOC concentrations in groundwater exceeded the respective WDNR NR 140 enforcement standards (ESs) and Preventive Action Limits (PALs).

The Fox Auto Salvage site is currently used as an auto repair facility. At the time this Phase 2.5 HMA was completed, the site was not identified in the Wisconsin Department of Natural Resources (WDNR) Bureau of Remediation and Redevelopment Tracking System (BRRTS) database or in the Wisconsin Department of Commerce Storage Tank Database.

To evaluate the extent of soil and groundwater impacts at the Fox Auto Salvage site, AECOM advanced six soil probes (FOX-1 through FOX-6). The locations and depth of the soil borings were based on proposed construction plans for the removal and installation of storm sewer. Soil probes were advanced to terminal depths ranging from approximately 4 to 8 feet bgs. Soil samples were field-screened for the potential presence of volatile compounds using a photoionization detector (PID) equipped with a 10.6eV lamp. Two of the soil probes (FOX-1 and FOX-5) were converted to temporary groundwater monitoring wells. The soil borings were abandoned with bentonite upon completion of the soil and groundwater sampling.

One to two soil samples were collected from each soil probe for laboratory analysis of GRO, DRO, petroleum volatile organic compounds (PVOCs) + naphthalene, and lead. Sample FOX-1 (6'-8') was also analyzed for lead by the Toxicity Characteristic Leaching Procedure (TCLP) and for cadmium, reactive cyanide and reactive sulfide. These laboratory analyses meet the Waste Management, Inc., Veolia Environmental Services, Inc., and Republic Services, Inc. analytical disposal requirements for petroleum-contaminated soil from an underground storage tank that contained unleaded gasoline. Soil and groundwater samples were submitted to Pace Analytical Service, Inc. in Green Bay, Wisconsin, for analysis.

Conclusions and Recommendations

- Petroleum-contaminated soil and groundwater exceeding WDNR standards was present in soil samples from Kapur borings B-1/B-1W and B-2/B-2W, and AECOM boring FOX-1 (same as Kapur B-

1/B-1W) and in groundwater samples from Kapur temporary wells B-1W and B-2W and AECOM temporary well FOX-1 (same as Kapur B-1/B-1W).

- The lead concentration in Kapur soil sample B-1 (5'-7') was 2,570 mg/kg and exceeded the NR 720 generic direct contact RCL for a non-industrial site of 50 mg/kg and for an industrial site of 500 mg/kg. Sample FOX-1 (6'-8') was analyzed by the Toxicity Characteristic Leaching Procedure (TCLP) for landfill disposal purposes because the B-1 (5'-7') result exceeded 100 mg/kg. The TCLP lead result for FOX-1 (6'-8') was 0.043 µg/L, which is below the TCLP limit of 5 µg/L.
- AECOM did not observe evidence of solid waste (foundry sand or slag) during soil probe activities for FOX-1 through FOX-6.
- The contaminated soil and groundwater in the STH 32 ROW adjacent to the west side of the property at 2423 Racine Ave. appears to be an undocumented release. The release should be reported to the WDNR (release notification is included with this report). The likely source of the release is the neighboring Fox Auto Salvage site. According to Mr. Kenny Fox, the Fox Auto Salvage site was historically used as a gasoline service station until the late 1970s. In 1979, one 500-gallon unleaded gasoline UST was removed from the site.
- AECOM does not recommend additional work near the Fox Auto Salvage site. Additional investigation may be necessary if construction plans change for the area in which this Phase 2.5 HMA was completed.
- AECOM recommends that Special Provisions include a Notice to Contractor and Item 205.0501.S (Excavation, Loading, Hauling, and Disposal of Petroleum Contaminated Soil) indicating the following:
  - The Fox Auto Salvage site is a former UST site.
  - Field observations and laboratory testing completed for soil samples identified petroleum impacts in soil in the ROW adjacent to the Fox Auto Salvage site from approximately station 50+20 to 50+70 from 40 feet left to 40 feet right and from station 388+25 to 389+25 from centerline to 60 feet right at a depth of approximately 1 to 15 feet below the existing ground surface. Soil excavated from this area will require bioremediation/landfill disposal. The estimated volume of contaminated soil to be excavated at this location is approximately 100 cubic yards (approximately 170 tons using a multiplier of 1.7 tons/cubic yard).
  - Field observations and laboratory testing completed for groundwater samples identified petroleum impacts in groundwater in the ROW adjacent to the Fox Auto Salvage site from approximately station 50+20 to 50+70 from 45 feet left to centerline and from station 388+25 to 389+25 from centerline to 60 feet right. Groundwater was present at these locations at a depth of approximately 6 feet bgs. If dewatering is necessary during construction in this area, the groundwater will require treatment and disposal.

1.0 Project Overview

1.1 Project Description

AECOM, Inc. (AECOM) has prepared this report on behalf of the Wisconsin Department of Transportation (WisDOT) to document Phase 2.5 Hazardous Materials Assessment (HMA) activities in the vicinity of the Fox Auto Salvage site located at 2423 Racine Ave. (STH 32) in the Village of Mt. Pleasant, Racine County, Wisconsin.

Reconstruction of Racine Ave. will occur in 2010. Proposed construction work includes removing old storm sewer and installing new storm sewer, and paving.

In October 2000, Himalayan Consultants, LLC (Himalayan) completed a Phase 1 HMA on behalf of the WisDOT. According to Mr. Kenny Fox, the site owner's brother, the site was used as a gasoline service station until the late 1970s. In 1979, one 500-gallon unleaded gasoline underground storage tank (UST) was removed from the site. The date of installation and the location of the UST were unknown. Excerpts from the Himalayan Phase 1 HMA for the Fox Auto Salvage site are provided in Appendix A.

In May 2002, Kapur & Associates, Inc. (Kapur) completed a Phase 2 HMA for the site on behalf of the WisDOT. Two soil borings (B-1 and B-2) were advanced along the west side of the property. Two soil samples were collected from each soil boring for laboratory analysis of gasoline range organics (GRO), diesel range organics (DRO), volatile organic compounds (VOCs), and lead. Temporary groundwater monitoring wells (B-1W and B-2W) were installed in soil borings B-1 and B-2. Groundwater samples were collected for laboratory analysis of GRO, DRO, VOCs, and lead. GRO, DRO, VOC and lead concentrations in soil exceeded the respective Wisconsin Department of Natural Resources (WDNR) NR 720 generic residual contaminant levels (RCLs) for the protection of groundwater pathway (GRO, DRO, VOCs) and the direct contact pathway (lead). VOC concentrations in groundwater exceeded the respective WDNR NR 140 enforcement standards (ESs) and Preventive Action Limits (PALs). Excerpts from the Kapur Phase 2 HMA for the Fox Auto Salvage site are provided in Appendix A.

The Fox Auto Salvage site is currently used as an auto repair facility. At the time this Phase 2.5 HMA was completed, the site was not identified in the Wisconsin Department of Natural Resources (WDNR) Bureau of Remediation and Redevelopment Tracking System (BRRTS) database or in the Wisconsin Department of Commerce Storage Tank Database.

1.1.1 Involved Parties

Information summaries for the parties involved with this site are listed below.

Client	Department of Transportation Bureau of Equity and Environmental Services 4802 Sheboygan Avenue, 451 Madison, Wisconsin 53707	Ms. Shar TeBeest (608) 266-1476
	Wisconsin Department of Transportation Southeast Region Environmental Services 141 NW Barstow Street Waukesha, WI 53187	Mr. Ken Wade (262) 548-6733

Consultant	AECOM, Inc. 11425 West Lake Park Drive Milwaukee, Wisconsin 53224	Mr. Dennis Lawton Mr. Bryan Bergmann (414) 359-3030
Soil Probe Subcontractor	Kitson Environmental Services, Inc. N4299 S. Helenville Road Helenville, Wisconsin 53137	Mr. Greg Kitson (920) 674-2378
Analytical Laboratory	Pace Analytical Services, Inc. 1241 Bellevue Street, Suite 9 Green Bay, Wisconsin 54302	Ms. Kang Khang (920) 469-2436

1.1.2 Site Location

The site location is shown in Figure 1 and is described as follows:

Northeast corner of the intersection of Racine Ave. (STH 32) and 25th St., Village of Mt. Pleasant, Racine County, Wisconsin

Southwest 1/4 of the Southwest 1/4 of Section 21, Township 3 North, Range 23 East

2.0 Methods of Investigation

To evaluate the extent of soil and groundwater impacts at the Fox Auto Salvage site, six soil probes (FOX-1 through FOX-6) were advanced at the locations shown in Figures 2 and 3. The locations and depths of the soil borings were based on proposed construction plans for the removal and installation of storm sewer.

On April 1, 2009, Kitson Environmental Services, Inc. (Kitson), at the direction of AECOM, advanced soil probes FOX-1 through FOX-6 at the locations shown in Figures 2 and 3. Soil probe FOX-1 was advanced in the approximate location of Kapur soil boring B-1.

An AECOM technician collected soil samples for soil classification, field screening, and laboratory analytical testing while Kitson personnel advanced the soil probes. Soil probes were advanced to terminal depths ranging from approximately 4 to 8 feet bgs. Soil samples were field-screened for the potential presence of volatile compounds using a photoionization detector (PID) equipped with a 10.6eV lamp. Two of the soil probes (FOX-1 and FOX-5) were converted to temporary groundwater monitoring wells. The soil borings were abandoned with bentonite upon completion of the soil and groundwater sampling. The boring logs and borehole abandonment forms are included in Appendix B.

One to two soil samples were collected from each soil probe for laboratory analysis of GRO, DRO, petroleum volatile organic compounds (PVOCs) + naphthalene, and lead. Sample FOX-1 (6'-8') was also analyzed for lead by the Toxicity Characteristic Leaching Procedure (TCLP) and for cadmium, reactive cyanide and reactive sulfide. These laboratory analyses meet the Waste Management, Veolia Environmental Services, Inc., and Republic Services, Inc. analytical disposal requirements for petroleum-contaminated soil from an underground storage tank that contained unleaded gasoline. Soil and groundwater samples were submitted to Pace Analytical Service, Inc. in Green Bay, Wisconsin, for analysis.

Additional details regarding sampling procedures are summarized in Appendix C.

3.0 Site Geologic and Hydrogeologic Setting

3.1 Area and Site Geology

The topography in the immediate vicinity of the subject site is relatively flat but slopes gently downward to the east (USGS 1958; photorevised 1971 and 1976). The site location and topography are shown in Figure 1.

The Soil Survey of Kenosha and Racine Counties (1970) maps the unconsolidated soils in the subject site vicinity as the Hebron-Montgomery-Aztalan Association. The Hebron-Montgomery-Aztalan Association is characterized by well-drained to poorly drained soils that have a loam to silty clay subsoil and is underlain by clayey to loamy lacustrine and outwash material on hills, knobs, and lake plains. Bedrock in the vicinity is mapped as Silurian dolomite (Mudrey et al., 1982). The depth to bedrock in the vicinity of the subject site is generally between 50 and 100 feet below ground surface (Trotta and Cotter, 1973).

Soils encountered while advancing the soil probes consisted of approximately 1 to 8 feet of fill (primarily silty sand and gravel) underlain by sand, silt or clay. The boring logs for the soil probes are included in Appendix B.

3.2 Area and Site Hydrogeology

The principal sources of groundwater in the site vicinity are shallow Pleistocene glacial drift aquifers and deeper Silurian and Ordovician dolomite formations and Cambrian sandstones.

Groundwater at the Fox Auto Salvage site was present during the Phase 2.5 HMA at a depth of approximately 6 feet bgs. Based on local topography, the anticipated direction of groundwater flow in the vicinity of the Fox Auto Salvage site is to the east toward Lake Michigan.

3.3 Potential Receptors to Contamination

The site is currently occupied by an auto repair shop. The subject site and surrounding commercial and residential properties are served by the City of Racine municipal water supply. It is possible that potable wells could potentially be receptors to groundwater contamination that may have originated from the Fox Auto Salvage site. However, based on the defined extent of the groundwater impacts, it is not likely that nearby potable wells are affected.

Wetland areas were not identified in the vicinity of the site based on review of the USGS topographic quadrangle map of the area.

The Fox Auto Salvage site consists of asphalt-, gravel-, and grass-covered areas. The possibility of human ingestion, direct contact, or inhalation of contaminated soil, is considered to be low unless the asphalt pavement and upper few feet of soil are removed.

4.0 Investigation Results

Soil Results

Soil analytical results were compared to generic NR 720.19 Table 1 and Table 2 Residual Contaminant Levels (RCLs), where applicable. Soil results are summarized in Table 1 of this Phase 2.5 HMA. The laboratory report is provided in Appendix D.

- Evidence of solid waste (foundry sand or slag) was not observed during soil probe activities for FOX-1 through FOX-6.
- Faint petroleum odors and staining were observed in soil sample FOX-1 (6'-8').
- PID readings for the soil samples were <1 PID unit except for sample FOX-1 (6'-8') which had a PID reading of 240 PID units.
- GRO and DRO were detected in sample FOX-1 (6'-8') at concentrations of 778 mg/kg and 337 mg/kg, respectively. These GRO and DRO concentrations exceed the NR 720 generic RCL for groundwater protection of 100 mg/kg. Concentrations of GRO ranging from 1.4 mg/kg to 37.6 mg/kg were detected in samples from FOX-1 through FOX-6.
- These PVOC compounds and naphthalene were detected in samples from FOX-1 at concentrations above the respective NR 720 generic RCLs for groundwater protection.
- The lead concentration in the Kapur soil boring B-1 (5'-7') was 2,570 mg/kg. AECOM advanced soil boring FOX-1 in approximately the same location as B-1 to collect a sample for analysis of lead by TCLP. The TCLP result for FOX-1 (6'-8') was flagged by the laboratory and the estimated concentration of 0.043 mg/L was above the method detection limit and below the adjusted reporting limit. This concentration is below the TCLP limit of 5 mg/l for characterization as hazardous waste.

Groundwater Results

Groundwater analytical results were compared to NR 140 Enforcement Standards (ES) and Preventive Action Limits (PAL), where applicable. Groundwater results are summarized in Table 2 of this Phase 2.5 HMA. The laboratory report is provided in Appendix D.

- Benzene and naphthalene were detected in sample FOX-1 at concentrations of 20.2 µg/L and 42.4 µg/L, respectively. The benzene and naphthalene concentrations exceed the respective NR 140 enforcement standards and preventive action limits. Other PVOCs were detected in sample FOX-1 at concentrations below the NR 140 PAL.
- The lead concentration of 1.6 µg/L in FOX-1 exceeded the NR 140 PAL (1.5 µg/L) but was below the ES (15 µg/L). However, the result was flagged by the laboratory because the result was an estimated concentration that was above the method detection limit but below the reporting limit.

5.0 Site Assessment Conclusions and Recommendations

- Evidence of solid waste (foundry sand or slag) was not observed during soil probe activities for FOX-1 through FOX-6.
- Petroleum-contaminated soil and groundwater exceeding WDNR standards was present in soil samples from Kapur borings B-1/B-1W and B-2/B-2W, and AECOM boring FOX-1 (same as Kapur B-1/B-1W) and in groundwater samples from Kapur temporary wells B-1W and B-2W and AECOM temporary well FOX-1 (same as Kapur B-1/B-1W).
- The lead concentration in Kapur soil sample B-1 (5'-7') was 2,570 mg/kg and exceeded the NR 720 generic RCL for a non-industrial site of 50 mg/kg and for an industrial site of 500 mg/kg. Sample FOX-1 (6'-8') was analyzed by the Toxicity Characteristic Leaching Procedure (TCLP) for landfill disposal purposes because the B-1 (5'-7') result exceeded 100 mg/kg. The TCLP lead result for FOX-1 (6'-8') was 0.043 µg/L, which is below the TCLP limit of 100 mg/L.
- The contaminated soil and groundwater in the STH 32 ROW adjacent to the west side of the property at 2423 Racine Ave. appears to be an undocumented release. The release should be reported to the WDNR (release notification is included with this report). The likely source of the release is the neighboring Fox Auto Salvage site. According to Mr. Kenny Fox, the Fox Auto Salvage site was historically used as a gasoline service station until the late 1970s. In 1979, one 500-gallon unleaded gasoline UST was removed from the site.
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- AECOM recommends that Special Provisions include a Notice to Contractor and Item 205.0501.S (Excavation, Loading, Hauling, and Disposal of Petroleum Contaminated Soil) indicating the following:
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  - Field observations and laboratory testing completed for groundwater samples identified petroleum impacts in groundwater in the ROW adjacent to the Fox Auto Salvage site from approximately station 50+20 to 50+70 from 45 feet left to centerline and from station 388+25 to 389+25 from centerline to 60 feet right. Groundwater was present at these locations at a depth of approximately 6 feet bgs. If dewatering is necessary during construction in this area, the groundwater will require treatment and disposal.

6.0 General Qualifications

The site assessment conducted at the site was undertaken to assess soil conditions at a select area of the property. This activity was limited to the borings completed at the locations indicated.

Factual information regarding operations, conditions, regional geology and hydrogeology, and test data completed throughout the site investigation were obtained, in part from outside agents and third parties and have been assumed by AECOM to be correct and complete. Because some facts stated in this report are subject to professional interpretation, they could result in differing conclusions. In addition, the findings and conclusions contained in this report are based on various quantitative factors as they existed on or near the date during which the fieldwork was completed.

AECOM assumes no responsibility for future discovery and elimination of hazards or their associated liabilities. The investigation conducted by AECOM in no way assures the elimination of all hazards or the fulfillment of a property owner's obligation under any local, state or federal laws or any modifications or changes thereto. It is the responsibility of the property owner to notify authorities of any future conditions that are in violation of the current legal standards.

AECOM has prepared this report at the request of the Wisconsin Department of Transportation. AECOM assumes responsibility for the accuracy of the report's contents, subject to what is stated elsewhere in this section, but recommends the report be used only for the purpose intended by our client and AECOM when the report was prepared. The report may be unsuitable for other uses, and reliance on its contents by anyone other than our client is done at the sole risk of the user. AECOM accepts no responsibility for application or interpretation of the results by anyone other than the Wisconsin Department of Transportation.

This report reflects conditions, as observed on the date(s) the site work was performed. Accordingly, changes or modifications to the property or surrounding facilities made after the investigation was completed are not reflected in this report.

7.0 References

Mudrey, M. G., Jr., Brown, B. A., and Greenberg, J. K., 1982, Bedrock Geology Map of Wisconsin. University of Wisconsin-Extension Geological and Natural History Survey.

Trotta, L.C. and R.D. Cotter, 1973. Map of Depth to Bedrock in Wisconsin. Madison: University of Wisconsin-Extension Geologic and Natural History Survey in cooperation with the United States Geological Survey, Scale=1:1,000,000.

United States Department of Agriculture, Soil Conservation Service, 1970. Soil Survey of Kenosha and Racine Counties, Wisconsin.

United States Geological Survey, 1958 (Photorevised 1971 and 1976). 7.5-Minute Topographic Map of Racine South, Wisconsin Quadrangle. Scale=1:24,000.

Table 1
Soil Analytical Results
Fox Auto Salvage
2423 Racine Ave. (STH 32)
Village of Mt. Pleasant, Wisconsin
WisDOT I.D. 3240-05-03
AECOM Project No. 10702-040

	NR 720 Generic RCLs			Kapur & Associates, Inc.				AECOM, Inc.									
	Direct Contact		Groundwater	B-1	B-1	B-2	B-2	FOX-1	FOX-1	FOX-2	FOX-2	FOX-3	FOX-4	FOX-4	FOX-5	FOX-5	FOX-6	FOX-6
				1-3'	5-7'	1-3'	7-9'	1-3'	6'-8'	2'-4'	4'-6'	1-3'	1-3'	4-6'	2-4'	4-6'	0-2'	4-6'
Parameter	Industrial[A]	Non-Industrial[B]	Protection[C]	9/21/2001	9/21/2001	9/21/2001	9/21/2001	4/1/2009	4/1/2009	4/1/2009	4/1/2009	4/1/2009	4/1/2009	4/1/2009	4/1/2009	4/1/2009	4/1/2009	4/1/2009
PID Result	NS	NS	NS	27.3	650	85.4	557	0.0	246	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GRO (mg/kg)	NS	NS	100	<5.55	**435** [C]	**4,090** [C]	71.0	<3.0	**778** [C]	<2.7	<3.0	<2.9	<3.0	<3.3	<3.2	<3.0	<3.2	<3.1
DRO (mg/kg)	NS	NS	100	24.6	61.7	**757** [C]	15.7	3.0	**337** [C]	1.8 J	<1.0	7.2	37.6	1.5 J	3.5	9.7	11.8	1.4 J
VOCs/PVOCs (µg/kg)																		
Benzene	(52,000)	(1,160)	5.5	**51.8** [C]	**167** [C]	**952** [C]	**350** [C]	<25.0	<100	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
Bromobenzene	NS	NS	NS	<25.0	<250	1,300	<50.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Butylbenzene	NS	NS	NS	60.8	1,060	2,920	141	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	NS	NS	NS	45.7	3,550	3,410	177	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	NS	NS	NS	<25.0	2,060	1,370	152	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	(102,000,000)	(1,560,000)	2,900	67.2	1,190	**5,940** [C]	863	<25.0	**3,460** [C]	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
Isopropylbenzene	NS	NS	NS	<25.0	2,010	2,580	228	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	NS	NS	NS	<25.0	4,140	1,670	93.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MTBE	NS	NS	NS	<25.0	<250	544	<50.0	<25.0	<100	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
Naphthalene	(313,000)	(20,400,000)	400	283	**2,900** [C]	**2,010** [C]	<50.0	<25.0	**2,080** [C]	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
n-Propylbenzene	NS	NS	NS	70.1	3,290	3,360	308	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	(204,000,000)	(3,130,000)	1,500	71.9	852	846	227	53.6 J	553	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
1,2,4-Trimethylbenzene	(51,100,000)	(782,000)	NS	146	802	6,580	499	115	3,700	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
1,3,5-Trimethylbenzene	(51,100,000)	(782,000)	NS	179	1,180	3,470	324	58.2 J	3,200	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
Xylenes, m & p	(2,244,000,000)	(34,430,000)	4,100	NA	NA	NA	NA	200	**5,150** [C]	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
Xylenes, o	(2,244,000,000)	(34,430,000)	4,100	NA	NA	NA	NA	57.7 J	2,140	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
Xylenes, Total	(2,244,000,000)	(34,430,000)	4,100	311	1,670	**10,200** [C]	2,150	257.7 J	**7,290** [C]	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0
Metals (mg/kg)																		
Cadmium	510	8	NS	NA	NA	NA	NA	NA	0.16 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	500	50	NS	38.0	**2,570** [AB]	5.17	18.8	27.2	NA	7.7	3.7	39.6	17.6	9.1	27.4	7.5	26.6	5.3
Metals by TCLP (mg/L)																		
Lead*	NS	NS	NS	NA	NA	NA	NA	NA	0.043 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics (mg/kg)																		
Reactive Cyanide	NS	NS	NS	NA	NA	NA	NA	NA	<0.015	NA	NA	NA	NA	NA	NA	NA	NA	NA
Reactive Sulfide	NS	NS	NS	NA	NA	NA	NA	NA	152	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Solids (%)	NS	NS	NS	90.0	85.8	81.3	75.5	83.9	87.3	92.7	83.8	85.5	83.9	76.4	78.3	82.3	77.7	79.6

Notes:

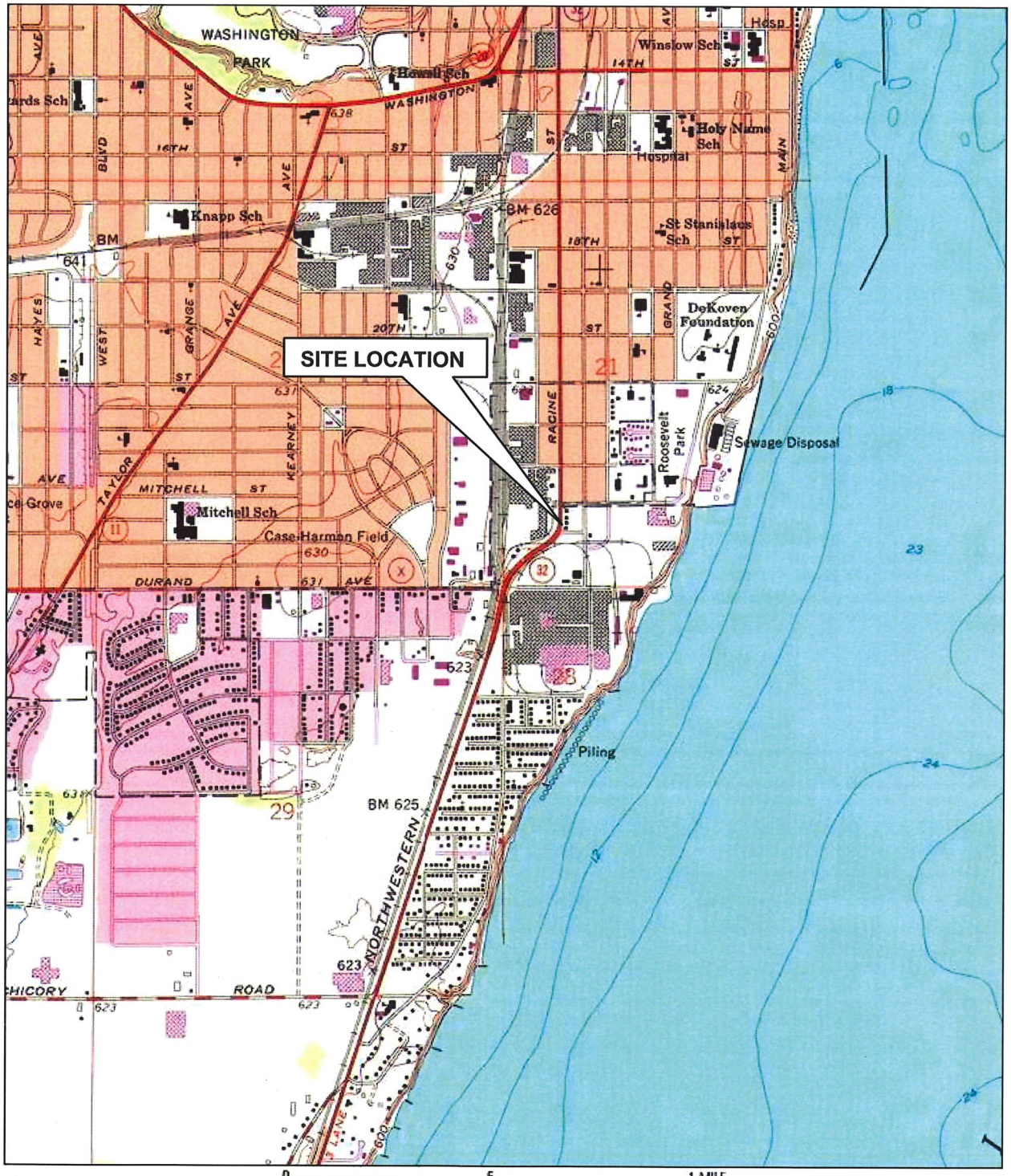
1. RCL - Residual Contaminant Level.
2. PID - Photoionization Detector.
3. GRO - Gasoline Range Organics
4. DRO - Diesel Range Organics
5. VOCs - Volatile Organic Compounds
6. PVOCs - Petroleum Volatile Organic Compounds
7. MTBE - Methyl Tert-Butyl Ether
8. TCLP - Toxicity Characteristic Leaching Procedure
9. mg/kg - milligrams per kilogram, or parts per million.
10. µg/kg - micrograms per kilogram, or parts per billion.
11. NS - No standard.
12. NA - Not analyzed.
13. J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
14. (52,000) - Calculated soil standard using the EPA Soil Screening Guidance
15. [A]: Result exceeds the NR 720 generic RCL for direct contact at an industrial site.
16. [B]: Result exceeds the NR 720 generic RCL for direct contact at a non-industrial site.
17. [C]: Result exceeds the NR 720 generic RCL for groundwater protection.
18. *: The TCLP limit for characterization of lead as a hazardous waste is 5 µg/l.

Table 2
Groundwater Analytical Results
Fox Auto Salvage
2423 Racine Ave. (STH 32)
Village of Mt. Pleasant, Wisconsin
WisDOT I.D. 3240-05-03
AECOM Project No. 10702-040

Parameter	NR 140 Enforcement Standard[A]	NR 140 Preventive Action Limit[B]	Kapur & Associates, Inc.		AECOM, Inc.	
			B-1W	B-2W	FOX-1	FOX-5
			9/21/2001	9/21/2001	4/6/2009	4/6/2009
GRO (µg/L)	**NS**	**NS**	11,900	26,700	NA	NA
DRO (µg/L)	**NS**	**NS**	14,900	40,800	NA	NA
VOCs/PVOCs (µg/L)						
Benzene	**5**	**0.5**	**513** [AB]	**725** [AB]	**20.2** [AB]	<0.23
Bromobenzene	**NS**	**NS**	<25.0	<25.0	NA	NA
n-Butylbenzene	**NS**	**NS**	33.2	39.7	NA	NA
sec-Butylbenzene	**NS**	**NS**	<25.0	<25.0	NA	NA
tert-Butylbenzene	**NS**	**NS**	<25.0	<25.0	NA	NA
Ethylbenzene	**700**	**140**	**582** [B]	**931** [AB]	68.2	<0.40
Isopropylbenzene	**NS**	**NS**	71.4	102	NA	NA
p-Isopropyltoluene	**NS**	**NS**	<25.0	29.4	NA	NA
Methyl-Tert-Butyl Ether	**60**	**12**	**45.3** [B]	**70.9** [AB]	10.4	<0.36
Naphthalene	**40**	**8**	**200** [AB]	**266** [AB]	**42.4** [AB]	<0.47
n-Propylbenzene	**NS**	**NS**	134	111	NA	NA
Toluene	**1,000**	**200**	58.8	100	7.9	<0.36
1,2,4-Trimethylbenzene	**480**	**96**	**218** [B]	**490** [AB]	4.5	<0.39
1,3,5-Trimethylbenzene	**480**	**96**	**119** [B]	**145** [B]	11.9	<0.40
m,p-Xylenes	**10,000**	**1,000**	NA	NA	49.5	<0.74
o-Xylenes	**10,000**	**1,000**	NA	NA	1.9	<0.36
Xylenes-Total	**10,000**	**1,000**	**1,060** [B]	**1,780** [B]	51.4	<1.10
Metals (µg/L)						
Cadmium	**5**	**0.5**	NA	NA	0.15 J	NA
Lead	**15**	**1.5**	<5.0	<5.0	**1.6 J** [B]	<1.4
Reactive Cyanide (mg/L)	**200**	**40**	NA	NA	NA	NA
Reactive Sulfide (mg/L)	**NS**	**NS**	NA	NA	NA	NA

Notes:

1. GRO - Gasoline Range Organics
2. DRO - Diesel Range Organics
3. VOCs - Volatile Organic Compounds
4. PVOCs - Petroleum Volatile Organic Compounds
5. [A] - Result exceeds the NR 140 Enforcement Standard (ES)
6. [B] - Result exceeds the NR 140 Preventive Action Limit (PAL)
7. **BOLD** indicates resutls exceed the NR 140 ES and/or PAL
8. µg/L - micrograms per liter
9. mg/L - milligrams per liter
10. NA - Not Analyzed
11. NS - No Standard



Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

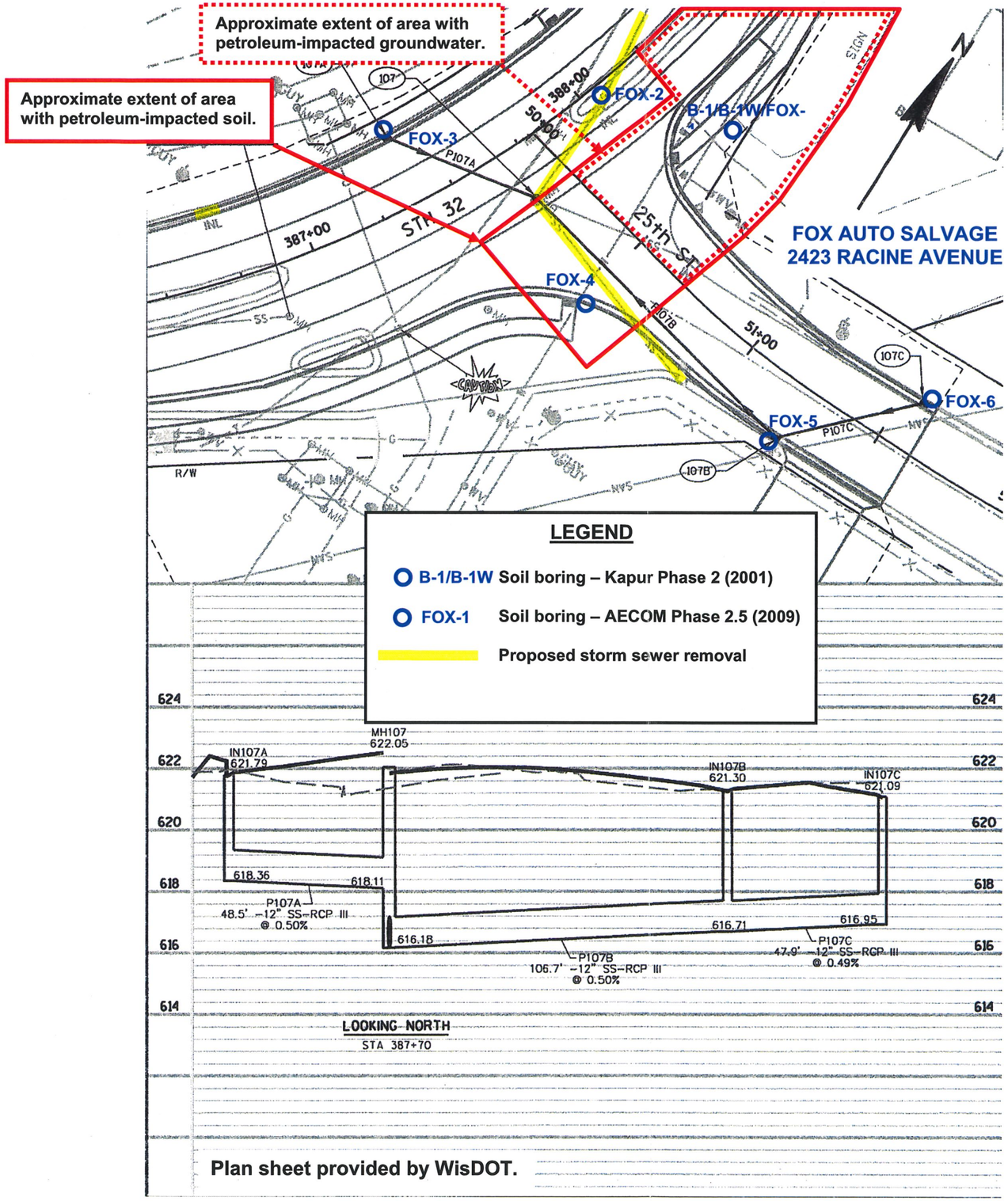
APPROXIMATE SCALE 1" = 2,000'

AECOM

11425 W. Lake Park Drive
Suite 100, Milwaukee, WI 53224
T 414.359.3030
www.aecom.com

SITE LOCATION MAP
PHASE 2.5 HAZARDOUS MATERIALS ASSESSMENT
FOX AUTO SALVAGE
2423 RACINE AVE. (STH 32)
VILLAGE OF MT. PLEASANT, WISCONSIN
WisDOT I.D. 3240-05-03

Drawn:	BJB 5/6/2009
Checked:	BJB 5/6/2009
Approved:	DXL 5/6/2009
PROJECT NUMBER	10702-040
FIGURE NUMBER	1

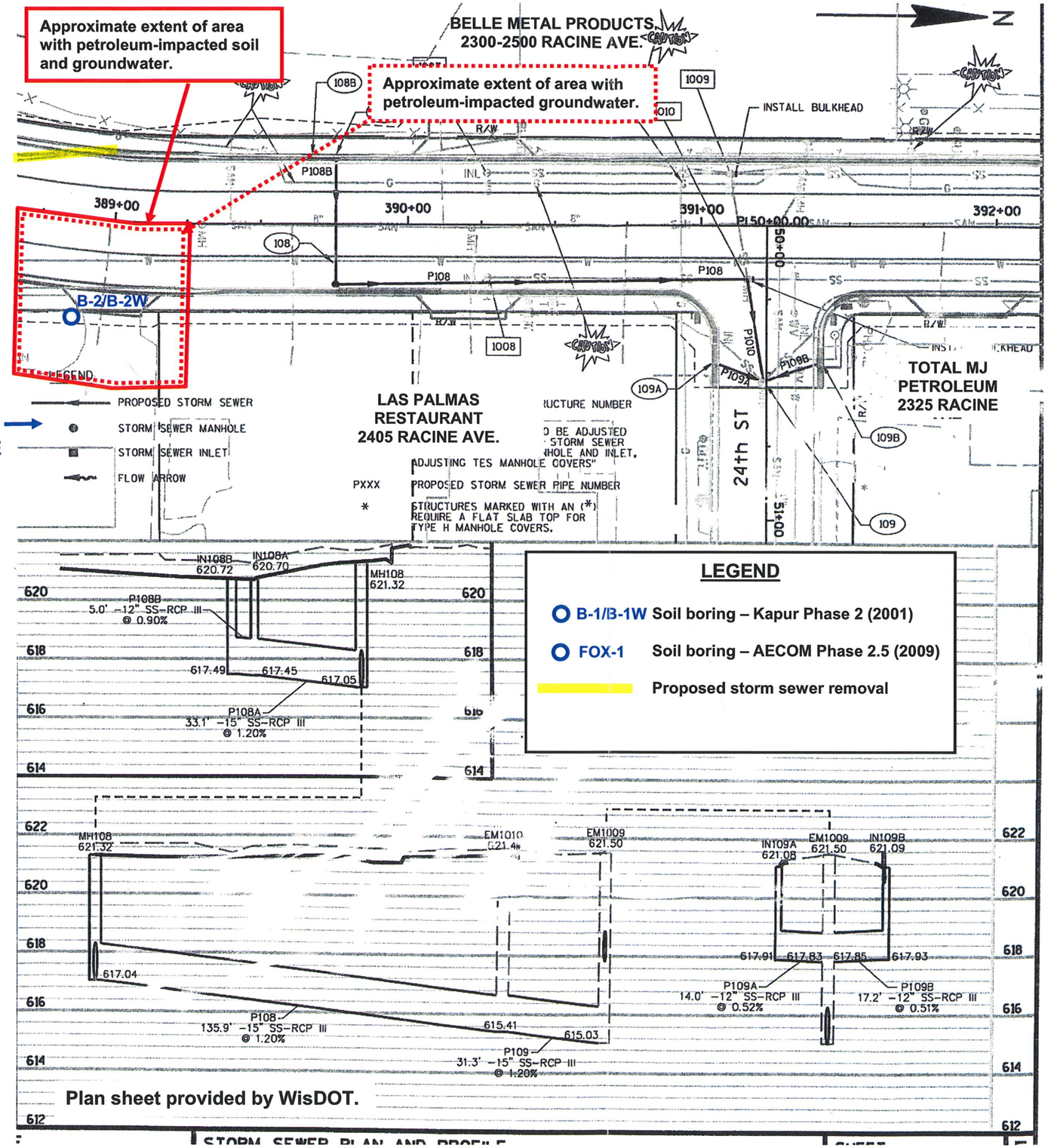


Plan sheet provided by WisDOT.

AECOM
11425 W. Lake Park Dr.
Milwaukee, WI 53224
414--359--3030
www.aecom.com

SITE DIAGRAM – PROJECT STATIONS 386+50 TO 388+50
PHASE 2.5 HAZARDOUS MATERIALS ASSESSMENT
FOX AUTO SALVAGE
2423 RACINE AVE. (STH 32)
VILLAGE OF MT. PLEASANT, WISCONSIN
WisDOT I.D. 3240-05-03

Drawn:	BJB 4/21/2009
Checked:	BJB 4/21/2009
Approved:	DXL 4/21/2009
PROJECT NUMBER	10702-040
FIGURE NUMBER	2



SITE DIAGRAM - PROJECT STATIONS 388+50 TO 392+00
PHASE 2.5 HAZARDOUS MATERIALS ASSESSMENT
FOX AUTO SALVAGE
2423 RACINE AVE. (STH 32)
VILLAGE OF MT. PLEASANT, WISCONSIN
WisDOT I.D. 3240-05-03

AECOM
11425 W. Lake Park Dr.
Milwaukee, WI 53224
414--359--3030
www.aecom.com

Drawn:	BJB 4/21/2009
Checked:	BJB 4/21/2009
Approved:	DXL 4/21/2009
PROJECT NUMBER	10702-040
FIGURE NUMBER	3

Appendix A

Excerpts from the Himalayan Consultants, LLC Phase 1 HMA and the Kapur & Associates, Inc. Phase 2 HMA

PHASE I
ENVIRONMENTAL SITE ASSESSMENT

STH 32
CTH KR TO 21st STREET
RACINE COUNTY
WISCONSIN

Prepared for:

Wisconsin Department of Transportation
District 2
Waukesha, Wisconsin

PROJECT ID: 3240-05-01

Prepared by:

Kapur & Associates, Inc.
7711 North Port Washington Road
Milwaukee, Wisconsin 53217

October 27, 2000

APPENDIX H

Fox Auto Salvage (Site No. 7)
(Former Gas Station)

Fox Auto Salvage (Former James Conley Property, Gas Station)
2423 Racine Avenue

This site appears on the UST database.

Fox Auto Salvage is presently located at the site. According to the owner's brother, Kenny Fox, the site was a gasoline service station until the late 1970's. One 500 gallon unleaded gasoline UST was removed from the property in 1979. The date of installation is not known.

The maximum depth of cut adjacent to this site is 5 feet for roadway construction. No additional R/W acquisition is expected adjacent to the site. However, based on the historical use of the site, the site may be an environmental threat during the proposed improvements.

n.

SITE RECONNAISSANCE INVESTIGATION CHECKLIST

REV 7-93

All Blanks must be filled out!

Use NA for Not Applicable, NI for Not Investigated, if appropriate

WDOT PROJECT ID: 3240-05-01
Termini CTH KR TO 21ST STREET
Highway STH 32
District 2
County RACINE

Property Address: 2423 RACINE AVE RACINE 53405

Owner Name and Address: KENNY FOX 2423 RACINE AVE RACINE 53405

Site Name (the one which you will use to refer to this site) FOX AUTO SALVAGE (SITE #7)

Owner Phone: (262) 633-7178

PROPOSED ACTIVITIES/RIGHT-OF-WAY

Purchase	Yes X	No
Excavate	Yes X	No
Relocate Utilities	Yes X	No
New Utilities	Yes X	No
Acquire Easements	Yes X	No
Type of Easements	TLE	

LAND USE (Describe or use NA/NI)

Current Use: OFFICE
Previous Use: GAS STATION
Adjacent Use: RESTAURANT

Other comments:

VISUAL INSPECTION (Note if present or use NA/NI) Mark approx. location on site map

Current or previous USTs	X
Aboveground Tanks (ASTs)	NO
Vent Pipes	NO
Disposal Pipes/Drums	NO
Filled Areas	NO
Ponds/Basins/Sumps	NO
Other	NO SALVAGE CARS ARE STORED AT THIS SITE

EVIDENCE OF CONTAMINATION:

Stained Ground Surface	Yes	No X
Sheen on Surface Water	Yes	No X
Odor	Yes	No X
Stressed Vegetation	Yes	No X
Other		

RECORD SEARCH (Check if completed and attach results, otherwise NA/NI)

County Assessor	NI	DILHR UST List	X	SCS	X	DNR Spills List	X
Fire Department	X	DNR Lust List	X	DOT RE Plats	NI	Reg. of Waste Sites	X
Plat Books	X	County Hwy Dept	NI	USEPA Finds	X	Reg. of Deeds	NI
Town Records	X	USGS	X	Bus. Directory	X	SWLF	X
Cty. Eng/DPW	NI	Aerial Photos	X	USEPA CERCLIS	X	EPA ERNS	X

SUSPECTED MIGRATION OF CONTAMINANTS

To Existing R/W	Yes	No X	To Adjacent Property	Yes	No X
To Proposed R/W	Yes X	No	From Adjacent Property	Yes	No X

ATTACHMENTS (* = Required if available at time of request)

Aerial Photos	NA	Map of Site *	X
Photographs of Site	X	Design Plan *	X
County Map Showing Site location *	NA	Preliminary Plat *	NA
		Route Alternate	NA

Preparer: LINDA J FELLENZ

Date Prepared: June 1, 2000

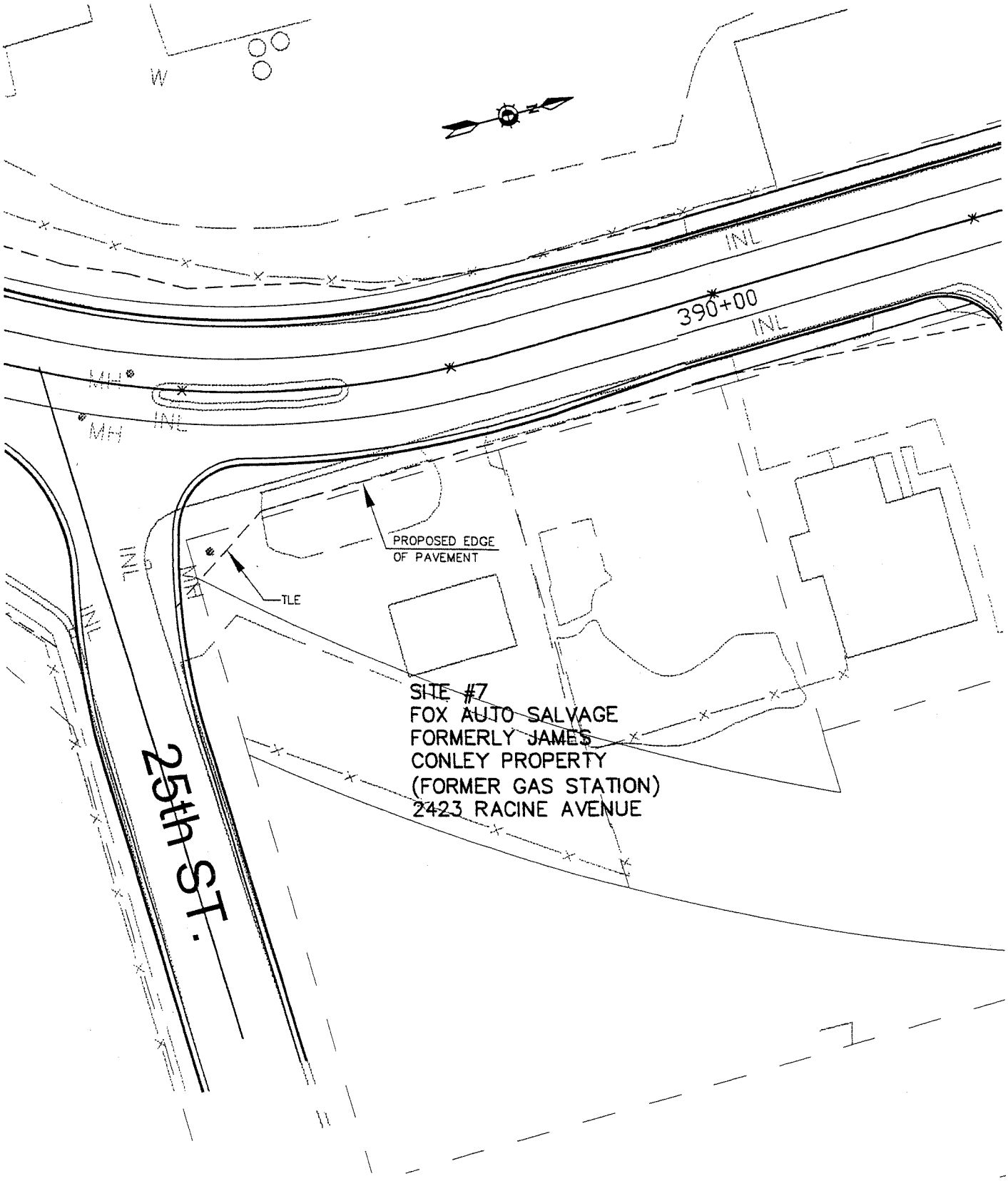
DESIGN OR REAL ESTATE SUPERVISOR or PROJECT SPONSOR (for local projects) COMPLETE:

Based on the above information, I recommend:

No further action		Phase 1		Phase 2	X
Phase 2½		Phase 3		Phase 4	

Signature: Linda J Fellenz

Date: 8/8/00



SITE 7 LOCATION MAP
FOX AUTO SALVAGE (FORMER GAS STATION)
2423 RACINE AVENUE
RACINE COUNTY, WISCONSIN

KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.351.6668

FIGURE 15

LF/SL | DATE: 7/26/00 | SCALE: 1"=50'

DWG FullPath: E:\DOT2\813STH32\Environmental\Site specific pics\RSITE7.dwg Last saved date/time: 10/27/00 11:38am Plot Date/Time: 10/27/00 11:39am Plotted by: KurtL_d

Site No. 7 - Fox Auto Salvage
2423 Racine Avenue
(facing north)

PHASE II
ENVIRONMENTAL
SITE ASSESSMENT

FOX AUTO SALVAGE
2423 RACINE AVENUE

RACINE COUNTY
WISCONSIN

Prepared for:

Wisconsin Department of Transportation District 2
Waukesha, Wisconsin

PROJECT ID: 3240-05-01

Prepared by:

Kapur & Associates, Inc.
7711 North Port Washington Road
Milwaukee, Wisconsin 53217

May 21, 2002

PHASE II
ENVIRONMENTAL
SITE ASSESSMENT

FOX AUTO SALVAGE
2423 RACINE AVENUE

RACINE COUNTY
WISCONSIN

Prepared for:

Wisconsin Department of Transportation District 2
Waukesha, Wisconsin

PROJECT ID: 3240-05-01

Prepared by:

Linda J. Fellenz
Hydrogeologist

Reviewed by:

Darin R. Miller
Environmental Engineer

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY

Kapur & Associates, Inc. (K&A) performed a Phase II Environmental Site Assessment (ESA) for the State Trunk Highway (STH) 32 right-of-way (R/W) adjacent to Fox Auto Salvage located at 2423 Racine Avenue, Racine, Wisconsin. This assessment has been performed in conjunction with the Wisconsin Department of Transportation's (WisDOT) proposed improvements to an approximately 7 mile segment of STH 32. The project begins at the intersection of STH 32 and 7th Avenue and continues north to the southern Racine City limits. The proposed improvements include a four-lane divided urban section with offset curb and gutter. This typical section will consist of two 12' driving lanes in each direction separated by a grassed median. New storm sewers and improved curb and gutters will be included in the construction.

In 2000, a Phase I Environmental Site Assessment performed by K&A within the proposed improvement section of STH 32 identified Fox Auto Salvage as a potential hazardous materials site.

The purpose of this assessment was to identify possible environmental contamination within the R/W that may be associated with the past use of the site as a gasoline service station.

The assessment has been performed pursuant to Procedure 21-35-10 of WisDOT Facilities Development Manual.

1.1 Findings and Conclusions

Findings

Soil

- Two soil borings (B1 & B2) were advanced to a maximum-drilled depth of 15 feet below ground surface (bgs).
- Four soil samples (B1-2, B1-4, B2-2 and B2-5) were collected and analyzed for Gasoline Range Organics (GRO), Diesel Range Organics (DRO), Volatile Organic Compounds (VOCs), and lead.
- GRO ranged from below laboratory detection limits to 4,090 parts per million (ppm) in sample B2-2 at a depth of 1-3 feet bgs.
- DRO was detected throughout the samples ranging from 15.7 ppm in sample B2-5 at 7-9 feet bgs to a maximum of 757 ppm in sample B2-2 at 1-3 feet bgs.

- Lead was detected throughout the samples ranging from 5.17 ppm in sample B2-2 to a maximum concentration of 2,570 ppm in sample B1-4 at 5-7 feet bgs.
- Of the VOC detected in the soil the concentration of benzene in sample B1-2 (0.0518 ppm at 1-3 feet bgs), B1-4 (0.167 ppm at 5-7 feet bgs), B2-2 (0.952 ppm at 1-3 feet bgs) and B2-5 (0.350 ppm at 7-9 feet bgs); the concentration of ethylbenzene in sample B2-2 of 5.940 ppm and the total xylene concentration in sample B2-2 of 10.2 ppm exceed the NR 720 generic Residual Contaminant Level (RCLs).
- Soil borings were converted to temporary groundwater monitoring wells (B1-W & B2-W).

Groundwater

- Groundwater was encountered at approximately 6 feet bgs in the temporary wells.
- One sample from each well was collected and laboratory analyzed for GRO, DRO, VOCs and lead.
- GRO concentrations detected were 11,900 parts per billion (ppb) in B1-W and 26,700 ppb in sample B2-W.
- DRO was detected at 0.0149 ppb in sample B1-W and at 0.0408 ppb in B2-W.
- Among the VOCs: Benzene concentrations detected in groundwater samples B1-W (513 ppb) and B2-W (725 ppb) were above the NR 140 Enforcement Standards (ES). The ethylbenzene concentration in sample B2-W (931 ppb) was above the NR 140 ES and the B1-W concentration of 582 ppb was below the NR 140 ES but above the NR 140 Preventive Action Limit (PAL). Methyl tert-butyl ether concentrations in sample B2-W (70.9 ppb) was above the NR 140 ES and the concentration of 45.3 ppb in sample B1-W was above the NR 140 PAL but below the NR 140 ES. The naphthalene concentrations of 200 ppb and 266 ppb in samples B1-W and B2-W respectively were above the NR 140 ES. The total 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene concentrations of 490 ppb and 145 ppb in sample B2-W was above the NR 140 ES the concentrations of 218 ppb and 119 ppb in sample B1-W was above the NR 140 PAL but below the NR 140 ES.

Conclusions

Based on the field observations and the laboratory analytical results, K&A has reached the following conclusions:

- DRO exceeded the NR 720 generic RCLs of 250 ppm for the protection of groundwater in sample B2-2 (757 ppm). GRO concentrations exceeded the NR 720 generic RCLs in samples B1-4 (435 ppm) and B2-2 (4,090 ppm). The maximum lead concentration of 2,570 ppm detected in sample B1-4 is above the NR 720 generic RCLs of 50 ppm based on human health risk from direct contact.
- Benzene in sample B1-2 (0.0518 ppm), B1-4 (0.167 ppm), B2-2 (0.952 ppm) and B2-5 (0.350 ppm), ethylbenzene in sample B2-2 of 5.940 ppm, and the total xylene in sample B2-2 of 10.2 ppm exceed their respective NR 720 generic RCLs.
- DRO and GRO were detected in groundwater samples collected during this investigation. Although no groundwater standard exists for GRO or DRO, its detection does indicate the presence of petroleum contamination in the groundwater.
- Benzene concentrations detected in groundwater samples B1-W (513 ppb) and B2-W (725 ppb) were above the NR 140 ES. The ethylbenzene concentration in sample B2-W (931 ppb) was above the NR 140 ES and the B1-W concentration of 582 ppb was below the NR 140 ES but above the NR 140 PAL. Methyl tert-butyl ether concentrations in sample B2-W (70.9 ppb) was above the NR 140 ES and the concentration of 45.3 ppb in sample B1-W was above the NR 140 PAL but below the NR 140 ES. The naphthalene concentrations of 200 ppb and 266 ppb in samples B1-W and B2-W respectively were above the NR 140 ES. The total 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene concentrations of 490 ppb and 145 ppb in sample B2-W was above the NR 140 ES the concentrations of 218 ppb and 119 ppb in sample B1-W was above the NR 140 PAL but below the NR 140 ES.
- Lead concentrations were below laboratory detection limits throughout the groundwater samples.

1.2 Recommendations

Based on the above conclusions, K&A recommends the following:

- Based on laboratory analytical results, petroleum contamination is present in soils within the R/W adjacent to Fox Auto Salvage. Therefore, soils excavated at depths of 2-8 feet bgs within the R/W near the site should be managed as special waste in accordance with NR 718. Based on the limited information obtained from the two borings advanced during this investigation, the exact volume of impacted soils adjacent to the site is not known at this time.

- Additional borings advanced at the site may determine the extent of contamination in the soil.

- Benzene, ethylbenzene, methyl tert-butyl ether, naphthalene, total trimethylbenzene concentrations exceeding the NR 140 groundwater ES were encountered in the groundwater collected during this investigation. If excavation is carried out to, or below the water table during roadway construction, the groundwater should be handled and managed per state and federal rules and regulations.

- Based on the analytical results for lead from sample B1-4 a Toxicity Characteristic Leaching Procedure (TCLP) analysis should be completed on the site soils.

- The DRO, GRO, and VOC impact in the soil and groundwater should be reported to the Wisconsin Department of Natural Resources (WDNR).

2.0 SITE INVESTIGATION

2.1 Purpose and Scope

The Wisconsin Department of Transportation's (WisDOT) is planning improvements to an approximately 7 mile segment of STH 32. The project begins at the intersection of STH 32 and 7th Avenue and continues north to the southern Racine City limits. In 2000, Kapur & Associates, Inc. (K&A) completed a Phase I Environmental Site Assessment (ESA) to identify the potential hazardous material sites within the proposed reconstruction section of the roadway. The K&A ESA identified Fox Auto Salvage as a potential hazardous materials site (Ref. 1).

The purpose of this assessment was to identify possible environmental contamination within the right-of-way (R/W) that may be associated with the past use of the site as a gasoline service station.

The scope of work performed for the assessment included the following:

- Subcontracted with North Shore Drilling Inc. to install two soil borings and convert them to temporary groundwater monitoring wells.
- Prepared a site-specific Health and Safety Plan.
- Field-screened fourteen (14) soil samples with a Photoionization Detector (PID) for the presence of Volatile Organic Compounds (VOCs).
- Described the soil samples according to Unified Soil Classification System (USCS) and prepared soil boring logs.
- Laboratory-analyzed four (4) soil samples for Gasoline Range Organics (GROs), Diesel Range Organics (DROs), VOCs, and lead.
- Supervised the installation of temporary groundwater monitoring wells.
- Developed monitoring wells by bailing approximately 6 gallons of water from each well.
- Collected one groundwater sample from each temporary monitoring well,
- Laboratory-analyzed groundwater samples for GRO, DRO, VOCs, and lead.
- Evaluated the field and laboratory testing results.
- Provided recommendations regarding the environmental conditions of soils and groundwater at the site.

2.2 Site Visit

Fox Auto Salvage is located on the east side of STH 32 in the Town of Mount Pleasant, Racine County, Wisconsin. The site is bounded by commercial properties to the north and east. The site is currently an automotive service and repair facility. (Photographs No. 1 and No. 2, Appendix B).

2.3 Site History

According to the owner's brother, Mr. Kenny Fox the site was a gasoline service station until the late 1970's. One (1) 500 gallon unleaded gasoline UST was removed from the property in 1979. The date of installation is not known. The site is located in an area of mixed commercial and residential properties.

2.4 Site Maps and Figures

Figure 1 in Appendix A is a 7.5 minute topographic map (South Racine Quadrangle, 1992) showing the location of the site. Figure 2 in Appendix A shows the boring locations.

2.5 Investigation Program

On September 21, 2001, two soil borings were installed with a truck-mounted rotary drilling rig equipped with a hydraulic head, using hollow stem augers. The samples were obtained using Standard Penetration Test (SPT) procedure (ASTM D-1586). Northshore Drilling Inc. of Grafton, Wisconsin performed the boring and sampling. The soil sampling procedures are presented in Appendix D.

Borings were strategically located by a K&A hydrogeologist in the potential construction excavation area within the existing R/W limits. Boring B1 was located at approximately 40 feet east of the centerline on STH 32 within the existing roadway R/W limits. Boring B2 was located approximately 35 feet east of the centerline of STH 32 within the existing roadway R/W limits. Each boring was advanced to a depth of 15 feet below ground surface (bgs).

Soil samples collected during drilling were field-screened for VOCs with a PID meter. Fourteen samples were collected and field-screened. PID values above the background levels were detected throughout the samples ranging from 27.3 to 700.0 parts per million

(ppm). Detailed descriptions of drilling, field screening procedures, and soil sample collection are described in Appendix D. The PID values for each sample are presented in Wisconsin Department of Natural Resources (WDNR) soil boring logs in Appendix E.

Based on the PID readings along with soil and groundwater conditions, two soil samples were collected from each boring for laboratory analysis. Samples were laboratory-analyzed for GROs, DROs, VOCs, and lead to investigate possible releases of the petroleum products.

After the completion of drilling, temporary monitoring wells were installed in boreholes B1 and B2. The casing used in these wells was two inch polyvinyl chloride (PVC). Each well was completed with a 10-foot screen at the base of the borehole. Each well was developed by pumping approximately 6 gallons of water using a submersible purge pump. Two groundwater samples were collected and submitted to the laboratory for analysis of GRO, DRO, VOCs, and lead to investigate possible gasoline, diesel fuel, and/or waste oil releases.

All downhole boring and sampling equipment was decontaminated before use and between boreholes and sampling events.

All boreholes were abandoned by filling with chipped bentonite. The WDNR abandonment forms are provided in Appendix E.

Petro odors / PIDs in B1 & B2 !

2.6 Investigative Waste

Visual and olfactory observations, and PID screening of soil samples did not indicate the presence of petroleum impacted soils at the site. No investigative waste was generated during this investigation.

what about soil cuttings?

2.7 Site Geology and Hydrogeology

The topography in the vicinity of the site slopes gently to the southwest toward a low-lying area. The local ground elevation is approximately 628 feet above the mean sea level (MSL).

The general site soil characteristics were documented through logging and description of the soil samples from the boreholes. Based on the borehole logs, the subsurface soils at the site consist of one foot of concrete (B2) or asphalt (B1) and base coarse underlain by

silty clay to 7 feet bgs underlain by blackish gray silty sand to 13 feet bgs (B2) and black to gray silty sand and gravel to 13 feet bgs (B1), underlain by gray stiff silty clay that extend to the maximum drilled depth of 15 feet bgs. The depth of bedrock at the site is estimated to be more than 100 feet (Ref. 3).

Boreholes were left open overnight to allow the water levels to stabilize in the boreholes. Based on these relatively stabilized water levels, groundwater was measured at approximately 6 feet bgs at the temporary monitoring wells, adjacent to the site.

2.8 Analytical Procedures

Great Lakes Analytical of Buffalo Grove, Illinois (Wisconsin DNR Certification Number: 999917160) analyzed the soil and groundwater samples for this investigation. The soil samples were analyzed for GRO, DRO, VOCs, and lead. Groundwater samples were analyzed for GRO, DRO, VOCs, and lead.

Analytical methods used for analyzing soil and groundwater samples are presented in Appendix D.

2.9 Analytical Results

2.9.1 Soil Samples

Soil samples B1-2 and B2-2 were collected at 1 to 3 feet bgs, sample B1-4 was collected at 5 to 7 feet bgs and sample B2-5 was collected at 7 to 9 feet bgs.

GRO was detected in samples B1-4 (435 ppm), B2-2 (4090 ppm) and B2-5 (71 ppm). DRO was detected in samples B1-2 (24.6 ppm), B1-4 (61.7 ppm) B2-2 (757 ppm) and B2-5 (15.7 ppm). DRO exceeded the NR 720 generic Residual Contaminant Level (RCLs) of 250 ppm for the protection of groundwater in sample B2-2 (757 ppm). GRO concentrations exceeded the NR 720 generic RCLs of 250 ppm for the protection of groundwater in samples B1-4 (435 ppm) and B2-2 (4,090 ppm).

Of the VOCs fifteen were detected throughout the samples: benzene B1-2 (0.0518 ppm), B1-4 (0.167 ppm), B2-2 (0.952 ppm) and B2-5 (0.350 ppm); bromobenzene B2-2 (1.30 ppm); n-butylbenzene B1-2 (0.06508 ppm), B1-4 (1.060 ppm), B2-2 (2.920 ppm) and B2-5 (0.141 ppm); sec-butylbenzene B1-2 (0.0457 ppm), B1-4 (3.550 ppm), B2-2 (3.410 ppm) and B2-5 (0.177 ppm); tert-butylbenzene B1-4 (2.060 ppm), B2-2 (1.370 ppm) and

B2-5 (0.152 ppm); ethylbenzene B1-2 (0.0672 ppm), B1-4 (1.190 ppm), B2-2 (5.940 ppm) and B2-5 (0.863 ppm); isopropylbenzene B1-4 (2.010 ppm), B2-2 (2.580 ppm) and B2-5 (0.228 ppm); p-isopropyltoluene B1-4 (4.140 ppm), B2-2 (1.670 ppm) and B2-5 (0.0936 ppm); methyl tert-butyl ether B2-2 (0.544 ppm); naphthalene B1-2 (0.283 ppm), B1-4 (2.900 ppm), B2-2 (2.010 ppm); n-propylbenzene B1-2 (0.070 ppm), B1-4 (3.290 ppm), B2-2 (3.360 ppm) and B2-5 (0.308 ppm); toluene B1-2 (0.072 ppm), B1-4 (0.852 ppm), B2-2 (0.846 ppm) and B2-5 (0.227 ppm); 1,2,4-trimethylbenzene B1-2 (0.146 ppm), B1-4 (0.802 ppm), B2-2 (6.580 ppm) and B2-5 (0.499 ppm); 1,3,5-trimethylbenzene B1-2 (0.179 ppm), B1-4 (1.180 ppm), B2-2 (3.470 ppm) and B2-5 (0.324 ppm), and total xylenes B1-2 (0.311 ppm), B1-4 (1.670 ppm), B2-2 (10.20 ppm) and B2-5 (2.150 ppm). Of the VOC detected in the soil the concentration of benzene in sample B1-2 (0.0518 ppm), B1-4 (0.167 ppm), B2-2 (0.952 ppm) and B2-5 (0.350 ppm); the concentration of ethylbenzene in sample B2-2 of 5.940 ppm and the total xylene concentration in sample B2-2 of 10.2 ppm exceed the NR 720 generic Residual Contaminant Level (RCLs).

Lead was detected in samples B1-2 (38 ppm), B1-4 (2570 ppm), B2-2 (5.17 ppm), and B2-5 (18.8 ppm). The concentration of lead in sample B1-4 of 2570 ppm exceeds the NR 720 generic RCLs of 50 ppm based on human health risk by direct contact.

Table 1 in Appendix C presents the summary of the laboratory analytical results. The complete laboratory report and chain of custody are included in Appendix F.

2.9.2 Groundwater Samples

GRO was detected in groundwater samples B1-W at 11,900 parts per billion (ppb) and 26,700 ppb. DRO concentrations ranged from 0.0149 ppb in sample B1-W to 0.0408 ppb in sample B2-W. Although no groundwater standard exists for GRO or DRO, its detection does indicate the presence of petroleum contamination in the groundwater.

Among the VOCs, benzene was detected in sample B1-W (513 ppb) and B2-W (725 ppb): n-butylbenzene was detected in sample B1-W (33.2 ppb) and B2-W (39.7 ppb); ethylbenzene was detected in sample B1-W (582 ppb) and B2-W (931 ppb); isopropylbenzene was detected in sample B1-W (71.4 ppb) and B2-W (102 ppb); p-isopropyltoluene was detected in sample B2-W (29.4 ppb); methyl tert-butyl ether was detected in sample B1-W (45.3 ppb) and B2-W (70.9 ppb); naphthalene was detected in sample B1-W (200 ppb) and B2-W (266 ppb); n-propylbenzene was detected in sample B1-W (134 ppb) and B2-W (111 ppb); toluene was detected in sample B1-W (58.8 ppb)

and B2-W (100 ppb); 1,2,4-trimethylbenzene was detected in sample B1-W (218 ppb) and B2-W (490 ppb); 1,3,5-trimethylbenzene was detected in sample B1-W (119 ppb) and B2-W (145 ppb), and total xylenes was detected in sample B1-W (1,060 ppb) and B2-W (1,780 ppb). Benzene concentrations detected in groundwater samples B1-W (513 ppb) and B2-W (725 ppb) were above the NR 140 Enforcement Standards (ES). The ethylbenzene concentration in sample B2-W (931 ppb) was above the NR 140 ES and the B1-W concentration of 582 ppb was above the NR 140 Preventive Action Limit (PAL) but below the NR 140 ES. Methyl tert-butyl ether concentrations in sample B2-W (70.9 ppb) was above the NR 140 ES and the concentration of 45.3 ppb in sample B1-W was above the NR 140 PAL but below the NR 140 ES. The naphthalene concentrations of 200 ppb and 266 ppb in sample B1-W and B2-W respectively were above the NR 140 ES. The collective 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene concentrations of 490 ppb and 145 ppb in sample B2-W were above the NR 140 ES the concentrations of 218 ppb and 119 ppb in sample B1-W was above the NR 140 PAL but below the NR 140 ES.

Lead concentrations were below laboratory detection limits throughout the groundwater samples.

Table 2 in Appendix C presents the summary of the laboratory analytical results. The complete laboratory report and chain of custody are included in Appendix F.

3.0 CONCLUSIONS

Based on the field observations and the laboratory analytical results, K&A has reached the following conclusions:

- DRO exceeded the NR 720 generic RCLs of 250 ppm for the protection of groundwater in sample B2-2 (757 ppm). GRO concentrations exceeded the NR 720 generic RCLs in samples B1-4 (435 ppm) and B2-2 (4,090 ppm). The maximum lead concentration of 2,570 ppm detected in sample B1-4 is above the NR 720 generic RCLs of 50 ppm based on human health risk from direct contact.

- Benzene in sample B1-2 (0.0518 ppm), B1-4 (0.167 ppm), B2-2 (0.952 ppm) and B2-5 (0.350 ppm), ethylbenzene in sample B2-2 of 5.940 ppm, and the total xylene in sample B2-2 of 10.2 ppm exceed their respective NR 720 generic RCLs.

- DRO and GRO were detected in groundwater samples collected during this investigation. Although no groundwater standard exists for GRO or DRO, its detection does indicate the presence of petroleum contamination in the groundwater.

- Benzene concentrations detected in groundwater samples B1-W (513 ppb) and B2-W (725 ppb) were above the NR 140 ES. The ethylbenzene concentration in sample B2-W (931 ppb) was above the NR 140 ES and the B1-W concentration of 582 ppb was below the NR 140 ES but above the NR 140 PAL. Methyl tert-butyl ether concentrations in sample B2-W (70.9 ppb) was above the NR 140 ES and the concentration of 45.3 ppb in sample B1-W was above the NR 140 PAL but below the NR 140 ES. The naphthalene concentrations of 200 ppb and 266 ppb in samples B1-W and B2-W respectively were above the NR 140 ES. The total 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene concentrations of 490 ppb and 145 ppb in sample B2-W was above the NR 140 ES the concentrations of 218 ppb and 119 ppb in sample B1-W was above the NR 140 PAL but below the NR 140 ES.

- Lead concentrations were below laboratory detection limits throughout the groundwater samples.

4.0 RECOMMENDATIONS

Based on the above conclusions, K&A recommends the following:

- Based on laboratory analytical results, petroleum contamination is present in soils within the R/W adjacent to Fox Auto Salvage. Therefore, soils excavated at depths of 2-8 feet bgs within the R/W near the site should be managed as special waste in accordance with NR 718. Based on the limited information obtained from the two borings advanced during this investigation, the exact volume of impacted soils adjacent to the site is not known at this time.

- Additional borings advanced at the site may determine the extent of contamination in the soil.

- Benzene, ethylbenzene, methyl tert-butyl ether, naphthalene, total trimethylbenzene concentrations exceeding the NR 140 groundwater ES were encountered in the groundwater collected during this investigation. If excavation is carried out to, or below the water table during roadway construction, the groundwater should be handled and managed per state and federal rules and regulations.

- Based on the analytical results for lead from sample B1-4 a Toxicity Characteristic Leaching Procedure (TCLP) analysis should be completed on the site soils.

- The DRO, GRO, and VOC impact in the soil and groundwater should be reported to the WDNR.

5.0 REFERENCES

1. Kapur & Associates, Inc. (2000). Phase I Environmental Site Assessment, State Trunk Highway 32 CTH KR to 21st Street, Racine County, Wisconsin.

2. United States Geological Survey (1992). Topographic Map – Racine South Quadrangle, 7.5 minute series.

3. M. G. Mudrey, Jr., B. A. Brown, and J. K. Greenberg (1982). Bed Rock Geologic Map of Wisconsin.

Disclaimer:

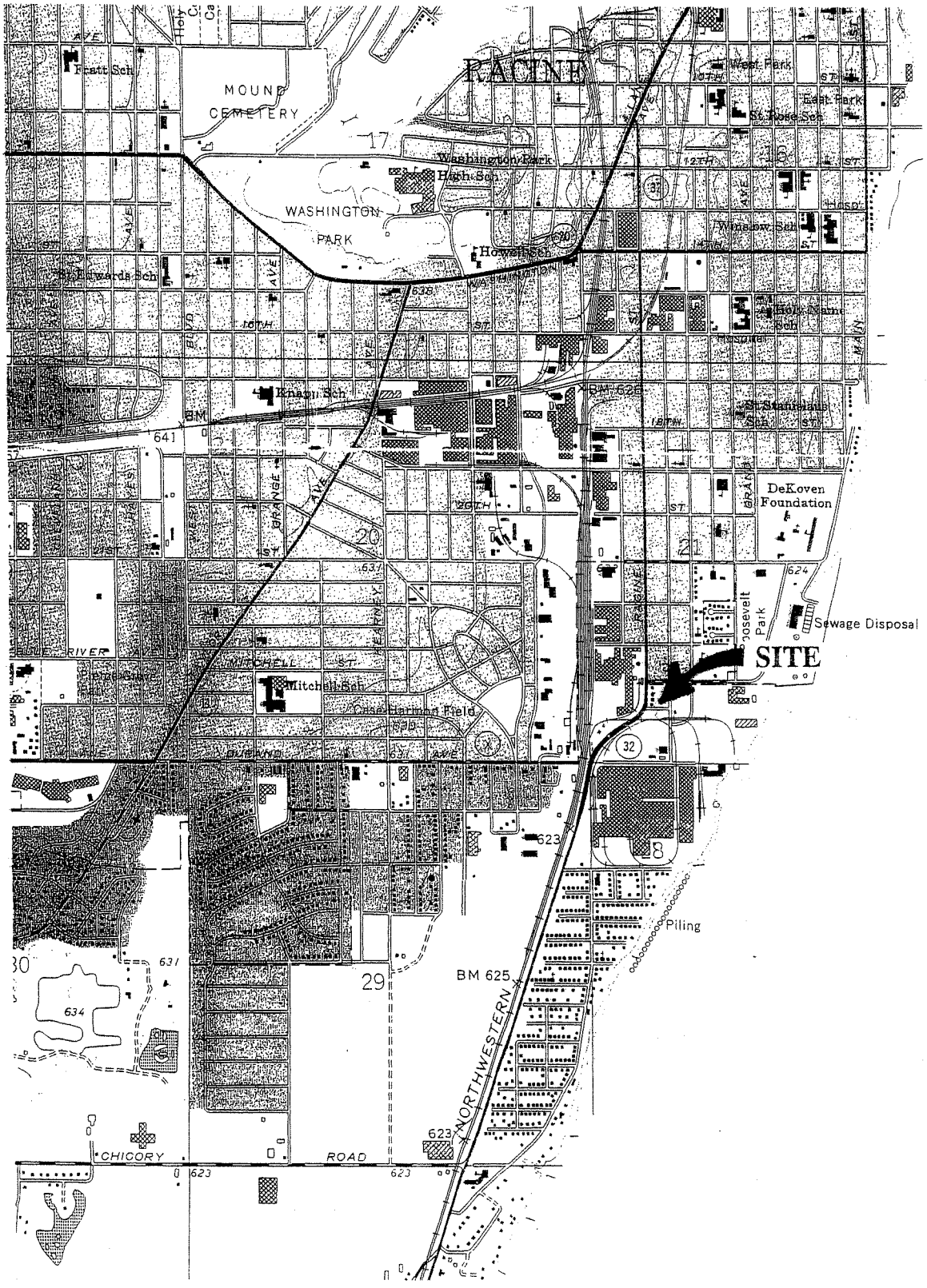
The conclusions and recommendations contained in this report are our professional opinions and are based on the limited sub-subsurface investigation of the site. The scope and performance of the professional services rendered are in accordance with the currently accepted environmental and engineering practices at this time and location. Though reasonable and prudent efforts were made to identify and evaluate potential environmental concerns at the site, there may remain unknown and hidden conditions that were not ascertainable during the assessment. Because the site evaluation was performed based on limited data and information, additional unidentified environmental impacts may be present at the site.

APPENDIX A

SITE MAPS

AND

FIGURES



KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.351.6668

SITE LOCATION MAP
FOX AUTO SALVAGE
2423 RACINE AVENUE

FIGURE
1

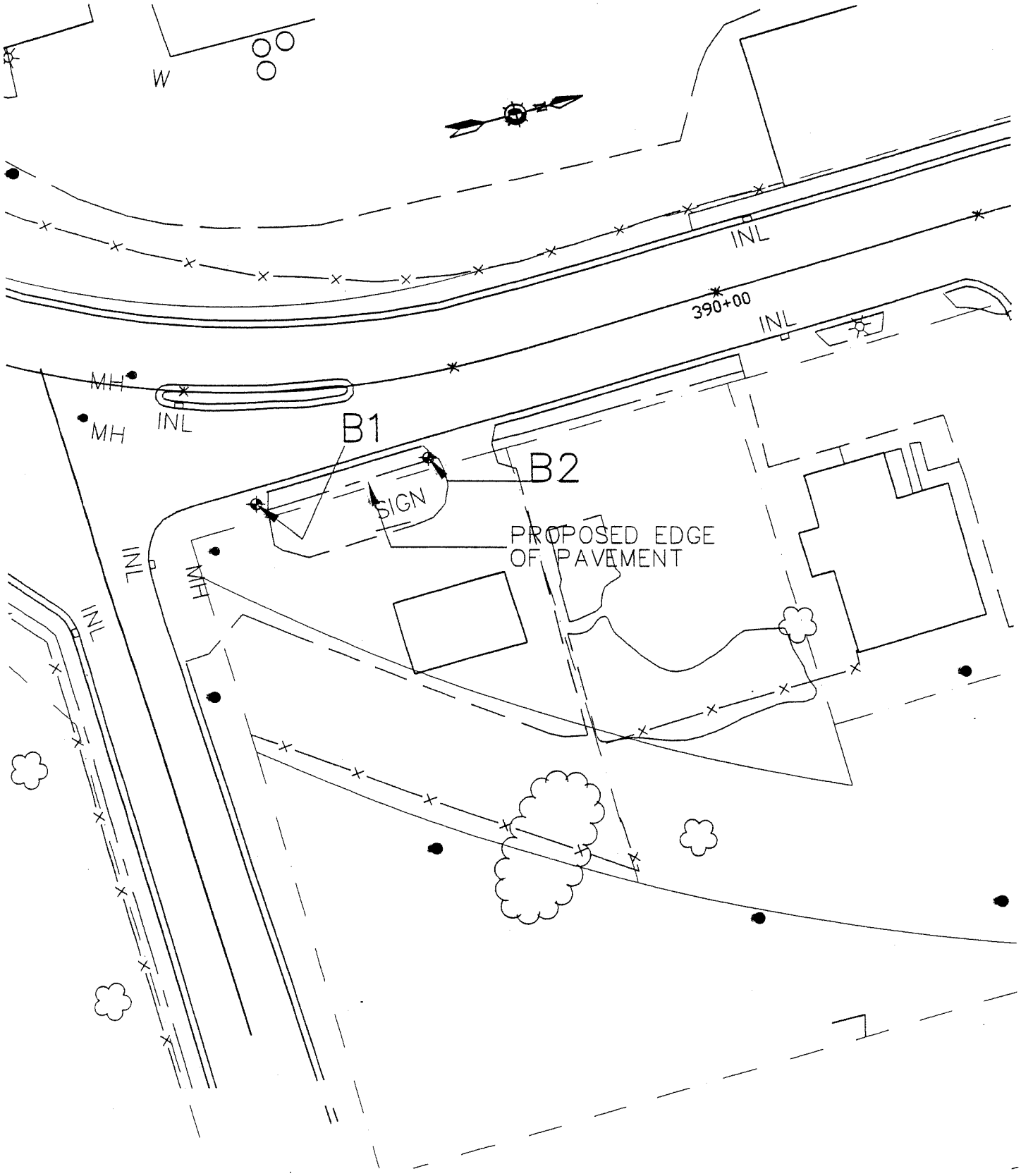
GRAPHIC SCALE:
0 0.5 MILE 1 MILE

REFERENCE: U.S.G.S. 7.5. MINUTE SERIES. PHOTO REVISED 1959

SITE LOCATION MAP
SOURCE: USGS (SOUTH RACINE)

DRAWN BY:	CHECKED BY:	APPROVED BY:	PROJECT NUMBER:	DATE:	REVISED DATE:
DRM	LJF	LJF	98813.604	10/15/01	

FILENAME: \DOT2\813STH32\Environmental\Kenosha\PHASE 1\887FIG1 DATE & TIME LAST EDIT: 08/14/00 Time 11:17



LEGEND

⊕ = Boring Location

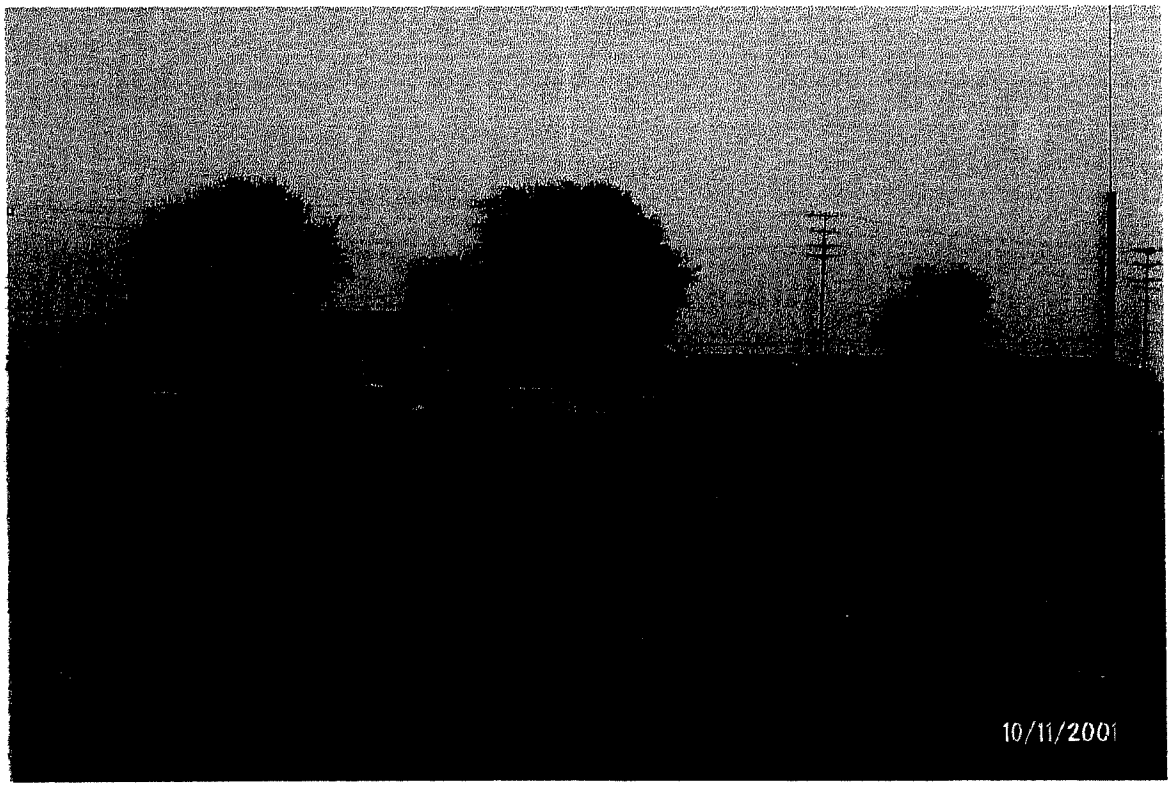
BORING LOCATION MAP
FOX AUTO SALVAGE (FORMER GAS STATION)
2423 RACINE AVENUE
RACINE COUNTY, WISCONSIN

KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.351.6666

FIGURE
2

APPENDIX B

SITE PHOTOGRAPHS



PHOTOGRAPH NO. 1: Fox Auto Salvage
(Facing South)

PHOTOGRAPH NO. 2: Fox Auto Salvage
(Facing South)

APPENDIX C

TABLES

Table 1
Analytical Results of Soil Samples
Fox Auto Salvage
2423 Racine Avenue

Boring #	B-1		B-2		NR 720
Sample ID	B1-2	B1-4	B2-2	B2-5	
Depth (ft)	1-3	5-7	1-3	7-9	NA
DRO (ppm)	24.6	61.7	**757.0**	15.7	100 (250)[1]
GRO (ppm)	<5.55	**435.0**	**4090.0**	71.0	100 (250)[1]
VOCs (ppm)					
Benzene	**0.0518**	**0.167**	**0.952**	**0.350**	0.0055
Bromobenzene	<0.025	<0.250	1.300	<0.050	NS
n-Butylbenzene	0.0608	1.060	2.920	0.141	NS
sec-Butylbenzene	0.0457	3.550	3.410	0.177	NS
tert-Butylbenzene	<0.025	2.060	1.370	0.152	NS
Ethybenzene	0.0672	1.190	**5.940**	0.863	2.90
Isopropylbenzene	<0.025	2.010	2.580	0.228	NS
p-Isopropyltoluene	<0.025	4.140	1.670	0.0936	NS
Methyl tert-butyl ether	<0.025	<0.250	0.544	<0.050	NS
Naphthalene	0.283	2.900	2.010	<0.050	NS
n-Propylbenzene	0.070	3.290	3.360	0.308	NS
Toluene	0.072	0.852	0.846	0.227	1.5
1,2,4-Trimethylbenzene	0.146	0.802	6.580	0.499	NS
1,3,5-Trimethylbenzene	0.179	1.180	3.470	0.324	NS
Total xylenes	0.311	1.670	**10.20**	2.150	4.10
Lead (ppm)	38.0	**2570.0**	5.17	18.8	50[2]

Table 2
Analytical Results of Groundwater Samples
Fox Auto Salvage
2423 Racine Avenue

	Sample ID		NR 140 PAL	NR 140 ES
Parameters	B1-W	B2-W		
DRO (ppb)	0.0149	0.0408	NA	NA
GRO (ppb)	**11900.0**	**26700.0**	NA	NA
VOCs (ppb)				
Benzene	**513.0**	**725.0**	0.5	5.0
n-Butylbenzene	33.2	39.7	NS	NS
Ethybenzene	582.0	**931.0**	140.0	700.0
Isopropylbenzene	71.4	102.0	NS	NS
p-Isopropyltoluene	<25.0	29.4		
Methyl tert-butyl ether	45.3	**70.9**	12.0	60.0
Naphthalene	**200.0**	**266.0**	8.0	40.0
n-Propylbenzene	134.0	111.0	NS	NS
Toluene	58.8	100.0	200.0	1000.0
1,2,4-Trimethylbenzene	218.0	**490.0**	96.0[2]	480.0[2]
1,3,5-Trimethylbenzene	119.0	**145.0**	96.0[2]	480.0[2]
Total xylenes	1060.0	1780.0	1000.0	10000.0
Lead	<5.0	<5.0	1.5	15

Notes:

ppm = parts per million; ppb = parts per billion; DRO = Diesel Range Organics, GRO = Gasoline Range Organics, VOCs = Volatile Organic Compounds

1 = Generic Residual Contaminant Levels (RCLs) in ppm based on hydraulic conductivity of site soils (Source: Wis. Adm. Code, NR 720)

2 = Generic RCLs in ppm based on Human health Risk from direct contact

ND = Not Detected; NA = Not Applicable; NS = No Standard

ES = Enforcement Standard per NR 140 (ppb), PAL = Preventative Action Limit per NR 140 (ppb)

Only compounds detected in at least one sample are shown in this table.

APPENDIX D

METHODS OF INVESTIGATION

1. Drilling and Collection of Soil Samples

Hollow Stem Auger

On September 21, 2001, two soil borings designated B1 and B2 were installed at the location shown in Figure 2 (Appendix A) using a truck mounted rotary drilling rig equipped with hydraulic head, using hollow stem augers. Drilling was performed by North Shore Drilling Inc. of Grafton, Wisconsin. During drilling of each boring, soil samples were obtained continuously using Standard Penetration Test (SPT) procedure (ASTM D-1586). Borings were advanced to a depth of 15 feet below ground surface (bgs). The samples were examined by a K&A Hydrogeologist for color, odor, texture, moistness, and other characteristics of the soil. These observations were used to prepare descriptive geologic logs for each boring and classify the soils according to Unified Soil Classification System (USCS).

2. Decontamination Procedures

All downhole boring and sampling equipment was decontaminated before use and between the borings and sampling events. The split spoon sampler was decontaminated by the drilling contractor personnel between samples by scrubbing off soil particles with a brush and water in a bucket with an Alconox solution and then rinsing the sampler in a separate bucket of clean water. Two or more split spoon samplers were used alternately to minimize drilling delays during decontamination of the sampler.

3. Field-Screening of Soil Samples

A portion of each sample was field-screened for the presence of Volatile Range Organic Compounds (VOCs) using an HNu Model DL-101 Photoionization Detector (PID) equipped with an 11.7 eV probe. The samples were tested by filling an 8-ounce glass jar half-full with desegregated soil and then sealing the jar with aluminum foil and screw ring cap. The jars were then set aside for a minimum of 20 minutes to allow any VOCs present within the soil to volatilize and equilibrate within headspace in the jar. If the ambient outside temperature was less than 70^0 Fahrenheit, then the sample was heated by storing the sample jar adjacent to the heating vent inside a heated van. The VOC concentration in the jar headspace was then measured by gently piercing the foil seal with the tip of the PID probe and recording the highest meter response shown on the HNu meter. A background measurement of ambient VOCs was also made immediately prior to each sample measurement and recorded on the PID forms. The PID was calibrated at the beginning using a standard of 100 parts per million (ppm) isobutylene gas and the manufacturer recommended calibration procedures.

4. Laboratory Analysis of Soil Samples

In addition to the soil used for PID testing, a separate portion of each sample was preserved for possible laboratory analyses. These samples were preserved by wrapping the soil tightly in aluminum foil to minimize exposure to air, placing the soil in a labeled zip-lock bag, and then placing the bag into a cooler with ice. Two samples from each of the borings were selected for laboratory analyses of diesel range organics (DRO), gasoline range organics (GRO), VOCs, and Lead. A methanol trip blank was collected to provide quality assurance/quality control (QA/QC) data and was laboratory-analyzed for VOCs.

The samples were collected in the laboratory provided jars as required by WDNR guidance documents. All samples were stored in a cooler with ice and maintained at a temperature of approximately 4^0 C until delivered under chain of custody procedures to laboratory personnel. Analytical methods used for analyzing the soil samples were Wisconsin Modified GRO for GROs, Wisconsin Modified DRO for DROs, EPA Method 8021 for VOCs, and EPA Method 6010 for Lead.

5. Laboratory Analysis of Groundwater Samples

Monitoring wells, B1-W and B2-W were developed by pumping approximately 6 gallons of water using a submersible purge pump. The wells were purged dry.

One groundwater sample was collected from each well and analyzed for DRO, GRO, VOCs and lead. Analytical methods used for analyzing the soil samples were Wisconsin Modified GRO for GROs, Wisconsin Modified DRO for DROs, EPA Method 8021 for VOCs, and EPA Method 6010 for Lead. A trip blank supplied by the laboratory accompanied the groundwater samples at all times until it was delivered to the laboratory personnel to provide quality assurance/quality control (QA/QC) data and was laboratory-analyzed for GRO, DRO, VOCs, and Lead. The groundwater samples collected for VOCs analysis were preserved with hydrochloric acid in the field. The Lead samples were field filtered and preserved with nitric acid.

6. Boring Abandonment Procedures

After the completion of soil sampling and groundwater sampling at borings B1, and B2, each boring was properly abandoned in accordance with Chapter NR 141 of the Wisconsin Administrative Code (WAC). Each boring was backfilled to the ground surface with chipped bentonite. The WDNR borehole abandonment forms were completed for each boring and are included as an appendix of this report.

APPENDIX E

WDNR BORING LOGS

AND

BOREHOLE ABANDONMENT FORMS

State of Wisconsin
Department of Natural Resources

Route To:
☒ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Other

Soil Boring Log Information

Form 4400-122 7-91

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Fox Auto Salvage		B1

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Completed	Drilling Method
North Shore Drilling Grafton, WI	9/21/01	9/21/01	HSA

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			5 FEET	Feet MSL	5 inches

Boring Location
State Plane
SE 1/4 of SW 1/4 of Section 21 ,T 3N N,R 23E
Lat
Long

Local Grid Location (If applicable)
☐N ☐E
☐S ☐W

County	DNR County Code	Civil Town/City/Village
Racine	52	Mt. Pleasant

Sample Number	Sample Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
1			0	Asphalt and base coarse	FILL									
2				Black to gray silty sand and gravel dry to wet petroleum odor	GM-SM			27.3						
3								325						
4			6					650						
5								700						
6								365						
7			12					210						
8				Gray stiff moist silty clay	CL-ML			50.5						
				END OF BORING AT 15'										
			18											
			24											
			30											

Foundry Sand & high lead

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Dale Kapur

Firm KAPUR & ASSOCIATES, INC.
7711 N Port Washington Road
Tel: (414) 351-6668 Fax: (414) 351-4117

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than $10 nor more than $5,000 for each violation. Fined not less than $10 or more than $100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

State of Wisconsin
Department of Natural Resources

Route To:
☒ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Other

Soil Boring Log Information

Form 4400-122 7-91

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wilson's Fish Market		B2

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Completed	Drilling Method
North Shore Drilling Grafton, WI	9/21/01	9/21/01	HSA

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			7.5 FEET	Feet MSL	5 inches

Boring Location
State Plane
SE 1/4 of SW 1/4 of Section 21 ,T 3N N,R 23E

Lat
Long

Local Grid Location (If applicable)
☐N ☐E
☐S ☐W

County	DNR County Code	Civil Town/City/Village
Racine	52	Town of Mt. Pleasant

Sample Number	Sample Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
1			0	Concrete and base coarse	FILL									
2				Black to gray to brown dry to moist soft to stiff silty clay petroleum odor	CL-ML			85.4						
3								210						
4			6					375						
5				Blackish gray silty sand wet some sand and gravel	SM			675						
6								557						
7			12					422						
8				Gray stiff moist silty clay	CL-ML			310						
				END OF BORING AT 15'										
			18											
			24											
			30											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Dan Kapur

Firm KAPUR & ASSOCIATES, INC.
7711 N Port Washington Road
Tel: (414) 351-6668 Fax: (414) 351-4117

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than $10 nor more than $5,000 for each violation. Fined not less than $10 or more than $100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT

Form 3300-5W Rev. 12-91

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back.

(1) GENERAL INFORMATION

Well/Drillhole/Borehole Location

County: Racine

☒ E ☐ W

SE 1/4 of SW 1/4 of Sec. 21 ; T. 3N N; R. 23

(If applicable) _____ Gov't Lot _____ Grid Number

Grid Location _____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Civil Town Name: Town of Mount Plesant

Street Address of Well: 2423 Racine Ave

City, Village: Racine, WI

(2) FACILITY NAME

Original Well Owner (If Known): WIS DOT

Present Well Owner: WIS DOT

Street or Route: District 2

City, State, Zip Code: Waukesha WI 53187-0798

Facility Well No. and/or Name (If Applicable): B1

WI Unique Well No.:

Reason For Abandonment: Sampling Complete

Date of Abandonment: 9/21/01

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On (Date) 9/21/01

☐ Monitoring Well
☐ Water Well
☐ Drillhole
☒ Borehole

Construction Report Available? ☒ Yes ☐ No

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft.) 15 Casing Diameter (ins.) _____
(From groundsurface)

Casing Depth (ft.) _____

Was Well Annular Space Grouted? ☐ Yes ☒ No ☐ Unknown
If Yes, To What Depth? _____ Feet

(4) Depth to Water (Feet) 5

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☒ No	

If No, Explain A

Was casing Cut Off Below Surface?	☐ Yes	☐ No
Did Sealing Material Rise to Surface?	☐ Yes	☒ No
Did Material Settle After 24 Hours?	☐ Yes	☒ No
If Yes, Was Hole Retopped?	☐ Yes	☒ No

(5) Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Dump Bailer ☒ Other (Explain) Gravity

(6) Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Pellets
☒ Granular Bentonite
☐ Bentonite-Cement Grout

(7)

Sealing Material Used	From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume	Mix Ratio or Mud Weight
Bentonite Chips	Surface	15	1.5	

(8) Comments

(9) Name of Person or Firm Doing Sealing Work: K&A/North Shore Drilling Inc.

Signature of Person Doing Work: [signature] Date Signed: 11/20/01

Street or Route: 7711 N. Port Washington Rd Telephone Number: (414) 351-6668

City, State, Zip Code: Milwaukee, WI, 53217

(10) FOR DNR OR COUNTY USE ONLY	
Date Received/Inspected	District/County
Reviewer/Inspector	☐ Complying Work ☐ Non-Complying Work
Follow-up Necessary	

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT

Form 3300-5W Rev. 12-91

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back.

(1) GENERAL INFORMATION

Well/Drillhole/Borehole Location

County: Racine

SE 1/4 of SW 1/4 of Sec. 21 ; T. 3N N; R. 23 ☒ E ☐ W

(If applicable) _____ Gov't Lot _____ Grid Number

Grid Location _____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Civil Town Name: Town of Mount Plesant

Street Address of Well: 2423 Racine Ave

City, Village: Racine, WI

(2) FACILITY NAME

Original Well Owner (If Known): WIS DOT

Present Well Owner: WIS DOT

Street or Route: District 2

City, State, Zip Code: Waukesha WI 53187-0798

Facility Well No. and/or Name (If Applicable): B2

WI Unique Well No.:

Reason For Abandonment: Sampling Complete

Date of Abandonment: 9/21/01

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On (Date) 9/21/01

☐ Monitoring Well
☐ Water Well
☐ Drillhole
☒ Borehole

Construction Report Available? ☒ Yes ☐ No

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft.) 15 Casing Diameter (ins.) _____
(From groundsurface)

Casing Depth (ft.) _____

Was Well Annular Space Grouted? ☐ Yes ☒ No ☐ Unknown
If Yes, To What Depth? _____ Feet

(4) Depth to Water (Feet) 7.5

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☒ No	

If No, Explain A

Was casing Cut Off Below Surface?	☐ Yes	☐ No
Did Sealing Material Rise to Surface?	☐ Yes	☒ No
Did Material Settle After 24 Hours?	☐ Yes	☒ No
If Yes, Was Hole Retopped?	☐ Yes	☒ No

(5) Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Dump Bailer ☒ Other (Explain) Gravity

(6) Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Pellets
☒ Granular Bentonite
☐ Bentonite-Cement Grout

(7)

Sealing Material Used	From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume	Mix Ratio or Mud Weight
Bentonite Chips	Surface	15	1.5	

(8) Comments

(9) Name of Person or Firm Doing Sealing Work: K&A/North Shore Drilling Inc.

Signature of Person Doing Work: [signature] Date Signed: 10/26/01

Street or Route: 7711 N. Port Washington Rd Telephone Number: (414) 351-6668

City, State, Zip Code: Milwaukee, WI, 53217

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected	District/County
Reviewer/Inspector	☐ Complying Work ☐ Non-Complying Work
Follow-up Necessary	

APPENDIX F

LABORATORY ANALYTICAL REPORTS

GREAT LAKES ANALYTICAL

140 East Ryan Road
Oak Creek, Wisconsin 53154

Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

Kapur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled: 9/21/01
7711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
B1-2	W109161-01	Soil (WI)	9/21/01
B1-4	W109161-02	Soil (WI)	9/21/01
B2-2	W109161-03	Soil (WI)	9/21/01
B2-5	W109161-04	Soil (WI)	9/21/01
B1-W	W109161-05	Water	9/21/01
B2-W	W109161-06	Water	9/21/01

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL

140 East Ryan Road
Oak Creek, Wisconsin 53154

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(414) 570-9460 FAX (414) 570-9461

Lapur & Associates, Inc.	Project: Fox Auto Salvage	Sampled:	9/21/01
7711 N. Port Washington Rd.	Project Number: N/A	Received:	9/21/01
Milwaukee, WI 53217	Project Manager: Darin Miller	Reported:	9/28/01 17:10

Diesel Range Organics (DRO) by WDNR DRO
Great Lakes Analytical--Oak Creek

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
1-2			W109161-01				Soil (WI)	
Diesel Range Organics (DRO)	1090068	9/25/01	9/26/01	WDNR DRO	5.55	**24.6**	mg/kg dry	T10,T11,T12,T15,T2,T6
1-4			W109161-02				Soil (WI)	G12
Diesel Range Organics (DRO)	1090068	9/25/01	9/26/01	WDNR DRO	35.0	**61.7**	mg/kg dry	T10,T11,T12,T15,T2,T6
B2-2			W109161-03				Soil (WI)	G12
Diesel Range Organics (DRO)	1090068	9/25/01	9/26/01	WDNR DRO	36.9	**757**	mg/kg dry	T10,T12,T13,T6
32-5			W109161-04				Soil (WI)	
Diesel Range Organics (DRO)	1090068	9/25/01	9/26/01	WDNR DRO	6.63	**15.7**	mg/kg dry	T10,T11,T12,T15,T2,T6
61-W			W109161-05				Water	G12
Diesel Range Organics (DRO)	1090078	9/27/01	9/28/01	WDNR DRO	0.600	**14.9**	mg/l	T10,T12,T13,T6
2-W			W109161-06				Water	G12
Diesel Range Organics (DRO)	1090078	9/27/01	9/28/01	WDNR DRO	0.600	**40.8**	mg/l	T10,T12,T13,T2,T6

Great Lakes Analytical--Oak Creek

**Refer to end of report for text of notes and definitions.*

Andrea Stathas, Project Manager

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apur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled: 9/21/01
7711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

Gasoline Range Organics (GRO) by WDNR GRO
Great Lakes Analytical--Oak Creek

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
1-2			W109161-01				Soil (WI)	
Gasoline Range Organics (GRO)	1090076	9/26/01	9/26/01	WDNR GRO	5.55	ND	mg/kg dry	
1-4			W109161-02				Soil (WI)	G12
Gasoline Range Organics (GRO)	1090076	9/26/01	9/26/01	WDNR GRO	58.3	**435**	mg/kg dry	T15,T2
B2-2			W109161-03				Soil (WI)	G12
Gasoline Range Organics (GRO)	1090076	9/26/01	9/27/01	WDNR GRO	1230	**4090**	mg/kg dry	T2,T3,T4
B2-5			W109161-04				Soil (WI)	G12
Gasoline Range Organics (GRO)	1090076	9/26/01	9/26/01	WDNR GRO	33.1	**71.0**	mg/kg dry	T1,T2,T4
B1-W			W109161-05				Water	G12
Gasoline Range Organics (GRO)	1090072	9/25/01	9/25/01	WDNR GRO	1000	**11900**	ug/l	T1,T4
2-W			W109161-06				Water	G12
Gasoline Range Organics (GRO)	1090072	9/25/01	9/25/01	WDNR GRO	5000	**26700**	ug/l	T1,T4

Great Lakes Analytical--Oak Creek

**Refer to end of report for text of notes and definitions.*

Andrea Stathas, Project Manager

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Lapur & Associates, Inc.	Project: Fox Auto Salvage	Sampled:	9/21/01
711 N. Port Washington Rd.	Project Number: N/A	Received:	9/21/01
Milwaukee, WI 53217	Project Manager: Darin Miller	Reported:	9/28/01 17:10

WDNR Volatile Organic Compounds by Method 8021
Great Lakes Analytical--Oak Creek

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
SB-2			W109161-01				Soil (WI)	
Benzene	1090070	9/25/01	9/27/01		25.0	**51.8**	ug/kg dry	
Bromobenzene	"	"	"		25.0	ND	"	
Bromodichloromethane	"	"	"		25.0	ND	"	
n-Butylbenzene	"	"	"		25.0	**60.8**	"	
sec-Butylbenzene	"	"	"		25.0	**45.7**	"	
tert-Butylbenzene	"	"	"		25.0	ND	"	
Carbon tetrachloride	"	"	"		25.0	ND	"	
Chlorobenzene	"	"	"		25.0	ND	"	
Chloroethane	"	"	"		25.0	ND	"	
Chloroform	"	"	"		25.0	ND	"	
Chloromethane	"	"	"		25.0	ND	"	
2-Chlorotoluene	"	"	"		25.0	ND	"	
4-Chlorotoluene	"	"	"		25.0	ND	"	
Dibromochloromethane	"	"	"		25.0	ND	"	
1,2-Dibromo-3-chloropropane	"	"	"		25.0	ND	"	
1,2-Dibromoethane	"	"	"		25.0	ND	"	
1,2-Dichlorobenzene	"	"	"		25.0	ND	"	
1,3-Dichlorobenzene	"	"	"		25.0	ND	"	G19
1,4-Dichlorobenzene	"	"	"		25.0	ND	"	
Dichlorodifluoromethane	"	"	"		25.0	ND	"	
1,1-Dichloroethane	"	"	"		25.0	ND	"	
1,2-Dichloroethane	"	"	"		25.0	ND	"	
1,1-Dichloroethene	"	"	"		25.0	ND	"	
cis-1,2-Dichloroethene	"	"	"		25.0	ND	"	
trans-1,2-Dichloroethene	"	"	"		25.0	ND	"	
1,2-Dichloropropane	"	"	"		25.0	ND	"	
1,3-Dichloropropane	"	"	"		25.0	ND	"	
2,2-Dichloropropane	"	"	"		25.0	ND	"	
Di-isopropyl ether	"	"	"		25.0	ND	"	
Ethylbenzene	"	"	"		25.0	**67.2**	"	
Hexachlorobutadiene	"	"	"		25.0	ND	"	
Isopropylbenzene	"	"	"		25.0	ND	"	
p-Isopropyltoluene	"	"	"		25.0	ND	"	
Methylene chloride	"	"	"		100	ND	"	
Methyl tert-butyl ether	"	"	"		25.0	ND	"	
Naphthalene	"	"	"		25.0	**283**	"	
n-Propylbenzene	"	"	"		25.0	**70.1**	"	
1,1,2,2-Tetrachloroethane	"	"	"		25.0	ND	"	

Great Lakes Analytical--Oak Creek

**Refer to end of report for text of notes and definitions.*

Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL

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Kapur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled: 9/21/01
7711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

WDNR Volatile Organic Compounds by Method 8021
Great Lakes Analytical--Oak Creek

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
1-2 (continued)			**W109161-01**				**Soil (WI)**	
Tetrachloroethene	1090070	9/25/01	9/27/01		25.0	ND	ug/kg dry	
Toluene	"	"	"		25.0	**71.9**	"	
1,2,3-Trichlorobenzene	"	"	"		25.0	ND	"	
1,2,4-Trichlorobenzene	"	"	"		25.0	ND	"	
1,1,1-Trichloroethane	"	"	"		25.0	ND	"	
1,1,2-Trichloroethane	"	"	"		25.0	ND	"	
Trichloroethene	"	"	"		25.0	ND	"	
Trichlorofluoromethane	"	"	"		25.0	ND	"	
1,2,4-Trimethylbenzene	"	"	"		25.0	**146**	"	
1,3,5-Trimethylbenzene	"	"	"		25.0	**179**	"	
Vinyl chloride	"	"	"		25.0	ND	"	
Total Xylenes	"	"	"		25.0	**311**	"	
Surrogate: 1-Cl-4-FB (ELCD)	"	"	"	*80.0-120*		*99.1*	*%*	
Surrogate: 1-Cl-4-FB (PID)	"	"	"	*80.0-120*		*85.3*	"	

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WDNR Volatile Organic Compounds by Method 8021
Great Lakes Analytical--Oak Creek

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
1-4			W109161-02				Soil (WI)	G12
Benzene	1090070	9/25/01	9/27/01		25.0	**167**	ug/kg dry	
Bromobenzene	"	"	9/26/01		250	ND	"	
romodichloromethane	"	"	"		250	ND	"	
-Butylbenzene	"	"	"		250	**1060**	"	
ec-Butylbenzene	"	"	"		250	**3550**	"	
ert-Butylbenzene	"	"	"		250	**2060**	"	
arbon tetrachloride	"	"	"		250	ND	"	
hlorobenzene	"	"	"		250	ND	"	
Chloroethane	"	"	"		250	ND	"	
hloroform	"	"	"		250	ND	"	
hloromethane	"	"	"		250	ND	"	
2-Chlorotoluene	"	"	"		250	ND	"	
4-Chlorotoluene	"	"	"		250	ND	"	
)ibromochloromethane	"	"	"		250	ND	"	
,2-Dibromo-3-chloropropane	"	"	"		250	ND	"	
,2-Dibromoethane	"	"	"		250	ND	"	
,2-Dichlorobenzene	"	"	"		250	ND	"	
,3-Dichlorobenzene	"	"	"		250	ND	"	
,4-Dichlorobenzene	"	"	"		250	ND	"	G19
Dichlorodifluoromethane	"	"	"		250	ND	"	
,1-Dichloroethane	"	"	"		250	ND	"	
,2-Dichloroethane	"	"	"		250	ND	"	
,1-Dichloroethene	"	"	"		250	ND	"	
is-1,2-Dichloroethene	"	"	"		250	ND	"	
rans-1,2-Dichloroethene	"	"	"		250	ND	"	
,2-Dichloropropane	"	"	"		250	ND	"	
1,3-Dichloropropane	"	"	"		250	ND	"	
,2-Dichloropropane	"	"	"		250	ND	"	
)i-isopropyl ether	"	"	"		250	ND	"	
Ethylbenzene	"	"	"		250	**1190**	"	
Hexachlorobutadiene	"	"	"		250	ND	"	
sopropylbenzene	"	"	"		250	**2010**	"	
p-Isopropyltoluene	"	"	"		250	**4140**	"	
Methylene chloride	"	"	"		1000	ND	"	
Methyl tert-butyl ether	"	"	"		250	ND	"	
Naphthalene	"	"	"		250	**2900**	"	
n-Propylbenzene	"	"	"		250	**3290**	"	
1,1,2,2-Tetrachloroethane	"	"	"		250	ND	"	

Great Lakes Analytical--Oak Creek

**Refer to end of report for text of notes and definitions.*

Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL

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WDNR Volatile Organic Compounds by Method 8021
Great Lakes Analytical--Oak Creek

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
1-4 (continued)			W109161-02				Soil (WI)	G12
Tetrachloroethene	1090070	9/25/01	9/26/01		250	ND	ug/kg dry	
Toluene	"	"	9/27/01		25.0	**852**	"	
,2,3-Trichlorobenzene	"	"	9/26/01		250	ND	"	
,2,4-Trichlorobenzene	"	"	"		250	ND	"	
1,1,1-Trichloroethane	"	"	"		250	ND	"	
',1,2-Trichloroethane	"	"	"		250	ND	"	
richloroethene	"	"	"		250	ND	"	
richlorofluoromethane	"	"	"		250	ND	"	
1,2,4-Trimethylbenzene	"	"	"		250	**802**	"	
,3,5-Trimethylbenzene	"	"	"		250	**1180**	"	
inyl chloride	"	"	"		250	ND	"	
Total Xylenes	"	"	"		250	**1670**	"	
Surrogate: 1-Cl-4-FB (ELCD)	"	"	"	*80.0-120*		*132*	*%*	*O5*
Surrogate: 1-Cl-4-FB (PID)	"	"	"	*80.0-120*		*134*	"	*O5*

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WDNR Volatile Organic Compounds by Method 8021
Great Lakes Analytical--Oak Creek

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
B2-2			W109161-03				Soil (WI)	G12
Benzene	1090070	9/25/01	9/27/01		250	**952**	ug/kg dry	
Bromobenzene	"	"	"		250	**1300**	"	
Bromodichloromethane	"	"	"		250	ND	"	
n-Butylbenzene	"	"	"		250	**2920**	"	
sec-Butylbenzene	"	"	"		250	**3410**	"	
tert-Butylbenzene	"	"	"		250	**1370**	"	
Carbon tetrachloride	"	"	"		250	ND	"	
Chlorobenzene	"	"	"		250	ND	"	
Chloroethane	"	"	"		250	ND	"	
Chloroform	"	"	"		250	ND	"	
Chloromethane	"	"	"		250	ND	"	
2-Chlorotoluene	"	"	"		250	ND	"	
4-Chlorotoluene	"	"	"		250	ND	"	
Dibromochloromethane	"	"	"		250	ND	"	
1,2-Dibromo-3-chloropropane	"	"	"		250	ND	"	
1,2-Dibromoethane	"	"	"		250	ND	"	
1,2-Dichlorobenzene	"	"	"		250	ND	"	
1,3-Dichlorobenzene	"	"	"		250	ND	"	G19
1,4-Dichlorobenzene	"	"	"		250	ND	"	
Dichlorodifluoromethane	"	"	"		250	ND	"	
1,1-Dichloroethane	"	"	"		250	ND	"	
1,2-Dichloroethane	"	"	"		250	ND	"	
1,1-Dichloroethene	"	"	"		250	ND	"	
cis-1,2-Dichloroethene	"	"	"		250	ND	"	
trans-1,2-Dichloroethene	"	"	"		250	ND	"	
1,2-Dichloropropane	"	"	"		250	ND	"	
1,3-Dichloropropane	"	"	"		250	ND	"	
2,2-Dichloropropane	"	"	"		250	ND	"	
Di-isopropyl ether	"	"	"		250	ND	"	
Ethylbenzene	"	"	"		250	**5940**	"	
Hexachlorobutadiene	"	"	"		250	ND	"	
Isopropylbenzene	"	"	"		250	**2580**	"	
p-Isopropyltoluene	"	"	"		250	**1670**	"	
Methylene chloride	"	"	"		1000	ND	"	
Methyl tert-butyl ether	"	"	"		250	**544**	"	
Naphthalene	"	"	"		250	**2010**	"	
n-Propylbenzene	"	"	"		250	**3360**	"	
1,1,2,2-Tetrachloroethane	"	"	"		250	ND	"	

Great Lakes Analytical--Oak Creek

**Refer to end of report for text of notes and definitions.*

Andrea Stathas, Project Manager

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7711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

WDNR Volatile Organic Compounds by Method 8021
Great Lakes Analytical--Oak Creek

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
82-2 (continued)			W109161-03				Soil (WI)	G12
Tetrachloroethene	1090070	9/25/01	9/27/01		250	ND	ug/kg dry	
Toluene	"	"	"		250	**846**	"	
1,2,3-Trichlorobenzene	"	"	"		250	ND	"	
1,2,4-Trichlorobenzene	"	"	"		250	ND	"	
1,1,1-Trichloroethane	"	"	"		250	ND	"	
1,1,2-Trichloroethane	"	"	"		250	ND	"	
Trichloroethene	"	"	"		250	ND	"	
Trichlorofluoromethane	"	"	"		250	ND	"	
1,2,4-Trimethylbenzene	"	"	"		250	**6580**	"	
1,3,5-Trimethylbenzene	"	"	"		250	**3470**	"	
Vinyl chloride	"	"	"		250	ND	"	
Total Xylenes	"	"	"		250	**10200**	"	
Surrogate: 1-Cl-4-FB (ELCD)	"	"	"	*80.0-120*		*111*	*%*	
Surrogate: 1-Cl-4-FB (PID)	"	"	"	*80.0-120*		*128*	"	*O5*

**Refer to end of report for text of notes and definitions.*

Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL

140 East Ryan Road
Oak Creek, Wisconsin 53154

Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

Kapur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled: 9/21/01
7711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

WDNR Volatile Organic Compounds by Method 8021
Great Lakes Analytical--Oak Creek

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
B2-5			W109161-04				Soil (WI)	G12
Benzene	1090070	9/25/01	9/27/01		50.0	**350**	ug/kg dry	
Bromobenzene	"	"	"		50.0	ND	"	
Bromodichloromethane	"	"	"		50.0	ND	"	
n-Butylbenzene	"	"	"		50.0	**141**	"	
sec-Butylbenzene	"	"	"		50.0	**177**	"	
tert-Butylbenzene	"	"	"		50.0	**152**	"	
Carbon tetrachloride	"	"	"		50.0	ND	"	
Chlorobenzene	"	"	"		50.0	ND	"	
Chloroethane	"	"	"		50.0	ND	"	
Chloroform	"	"	"		50.0	ND	"	
Chloromethane	"	"	"		50.0	ND	"	
2-Chlorotoluene	"	"	"		50.0	ND	"	
4-Chlorotoluene	"	"	"		50.0	ND	"	
Dibromochloromethane	"	"	"		50.0	ND	"	
1,2-Dibromo-3-chloropropane	"	"	"		50.0	ND	"	
1,2-Dibromoethane	"	"	"		50.0	ND	"	
1,2-Dichlorobenzene	"	"	"		50.0	ND	"	
1,3-Dichlorobenzene	"	"	"		50.0	ND	"	G19
1,4-Dichlorobenzene	"	"	"		50.0	ND	"	
Dichlorodifluoromethane	"	"	"		50.0	ND	"	
1,1-Dichloroethane	"	"	"		50.0	ND	"	
1,2-Dichloroethane	"	"	"		50.0	ND	"	
1,1-Dichloroethene	"	"	"		50.0	ND	"	
cis-1,2-Dichloroethene	"	"	"		50.0	ND	"	
trans-1,2-Dichloroethene	"	"	"		50.0	ND	"	
1,2-Dichloropropane	"	"	"		50.0	ND	"	
1,3-Dichloropropane	"	"	"		50.0	ND	"	
2,2-Dichloropropane	"	"	"		50.0	ND	"	
Di-isopropyl ether	"	"	"		50.0	ND	"	
Ethylbenzene	"	"	"		50.0	**863**	"	
Hexachlorobutadiene	"	"	"		50.0	ND	"	
Isopropylbenzene	"	"	"		50.0	**228**	"	
p-Isopropyltoluene	"	"	"		50.0	**93.6**	"	
Methylene chloride	"	"	"		200	ND	"	
Methyl tert-butyl ether	"	"	"		50.0	ND	"	
Naphthalene	"	"	"		50.0	ND	"	
n-Propylbenzene	"	"	"		50.0	**308**	"	
1,1,2,2-Tetrachloroethane	"	"	"		50.0	ND	"	

Great Lakes Analytical--Oak Creek

**Refer to end of report for text of notes and definitions.*

Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL
140 East Ryan Road
Oak Creek, Wisconsin 53154
Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

Capur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled: 9/21/01
7711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

WDNR Volatile Organic Compounds by Method 8021
Great Lakes Analytical--Oak Creek

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
12-5 (continued)			W109161-04				Soil (WI)	G12
Tetrachloroethene	1090070	9/25/01	9/27/01		50.0	ND	ug/kg dry	
Toluene	"	"	"		50.0	**227**	"	
,2,3-Trichlorobenzene	"	"	"		50.0	ND	"	
,2,4-Trichlorobenzene	"	"	"		50.0	ND	"	
1,1,1-Trichloroethane	"	"	"		50.0	ND	"	
1,1,2-Trichloroethane	"	"	"		50.0	ND	"	
Trichloroethene	"	"	"		50.0	ND	"	
Trichlorofluoromethane	"	"	"		50.0	ND	"	
1,2,4-Trimethylbenzene	"	"	"		50.0	**499**	"	
,3,5-Trimethylbenzene	"	"	"		50.0	**324**	"	
Vinyl chloride	"	"	"		50.0	ND	"	
Total Xylenes	"	"	"		50.0	**2150**	"	
Surrogate: 1-Cl-4-FB (ELCD)	"	"	"	*80.0-120*		*86.5*	*%*	
Surrogate: 1-Cl-4-FB (PID)	"	"	"	*80.0-120*		*59.5*	"	*O4*

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Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL
140 East Ryan Road
Oak Creek, Wisconsin 53154
Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

Kapur & Associates, Inc.	Project: Fox Auto Salvage	Sampled:	9/21/01
7711 N. Port Washington Rd.	Project Number: N/A	Received:	9/21/01
Milwaukee, WI 53217	Project Manager: Darin Miller	Reported:	9/28/01 17:10

WDNR Volatile Organic Compounds by Method 8021
Great Lakes Analytical--Oak Creek

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
B1-W			W109161-05				Water	G12
Benzene	1090082	9/27/01	9/28/01		25.0	**513**	ug/l	
Bromobenzene	"	"	"		25.0	ND	"	
Bromodichloromethane	"	"	"		25.0	ND	"	
n-Butylbenzene	"	"	"		25.0	**33.2**	"	
sec-Butylbenzene	"	"	"		25.0	ND	"	
tert-Butylbenzene	"	"	"		25.0	ND	"	
Carbon tetrachloride	"	"	"		25.0	ND	"	
Chlorobenzene	"	"	"		25.0	ND	"	
Chloroethane	"	"	"		25.0	ND	"	
Chloroform	"	"	"		7.00	ND	"	
Chloromethane	"	"	"		30.0	ND	"	
2-Chlorotoluene	"	"	"		25.0	ND	"	
4-Chlorotoluene	"	"	"		25.0	ND	"	
Dibromochloromethane	"	"	"		25.0	ND	"	
1,2-Dibromo-3-chloropropane	"	"	"		19.5	ND	"	
1,2-Dibromoethane	"	"	"		19.0	ND	"	
1,2-Dichlorobenzene	"	"	"		25.0	ND	"	
1,3-Dichlorobenzene	"	"	"		25.0	ND	"	
1,4-Dichlorobenzene	"	"	"		25.0	ND	"	
Dichlorodifluoromethane	"	"	"		25.0	ND	"	
1,1-Dichloroethane	"	"	"		25.0	ND	"	
1,2-Dichloroethane	"	"	"		25.0	ND	"	
1,1-Dichloroethene	"	"	"		25.0	ND	"	
cis-1,2-Dichloroethene	"	"	"		25.0	ND	"	
trans-1,2-Dichloroethene	"	"	"		25.0	ND	"	
2,2-Dichloropropane	"	"	"		25.0	ND	"	
1,3-Dichloropropane	"	"	"		25.0	ND	"	
1,2-Dichloropropane	"	"	"		25.0	ND	"	
Di-isopropyl ether	"	"	"		250	ND	"	
Ethylbenzene	"	"	"		25.0	**582**	"	
Hexachlorobutadiene	"	"	"		250	ND	"	
Isopropylbenzene	"	"	"		25.0	**71.4**	"	
p-Isopropyltoluene	"	"	"		25.0	ND	"	
Methylene chloride	"	"	"		26.5	ND	"	
Methyl tert-butyl ether	"	"	"		25.0	**45.3**	"	
Naphthalene	"	"	"		100	**200**	"	
n-Propylbenzene	"	"	"		25.0	**134**	"	
1,1,2,2-Tetrachloroethane	"	"	"		17.5	ND	"	

Great Lakes Analytical--Oak Creek

**Refer to end of report for text of notes and definitions.*

Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL

140 East Ryan Road
Oak Creek, Wisconsin 53154

Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

Kapur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled: 9/21/01
7711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

WDNR Volatile Organic Compounds by Method 8021
Great Lakes Analytical--Oak Creek

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
I-W (continued)			W109161-05				Water	G12
Tetrachloroethene	1090082	9/27/01	9/28/01		25.0	ND	ug/l	
Toluene	"	"	"		25.0	**58.8**	"	
2,3-Trichlorobenzene	"	"	"		100	ND	"	
2,4-Trichlorobenzene	"	"	"		100	ND	"	
1,1,1-Trichloroethane	"	"	"		25.0	ND	"	
1,2-Trichloroethane	"	"	"		8.00	ND	"	
richloroethene	"	"	"		25.0	ND	"	
Trichlorofluoromethane	"	"	"		25.0	ND	"	
1,2,4-Trimethylbenzene	"	"	"		50.0	**218**	"	
1,3,5-Trimethylbenzene	"	"	"		50.0	**119**	"	
nyl chloride	"	"	"		8.50	ND	"	
Total Xylenes	"	"	"		25.0	**1060**	"	
Surrogate: 1-Cl-4-FB (ELCD)	"	"	"	*80.0-120*		*112*	*%*	
Surrogate: 1-Cl-4-FB (PID)	"	"	"	*80.0-120*		*109*	"	

GREAT LAKES ANALYTICAL
140 East Ryan Road
Oak Creek, Wisconsin 53154
Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

apur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled: 9/21/01
711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
filwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

WDNR Volatile Organic Compounds by Method 8021
Great Lakes Analytical--Oak Creek

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
2-W			W109161-06				Water	G12
Benzene	1090082	9/27/01	9/28/01		25.0	**725**	ug/l	
Bromobenzene	"	"	"		25.0	ND	"	
Bromodichloromethane	"	"	"		25.0	ND	"	
n-Butylbenzene	"	"	"		25.0	**39.7**	"	
sec-Butylbenzene	"	"	"		25.0	ND	"	
tert-Butylbenzene	"	"	"		25.0	ND	"	
Carbon tetrachloride	"	"	"		25.0	ND	"	
Chlorobenzene	"	"	"		25.0	ND	"	
Chloroethane	"	"	"		25.0	ND	"	
Chloroform	"	"	"		7.00	ND	"	
Chloromethane	"	"	"		30.0	ND	"	
2-Chlorotoluene	"	"	"		25.0	ND	"	
4-Chlorotoluene	"	"	"		25.0	ND	"	
Dibromochloromethane	"	"	"		25.0	ND	"	
1,2-Dibromo-3-chloropropane	"	"	"		19.5	ND	"	
1,2-Dibromoethane	"	"	"		19.0	ND	"	
1,2-Dichlorobenzene	"	"	"		25.0	ND	"	
1,3-Dichlorobenzene	"	"	"		25.0	ND	"	
1,4-Dichlorobenzene	"	"	"		25.0	ND	"	
Dichlorodifluoromethane	"	"	"		25.0	ND	"	
1,1-Dichloroethane	"	"	"		25.0	ND	"	
1,2-Dichloroethane	"	"	"		25.0	ND	"	
1,1-Dichloroethene	"	"	"		25.0	ND	"	
cis-1,2-Dichloroethene	"	"	"		25.0	ND	"	
trans-1,2-Dichloroethene	"	"	"		25.0	ND	"	
1,2-Dichloropropane	"	"	"		25.0	ND	"	
1,3-Dichloropropane	"	"	"		25.0	ND	"	
2,2-Dichloropropane	"	"	"		25.0	ND	"	
Di-isopropyl ether	"	"	"		250	ND	"	
Ethylbenzene	"	"	"		25.0	**931**	"	
Hexachlorobutadiene	"	"	"		250	ND	"	
Isopropylbenzene	"	"	"		25.0	**102**	"	
p-Isopropyltoluene	"	"	"		25.0	**29.4**	"	
Methylene chloride	"	"	"		26.5	ND	"	
Methyl tert-butyl ether	"	"	"		25.0	**70.9**	"	
Naphthalene	"	"	"		100	**266**	"	
n-Propylbenzene	"	"	"		25.0	**111**	"	
1,1,2,2-Tetrachloroethane	"	"	"		17.5	ND	"	

Great Lakes Analytical--Oak Creek

**Refer to end of report for text of notes and definitions.*

Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL

140 East Ryan Road
Oak Creek, Wisconsin 53154

Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

Kapur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled: 9/21/01
7711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

WDNR Volatile Organic Compounds by Method 8021
Great Lakes Analytical--Oak Creek

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
2-W (continued)			**W109161-06**				**Water**	**G12**
Tetrachloroethene	1090082	9/27/01	9/28/01		25.0	ND	ug/l	
Toluene	"	"	"		25.0	**100**	"	
1,2,3-Trichlorobenzene	"	"	"		100	ND	"	
1,2,4-Trichlorobenzene	"	"	"		100	ND	"	
1,1,1-Trichloroethane	"	"	"		25.0	ND	"	
1,1,2-Trichloroethane	"	"	"		8.00	ND	"	
Trichloroethene	"	"	"		25.0	ND	"	
Trichlorofluoromethane	"	"	"		25.0	ND	"	
1,2,4-Trimethylbenzene	"	"	"		50.0	**490**	"	
1,3,5-Trimethylbenzene	"	"	"		50.0	**145**	"	
Vinyl chloride	"	"	"		8.50	ND	"	
Total Xylenes	"	"	"		25.0	**1780**	"	
Surrogate: 1-Cl-4-FB (ELCD)	"	"	"	*80.0-120*		*117*	*%*	
Surrogate: 1-Cl-4-FB (PID)	"	"	"	*80.0-120*		*104*	"	

GREAT LAKES ANALYTICAL

140 East Ryan Road
Oak Creek, Wisconsin 53154

Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

Kapur & Associates, Inc.	Project: Fox Auto Salvage	Sampled:	9/21/01
7711 N. Port Washington Rd.	Project Number: N/A	Received:	9/21/01
Milwaukee, WI 53217	Project Manager: Darin Miller	Reported:	9/28/01 17:10

Total Metals by EPA 6000/7000 Series Methods
Great Lakes Analytical

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
1-2			**W109161-01**				Soil (WI)	1
Lead	1090493	9/28/01	9/28/01	EPA 6010B	1.11	**38.0**	mg/kg dry	
1-4			**W109161-02**				Soil (WI)	1
Lead	1090493	9/28/01	9/28/01	EPA 6010B	6.99	**2570**	mg/kg dry	G12
2-2			**W109161-03**				Soil (WI)	1
Lead	1090493	9/28/01	9/28/01	EPA 6010B	1.23	**5.17**	mg/kg dry	
B2-5			**W109161-04**				Soil (WI)	1
Lead	1090493	9/28/01	9/28/01	EPA 6010B	1.33	**18.8**	mg/kg dry	

Great Lakes Analytical--Oak Creek

**Refer to end of report for text of notes and definitions.*

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GREAT LAKES ANALYTICAL

140 East Ryan Road
Oak Creek, Wisconsin 53154

Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

Kapur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled: 9/21/01
7711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

Dissolved Metals by EPA 6000/7000 Series Methods
Great Lakes Analytical

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
B1-W			**W109161-05**				**Water**	1
Lead	1090489	9/28/01	9/28/01	EPA 7421	0.00500	ND	mg/l	
2-W			**W109161-06**				**Water**	1
Lead	1090489	9/28/01	9/28/01	EPA 7421	0.00500	ND	mg/l	

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Oak Creek, Wisconsin 53154

Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

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7711 N. Port Washington Rd.	Project Number:	N/A	Received:	9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported:	9/28/01 17:10

Dry Weight Determination
Great Lakes Analytical

Sample Name	Lab ID	Matrix	Result	Units
B1-2	W109161-01	Soil (WI)	90.0	%
B1-4	W109161-02	Soil (WI)	85.8	%
B2-2	W109161-03	Soil (WI)	81.3	%
B2-5	W109161-04	Soil (WI)	75.5	%

Great Lakes Analytical--Oak Creek

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140 East Ryan Road
Oak Creek, Wisconsin 53154

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Kapur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled:	9/21/01
7711 N. Port Washington Rd.	Project Number:	N/A	Received:	9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported:	9/28/01 17:10

Dry Weight Determination
Great Lakes Analytical--Oak Creek

Sample Name	Lab ID	Matrix	Result	Units
B1-2	W109161-01	Soil (WI)	90.0	%
B1-4	W109161-02	Soil (WI)	85.8	%
B2-2	W109161-03	Soil (WI)	81.3	%
B2-5	W109161-04	Soil (WI)	75.5	%

Great Lakes Analytical--Oak Creek

Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL

140 East Ryan Road
Oak Creek, Wisconsin 53154

Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

Kapur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled: 9/21/01
7711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

Diesel Range Organics (DRO) by WDNR DRO/Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 1090068	**Date Prepared: 9/25/01**				**Extraction Method: EPA 3550B**					
Blank	**1090068-BLK1**									
Diesel Range Organics (DRO)	9/26/01			ND	mg/kg dry	5.00				
LCS	**1090068-BS1**									
Diesel Range Organics (DRO)	9/26/01	40.0		34.8	mg/kg dry	70.0-120	87.0			
LCS Dup	**1090068-BSD1**									
Diesel Range Organics (DRO)	9/26/01	40.0		31.5	mg/kg dry	70.0-120	78.8	20.0	9.89	
Batch: 1090078	**Date Prepared: 9/27/01**				**Extraction Method: EPA 3510C**					
Blank	**1090078-BLK1**									
Diesel Range Organics (DRO)	9/27/01			ND	mg/l	0.100				
LCS	**1090078-BS1**									
Diesel Range Organics (DRO)	9/27/01	1.00		0.836	mg/l	75.0-115	83.6			
LCS Dup	**1090078-BSD1**									
Diesel Range Organics (DRO)	9/27/01	1.00		0.811	mg/l	75.0-115	81.1	20.0	3.04	

GREAT LAKES ANALYTICAL
140 East Ryan Road
Oak Creek, Wisconsin 53154
Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

Kapur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled: 9/21/01
7711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

Gasoline Range Organics (GRO) by WDNR GRO/Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 1090072	**Date Prepared: 9/25/01**				**Extraction Method: EPA 5030B (P/T)**					
Blank	**1090072-BLK1**									
Gasoline Range Organics (GRO)	9/25/01			**ND**	ug/l	**50.0**				
LCS	**1090072-BS1**									
Gasoline Range Organics (GRO)	9/25/01	200		177	ug/l	80.0-120	88.5			
Matrix Spike	**1090072-MS1**		**W109155-04**							
Gasoline Range Organics (GRO)	9/25/01	200	ND	176	ug/l	75.0-125	**88.0**			
Matrix Spike Dup	**1090072-MSD1**		**W109155-04**							
Gasoline Range Organics (GRO)	9/26/01	200	ND	156	ug/l	75.0-125	**78.0**	20.0	**12.0**	
Batch: 1090076	**Date Prepared: 9/26/01**				**Extraction Method: EPA 5030B [MeOH]**					
Blank	**1090076-BLK1**									
Gasoline Range Organics (GRO)	9/26/01			**ND**	mg/kg dry	**5.00**				
LCS	**1090076-BS1**									
Gasoline Range Organics (GRO)	9/26/01	10.0		9.60	mg/kg dry	80.0-120	96.0			
LCS Dup	**1090076-BSD1**									
Gasoline Range Organics (GRO)	9/26/01	10.0		9.52	mg/kg dry	80.0-120	95.2	20.0	0.837	

Great Lakes Analytical--Oak Creek

**Refer to end of report for text of notes and definitions.*

Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL

140 East Ryan Road
Oak Creek, Wisconsin 53154

Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

Kapur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled: 9/21/01
7711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

WDNR Volatile Organic Compounds by Method 8021/Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 1090070	**Date Prepared: 9/25/01**				**Extraction Method: EPA 5030B [MeOH]**					
Blank	**1090070-BLK1**									
Benzene	9/26/01			ND	ug/kg dry	25.0				
Bromobenzene	"			ND	"	25.0				
Bromodichloromethane	"			ND	"	25.0				
n-Butylbenzene	"			ND	"	25.0				
sec-Butylbenzene	"			ND	"	25.0				
tert-Butylbenzene	"			ND	"	25.0				
Carbon tetrachloride	"			ND	"	25.0				
Chlorobenzene	"			ND	"	25.0				
Chloroethane	"			ND	"	25.0				
Chloroform	"			ND	"	25.0				
Chloromethane	"			ND	"	25.0				
2-Chlorotoluene	"			ND	"	25.0				
4-Chlorotoluene	"			ND	"	25.0				
Dibromochloromethane	"			ND	"	25.0				
1,2-Dibromo-3-chloropropane	"			ND	"	25.0				
1,2-Dibromoethane	"			ND	"	25.0				
1,2-Dichlorobenzene	"			ND	"	25.0				
1,3-Dichlorobenzene	"			ND	"	25.0				
1,4-Dichlorobenzene	"			ND	"	25.0				
Dichlorodifluoromethane	"			ND	"	25.0				
1,1-Dichloroethane	"			ND	"	25.0				
1,2-Dichloroethane	"			ND	"	25.0				
1,1-Dichloroethene	"			ND	"	25.0				
cis-1,2-Dichloroethene	"			ND	"	25.0				
trans-1,2-Dichloroethene	"			ND	"	25.0				
1,2-Dichloropropane	"			ND	"	25.0				
1,3-Dichloropropane	"			ND	"	25.0				
2,2-Dichloropropane	"			ND	"	25.0				
Di-isopropyl ether	"			ND	"	25.0				
Ethylbenzene	"			ND	"	25.0				
Hexachlorobutadiene	"			ND	"	25.0				
Isopropylbenzene	"			ND	"	25.0				
p-Isopropyltoluene	"			ND	"	25.0				
Methylene chloride	"			ND	"	100				
Methyl tert-butyl ether	"			ND	"	25.0				
Naphthalene	"			ND	"	25.0				
n-Propylbenzene	"			ND	"	25.0				

Great Lakes Analytical--Oak Creek

Refer to end of report for text of notes and definitions.

Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL
140 East Ryan Road
Oak Creek, Wisconsin 53154
Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

Kapur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled: 9/21/01
7711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

WDNR Volatile Organic Compounds by Method 8021/Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Blank (continued)	**1090070-BLK1**									
1,1,2,2-Tetrachloroethane	9/26/01			**ND**	ug/kg dry	**25.0**				
Tetrachloroethene	"			**ND**	"	**25.0**				
Toluene	"			**ND**	"	**25.0**				
1,2,3-Trichlorobenzene	"			**ND**	"	**25.0**				
1,2,4-Trichlorobenzene	"			**ND**	"	**25.0**				
1,1,1-Trichloroethane	"			**ND**	"	**25.0**				
1,1,2-Trichloroethane	"			**ND**	"	**25.0**				
Trichloroethene	"			**ND**	"	**25.0**				
Trichlorofluoromethane	"			**ND**	"	**25.0**				
1,2,4-Trimethylbenzene	"			**ND**	"	**25.0**				
1,3,5-Trimethylbenzene	"			**ND**	"	**25.0**				
Vinyl chloride	"			**ND**	"	**25.0**				
Total Xylenes	"			**ND**	"	**25.0**				
Surrogate: 1-Cl-4-FB (ELCD)	"	*1000*		*945*	"	*80.0-120*	*94.5*			
Surrogate: 1-Cl-4-FB (PID)	"	*1000*		*947*	"	*80.0-120*	*94.7*			
LCS	**1090070-BS1**									
Benzene	9/26/01	1000		1060	ug/kg dry	80.0-120	106			
Bromobenzene	"	1000		1060	"	80.0-120	106			
Bromodichloromethane	"	1000		1100	"	80.0-120	110			
n-Butylbenzene	"	1000		1040	"	80.0-120	104			
sec-Butylbenzene	"	1000		1040	"	80.0-120	104			
tert-Butylbenzene	"	1000		1020	"	80.0-120	102			
Carbon tetrachloride	"	1000		897	"	80.0-120	89.7			
Chlorobenzene	"	1000		906	"	80.0-120	90.6			
Chloroethane	"	1000		829	"	80.0-120	82.9			
Chloroform	"	1000		884	"	80.0-120	88.4			
Chloromethane	"	1000		908	"	80.0-120	90.8			
2-Chlorotoluene	"	1000		1060	"	80.0-120	106			
4-Chlorotoluene	"	1000		1060	"	80.0-120	106			
Dibromochloromethane	"	1000		1010	"	80.0-120	101			
1,2-Dibromo-3-chloropropane	"	1000		1020	"	80.0-120	102			
1,2-Dibromoethane	"	1000		1140	"	80.0-120	114			
1,2-Dichlorobenzene	"	1000		1060	"	80.0-120	106			
1,3-Dichlorobenzene	"	1000		1160	"	80.0-120	116			
1,4-Dichlorobenzene	"	1000		1100	"	80.0-120	110			
Dichlorodifluoromethane	"	1000		977	"	80.0-120	97.7			
1,1-Dichloroethane	"	1000		1040	"	80.0-120	104			

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Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL
140 East Ryan Road
Oak Creek, Wisconsin 53154
Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

Kapur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled: 9/21/01
7711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

WDNR Volatile Organic Compounds by Method 8021/Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
LCS (continued)	**1090070-BS1**									
1,2-Dichloroethane	9/26/01	1000		1120	ug/kg dry	80.0-120	112			
1,1-Dichloroethene	"	1000		988	"	80.0-120	98.8			
cis-1,2-Dichloroethene	"	1000		1140	"	80.0-120	114			
trans-1,2-Dichloroethene	"	1000		1060	"	80.0-120	106			
1,2-Dichloropropane	"	1000		854	"	80.0-120	85.4			
1,3-Dichloropropane	"	1000		1120	"	80.0-120	112			
2,2-Dichloropropane	"	1000		954	"	80.0-120	95.4			
Di-isopropyl ether	"	1000		925	"	80.0-120	92.5			
Ethylbenzene	"	1000		956	"	80.0-120	95.6			
Hexachlorobutadiene	"	1000		918	"	80.0-120	91.8			
Isopropylbenzene	"	1000		1040	"	80.0-120	104			
p-Isopropyltoluene	"	1000		908	"	80.0-120	90.8			
Methylene chloride	"	1000		861	"	80.0-120	86.1			
Methyl tert-butyl ether	"	1000		1030	"	80.0-120	103			
Naphthalene	"	1000		1170	"	80.0-120	117			
n-Propylbenzene	"	1000		1110	"	80.0-120	111			
1,1,2,2-Tetrachloroethane	"	1000		887	"	80.0-120	88.7			
Tetrachloroethene	"	1000		1030	"	80.0-120	103			
Toluene	"	1000		1040	"	80.0-120	104			
1,2,3-Trichlorobenzene	"	1000		1080	"	80.0-120	108			
1,2,4-Trichlorobenzene	"	1000		1140	"	80.0-120	114			
1,1,1-Trichloroethane	"	1000		1140	"	80.0-120	114			
1,1,2-Trichloroethane	"	1000		1080	"	80.0-120	108			
Trichloroethene	"	1000		1020	"	80.0-120	102			
Trichlorofluoromethane	"	1000		878	"	80.0-120	87.8			
1,2,4-Trimethylbenzene	"	1000		1050	"	80.0-120	105			
1,3,5-Trimethylbenzene	"	1000		980	"	80.0-120	98.0			
Vinyl chloride	"	1000		970	"	80.0-120	97.0			
Total Xylenes	"	3000		2960	"	80.0-120	98.7			
Surrogate: 1-Cl-4-FB (ELCD)	"	*1000*		*936*	"	*80.0-120*	*93.6*			
Surrogate: 1-Cl-4-FB (PID)	"	*1000*		*1040*	"	*80.0-120*	*104*			
LCS Dup	**1090070-BSD1**									
Benzene	9/26/01	1000		883	ug/kg dry	80.0-120	88.3	20.0	18.2	
Bromobenzene	"	1000		906	"	80.0-120	90.6	20.0	15.7	
Bromodichloromethane	"	1000		1080	"	80.0-120	108	20.0	1.83	
n-Butylbenzene	"	1000		874	"	80.0-120	87.4	20.0	17.3	
sec-Butylbenzene	"	1000		881	"	80.0-120	88.1	20.0	16.6	

Great Lakes Analytical--Oak Creek

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GREAT LAKES ANALYTICAL
140 East Ryan Road
Oak Creek, Wisconsin 53154
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(414) 570-9460 FAX (414) 570-9461

Kapur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled: 9/21/01
7711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

WDNR Volatile Organic Compounds by Method 8021/Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
LCS Dup (continued)	**1090070-BSD1**									
tert-Butylbenzene	9/26/01	1000		875	ug/kg dry	80.0-120	87.5	20.0	15.3	
Carbon tetrachloride	"	1000		910	"	80.0-120	91.0	20.0	1.44	
Chlorobenzene	"	1000		822	"	80.0-120	82.2	20.0	9.72	
Chloroethane	"	1000		860	"	80.0-120	86.0	20.0	3.67	
Chloroform	"	1000		854	"	80.0-120	85.4	20.0	3.45	
Chloromethane	"	1000		941	"	80.0-120	94.1	20.0	3.57	
2-Chlorotoluene	"	1000		872	"	80.0-120	87.2	20.0	19.5	
4-Chlorotoluene	"	1000		902	"	80.0-120	90.2	20.0	16.1	
Dibromochloromethane	"	1000		960	"	80.0-120	96.0	20.0	5.08	
1,2-Dibromo-3-chloropropane	"	1000		1050	"	80.0-120	105	20.0	2.90	
1,2-Dibromoethane	"	1000		1100	"	80.0-120	110	20.0	3.57	
1,2-Dichlorobenzene	"	1000		910	"	80.0-120	91.0	20.0	15.2	
1,3-Dichlorobenzene	"	1000		946	"	80.0-120	94.6	20.0	20.3	
1,4-Dichlorobenzene	"	1000		940	"	80.0-120	94.0	20.0	15.7	
Dichlorodifluoromethane	"	1000		922	"	80.0-120	92.2	20.0	5.79	
1,1-Dichloroethane	"	1000		982	"	80.0-120	98.2	20.0	5.74	
1,2-Dichloroethane	"	1000		1120	"	80.0-120	112	20.0	0	
1,1-Dichloroethene	"	1000		850	"	80.0-120	85.0	20.0	15.0	
cis-1,2-Dichloroethene	"	1000		956	"	80.0-120	95.6	20.0	17.6	
trans-1,2-Dichloroethene	"	1000		891	"	80.0-120	89.1	20.0	17.3	
1,2-Dichloropropane	"	1000		862	"	80.0-120	86.2	20.0	0.932	
1,3-Dichloropropane	"	1000		1060	"	80.0-120	106	20.0	5.50	
2,2-Dichloropropane	"	1000		1050	"	80.0-120	105	20.0	9.58	
Di-isopropyl ether	"	1000		807	"	80.0-120	80.7	20.0	13.6	
Ethylbenzene	"	1000		837	"	80.0-120	83.7	20.0	13.3	
Hexachlorobutadiene	"	1000		832	"	80.0-120	83.2	20.0	9.83	
Isopropylbenzene	"	1000		892	"	80.0-120	89.2	20.0	15.3	
p-Isopropyltoluene	"	1000		802	"	80.0-120	80.2	20.0	12.4	
Methylene chloride	"	1000		828	"	80.0-120	82.8	20.0	3.91	
Methyl tert-butyl ether	"	1000		875	"	80.0-120	87.5	20.0	16.3	
Naphthalene	"	1000		1040	"	80.0-120	104	20.0	11.8	
n-Propylbenzene	"	1000		939	"	80.0-120	93.9	20.0	16.7	
1,1,2,2-Tetrachloroethane	"	1000		899	"	80.0-120	89.9	20.0	1.34	
Tetrachloroethene	"	1000		973	"	80.0-120	97.3	20.0	5.69	
Toluene	"	1000		924	"	80.0-120	92.4	20.0	11.8	
1,2,3-Trichlorobenzene	"	1000		925	"	80.0-120	92.5	20.0	15.5	
1,2,4-Trichlorobenzene	"	1000		970	"	80.0-120	97.0	20.0	16.1	
1,1,1-Trichloroethane	"	1000		1140	"	80.0-120	114	20.0	0	

GREAT LAKES ANALYTICAL

140 East Ryan Road
Oak Creek, Wisconsin 53154

Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

Kapur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled: 9/21/01
7711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

WDNR Volatile Organic Compounds by Method 8021/Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
LCS Dup (continued)	**1090070-BSD1**									
1,1,2-Trichloroethane	9/26/01	1000		1000	ug/kg dry	80.0-120	100	20.0	7.69	
Trichloroethene	"	1000		847	"	80.0-120	84.7	20.0	18.5	
Trichlorofluoromethane	"	1000		871	"	80.0-120	87.1	20.0	0.800	
1,2,4-Trimethylbenzene	"	1000		895	"	80.0-120	89.5	20.0	15.9	
1,3,5-Trimethylbenzene	"	1000		835	"	80.0-120	83.5	20.0	16.0	
Vinyl chloride	"	1000		859	"	80.0-120	85.9	20.0	12.1	
Total Xylenes	"	3000		2550	"	80.0-120	85.0	20.0	14.9	
Surrogate: 1-Cl-4-FB (ELCD)	"	*1000*		*941*	"	*80.0-120*	*94.1*			
Surrogate: 1-Cl-4-FB (PID)	"	*1000*		*943*	"	*80.0-120*	*94.3*			

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Kapur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled: 9/21/01
7711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

Total Metals by EPA 6000/7000 Series Methods/Quality Control
Great Lakes Analytical

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 1090493	**Date Prepared: 9/28/01**					**Extraction Method: EPA 3050B**				
Blank	**1090493-BLK1**									
Lead	9/28/01			**ND**	mg/kg dry	**1.00**				
LCS	**1090493-BS1**									
Lead	9/28/01	201		211	mg/kg dry	84.0-109	105			
Matrix Spike	**1090493-MS1**		**B109334-01**							
Lead	9/28/01	261	14.0	222	mg/kg dry	52.0-125	**79.7**			
Matrix Spike Dup	**1090493-MSD1**		**B109334-01**							
Lead	9/28/01	264	14.0	225	mg/kg dry	52.0-125	**79.9**	14.0	**0.251**	

Great Lakes Analytical--Oak Creek

**Refer to end of report for text of notes and definitions.*

Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL

140 East Ryan Road
Oak Creek, Wisconsin 53154

Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

Kapur & Associates, Inc.	Project:	Fox Auto Salvage	Sampled: 9/21/01
7711 N. Port Washington Rd.	Project Number:	N/A	Received: 9/21/01
Milwaukee, WI 53217	Project Manager:	Darin Miller	Reported: 9/28/01 17:10

Dissolved Metals by EPA 6000/7000 Series Methods/Quality Control
Great Lakes Analytical

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 1090489	**Date Prepared: 9/28/01**					**Extraction Method: General Prep Metals**				
Blank	1090489-BLK1									
Lead	9/28/01			**ND**	mg/l	**0.00500**				
LCS	1090489-BS1									
Lead	9/28/01	0.0240		0.0229	mg/l	63.2-127	95.4			
Matrix Spike	1090489-MS1		B109332-05							
Lead	9/28/01	0.0240	ND	0.0240	mg/l	24.5-184	**100**			
Matrix Spike Dup	1090489-MSD1		B109332-05							
Lead	9/28/01	0.0240	ND	0.0242	mg/l	24.5-184	**101**	9.72	**0.995**	

Great Lakes Analytical--Oak Creek

**Refer to end of report for text of notes and definitions.*

Andrea Stathas, Project Manager

@glalabs.com
FAX (414) 570-9461

9/21/01
21/01
28/01 17:10

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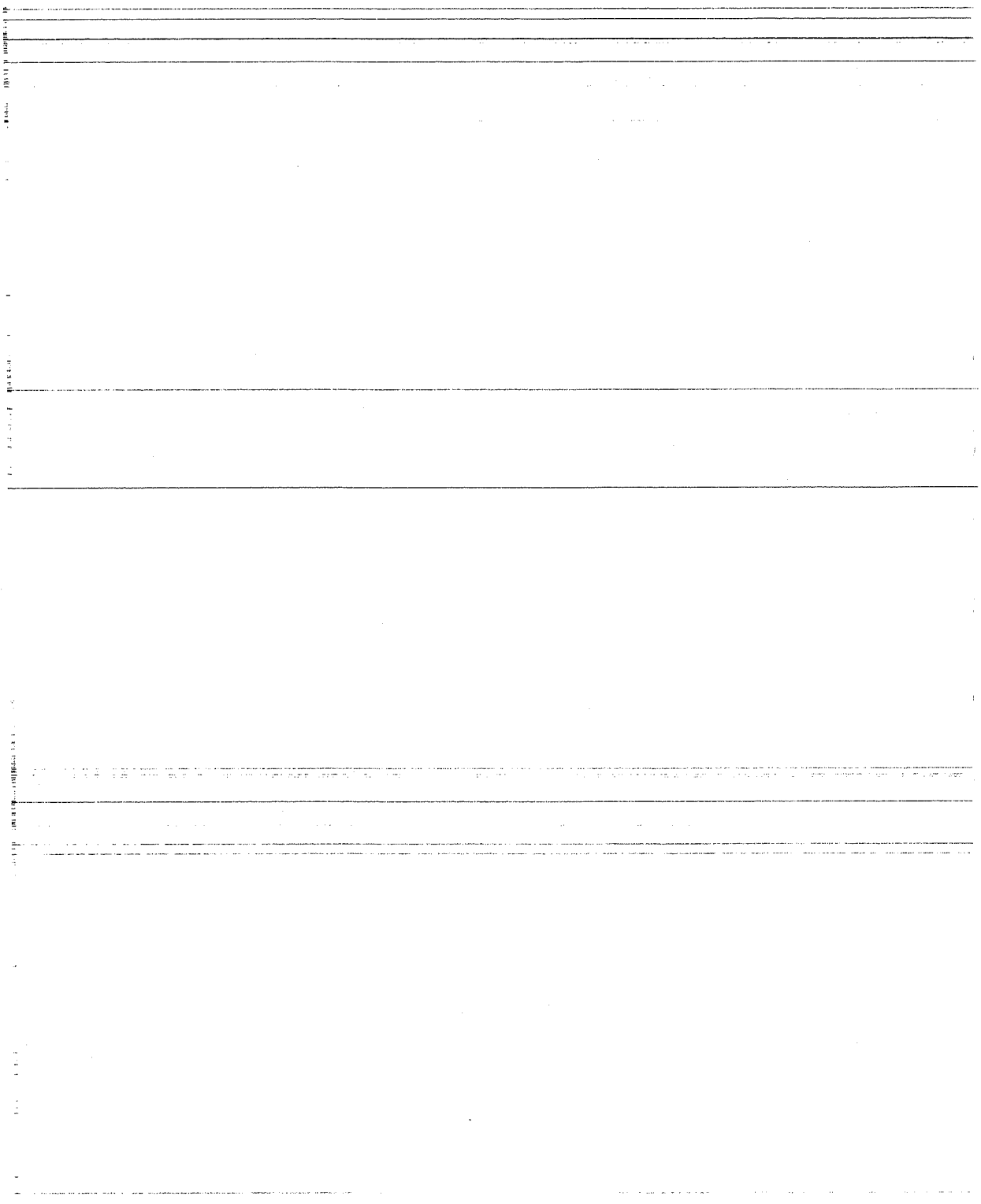

Gr LAKES ANALYTICAL

CHAIN OF CUSTODY REPORT

Buffalo Grove, IL 60089-4505
(847) 808-7766
FAX (847) 808-7772

Oak Creek, WI 53154
(414) 570-9460
FAX (414) 570-9461

Client: K&A
Address: 7711 N. Port Rd
Milw. WI 53217
Report to: Darin Miller Phone #: ( ) Fax #: ( )
Project: Fox Auto Salvage
Sampler: DM
PO/Quote #: DK10117C

Bill To: SAME
Address:
State & Program: WI LUST Phone #: ( ) Fax #: ( )

TAT: (STD.) 4 DAY 3 DAY 2 DAY 1 DAY < 24 HRS.
☐ YES - TAT is critical
☐ NO - TAT is not critical
DATE RESULTS NEEDED:
TEMPERATURE UPON RECEIPT: on ice
Deliverable Package Needed: ☐ STD ☐ Other
Air Bill No.

	FIELD ID, LOCATION	PID	DATE COLLECTED	TIME COLLECTED	SAMPLE MATRIX	MeOH	NaHSO4	HCl	HNO3	H2SO4	NaOH	NONE	TOTAL # OF BOTTLES	GRO	DRO	VOC	Dry wt	PAHs							SAMPLE CONTROL: CRACKED-BROKEN	IMPROPERLY SEALED	LABORATORY ID NUMBER
1	B1-2		9/21/01	3:00	S								4	X	X	X	X	X									W109161-01
2	B1-4		9/21/01	3:00	S								4	X	X	X	X	X									-02
3	B2-2		9/21/01	12:30	S								4	X	X	X	X	X									-03
4	B2-6		9/21/01	12:30	S								4	X	X	X	X	X									-04
5	B1-W		9/21/01	3:15	GW								6	X	X	X	X										-05
6	B2-W		9/21/01	2:30	GW								6	X	X	X	X										-06
7																											
8																											
9																											
10																											

ANALYSIS TYPE

RELINQUISHED	DATE / TIME	RECEIVED	DATE / TIME	RELINQUISHED	DATE / TIME	RECEIVED	DATE / TIME
Darin Miller	9/21/01	Andrea [illegible]	9/21/01 4:30p				
RELINQUISHED	DATE / TIME	RECEIVED	DATE / TIME	RELINQUISHED	DATE / TIME	RECEIVED	DATE / TIME

COMMENTS:

PAGE OF

Appendix B

Soil Boring Logs and Borehole Abandonment Forms

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
WisDOT STH 32/11		FOX-1

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Kitson Environmental Services - G. Kitson AECOM Project No. 10702-040	4/1/2009	4/1/2009	geoprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		FOX-1	Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SW 1/4 of SW 1/4 of Section 21, T 3 N, R 23 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Racine	52	Village of Mt Pleasant

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 GP	24 / 12		0	Concrete				<1						
			1.5	Fill: Brown fine to coarse silty sand and gravel - black stained/petroleum odor noted from 6 to 8 feet - moist										
2 GP	24 / 12		3.0					<1						
3 GP	24 / 12		4.5					<1						
4 GP	24 / 12		6.0					240						
			7.5	End of Boring. Boring advanced from 0.0 feet to 8.0 feet with geoprobe. Temporary groundwater monitoring well installed at 8.0 feet.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	AECOM 11425 W. Lake Park Drive Milwaukee, WI 53224	Tel: 414-359-3030 Fax: 414-359-0822

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5 2/2000 Page 1 of 2

Notice: Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other _____

(1) GENERAL INFORMATION

WI Unique Well No. | DNR Well ID No. | County: Racine

Common Well Name: FOX-1 Gov't Lot (if applicable): _____

Grid Location: SW 1/4 of SW 1/4 of Sec. 21 ; T. 3 N; R. 23 ☒ E ☐ W

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐

Lat ° ' " Long ° ' "

State Plane _____ ft. N. _____ ft. E. S ☐ C ☐ N ☐ Zone

Reason For Abandonment: test boring

WI Unique Well No. of Replacement Well:

(2) FACILITY /OWNER INFORMATION

Facility Name: WisDOT STH 32/11

Facility ID | License/Permit/Monitoring No.

Street Address of Well: 2423 Racine Ave.

City, Village, or Town: Village of Mt Pleasant

Present Well Owner: WisDOT | Original Owner: WisDOT

Street Address or Route of Owner: 4802 Sheboygan Avenue, Rm 451

City, State, Zip Code: Madison, Wisconsin 53707

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 4-1-09

☐ Monitoring Well
☐ Water Well
☒ Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☒ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) _____ (From ground surface)
Casing Diameter (in.) _____
Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown

If Yes, To What Depth? _____ Feet

Depth to Water (Feet) _____

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☐ No	
Was Casing Cut Off Below Surface?	☐ Yes	☐ No	
Did Sealing Material Rise to Surface?	☒ Yes	☐ No	
Did Material Settle After 24 Hours?	☐ Yes	☒ No	
If Yes, Was Hole Retopped?	☐ Yes	☐ No	

Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Screened & Poured ☒ Other (Explain) poured (Bentonite Chips)

Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☒ Bentonite Chips
☐ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

(5) Sealing Material Used	From (Ft.)	To (Ft.)		Mix Ratio or Mud Weight
Bentonite	Surface	8.0		

(6) Comments _____

(7) Name of Person or Firm Doing Sealing Work: AECOM | Date of Abandonment: 4/1/09

Signature of Person Doing Work | Date Signed

Street or Route: 11425 W. Lake Park Drive | Telephone Number: 414-359-3030

City, State, Zip Code: Milwaukee, Wisconsin 53224

FOR DNR OR COUNTY USE ONLY

Date Received | Noted By

Comments

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
WisDOT STH 32/11		FOX-2

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Kitson Environmental Services - G. Kitson AECOM Project No. 10702-040	4/1/2009	4/1/2009	geoprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		FOX-2	Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SW 1/4 of SW 1/4 of Section 21, T 3 N, R 23 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Racine	52	Village of Mt Pleasant

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	3			Asphalt				<1						
GP	3			Fill: Crushed concrete				<1						
2	2			Fill: Brown fine sand - moist				<1						
GP	2		1.5	Fill: Pea gravel				<1						
3	1			Possible Fill: Brown fine to medium sand - moist										
GP	1													
4	8		3.0											
GP	8													
5	36													
GP	24			Brown fine to medium sand (SP) - moist to wet				<1						
6	24		4.5											
GP	12													
			6.0		SP									
7	24							<1						
GP	12													
			7.5											
				End of Boring. Boring advanced from 0.0 feet to 8.0 feet with geoprobe. Boring backfilled with bentonite.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	AECOM 11425 W. Lake Park Drive Milwaukee, WI 53224	Tel: 414-359-3030 Fax: 414-359-0822

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5 2/2000 Page 1 of 2

Notice: Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other _____

(1) GENERAL INFORMATION

WI Unique Well No. | DNR Well ID No. | County: Racine

Common Well Name: FOX-2 Gov't Lot (if applicable): _____

Grid Location: SW 1/4 of SW 1/4 of Sec. 21 ; T. 3 N; R. 23 ☒ E ☐ W

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐

Lat ° ' " Long ° ' " or

State Plane _____ ft. N. _____ ft. E. S ☐ C ☐ N ☐ Zone

Reason For Abandonment: test boring

WI Unique Well No. of Replacement Well:

(2) FACILITY /OWNER INFORMATION

Facility Name: WisDOT STH 32/11

Facility ID | License/Permit/Monitoring No.

Street Address of Well: 2423 Racine Ave.

City, Village, or Town: Village of Mt Pleasant

Present Well Owner: WisDOT | Original Owner: WisDOT

Street Address or Route of Owner: 4802 Sheboygan Avenue, Rm 451

City, State, Zip Code: Madison, Wisconsin 53707

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 4-1-09

☐ Monitoring Well
☐ Water Well
☒ Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☒ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) _____ (From ground surface) Casing Diameter (in.) _____
Casing Depth (ft.) _____
Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? _____ Feet
Depth to Water (Feet) _____

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☐ No	
Was Casing Cut Off Below Surface?	☐ Yes	☐ No	
Did Sealing Material Rise to Surface?	☒ Yes	☐ No	
Did Material Settle After 24 Hours?	☐ Yes	☒ No	
If Yes, Was Hole Retopped?	☐ Yes	☐ No	

Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Screened & Poured ☒ Other (Explain) poured (Bentonite Chips)

Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☒ Bentonite Chips
☐ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

(5) Sealing Material Used	From (Ft.)	To (Ft.)		Mix Ratio or Mud Weight
Bentonite	Surface	8.0		

(6) Comments _____

(7) Name of Person or Firm Doing Sealing Work: AECOM | Date of Abandonment: 4/1/09

Signature of Person Doing Work | Date Signed

Street or Route: 11425 W. Lake Park Drive | Telephone Number: 414-359-3030

City, State, Zip Code: Milwaukee, Wisconsin 53224

FOR DNR OR COUNTY USE ONLY
Date Received | Noted By
Comments

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
WisDOT STH 32/11		FOX-3

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Kitson Environmental Services - G. Kitson AECOM Project No. 10702-040	4/1/2009	4/1/2009	geoprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		FOX-3	Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SW 1/4 of SW 1/4 of Section 21, T 3 N, R 23 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Racine	52	Village of Mt Pleasant

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 GP	12 12			Topsoil - black organic silt				<1						
2 GP	12 12		1.5	Fill: Brown silty clay - trace fine to medium sand and gravel - moist				<1						
3 GP	12 12							<1						
4 GP	12 12		3.0	Brown clayey silt - moist	ML			<1						
				End of Boring. Boring advanced from 0.0 feet to 4.0 feet with geoprobe. Boring backfilled with bentonite.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm AECOM
11425 W. Lake Park Drive Milwaukee, WI 53224
Tel: 414-359-3030
Fax: 414-359-0822

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State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5 2/2000

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Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other _____

(1) GENERAL INFORMATION

WI Unique Well No. | DNR Well ID No. | County: Racine

Common Well Name: FOX-3 Gov't Lot (if applicable): _____

Grid Location: SW 1/4 of SW 1/4 of Sec. 21 ; T. 3 N; R. 23 ☒ E ☐ W

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐

Lat ° ' " Long ° ' " or

State Plane _____ ft. N. _____ ft. E. S ☐ C ☐ N ☐ Zone

Reason For Abandonment: test boring | WI Unique Well No. of Replacement Well:

(2) FACILITY /OWNER INFORMATION

Facility Name: WisDOT STH 32/11

Facility ID | License/Permit/Monitoring No.

Street Address of Well: 2423 Racine Ave.

City, Village, or Town: Village of Mt Pleasant

Present Well Owner: WisDOT | Original Owner: WisDOT

Street Address or Route of Owner: 4802 Sheboygan Avenue, Rm 451

City, State, Zip Code: Madison, Wisconsin 53707

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 4-1-09

☐ Monitoring Well
☐ Water Well
☒ Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☒ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) _____ (From ground surface) Casing Diameter (in.) _____
Casing Depth (ft.) _____
Lower Drillhole Diameter (in.) _____
Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? _____ Feet
Depth to Water (Feet) _____

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☐ No	
Was Casing Cut Off Below Surface?	☐ Yes	☐ No	
Did Sealing Material Rise to Surface?	☒ Yes	☐ No	
Did Material Settle After 24 Hours?	☐ Yes	☒ No	
If Yes, Was Hole Retopped?	☐ Yes	☐ No	

Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Screened & Poured ☒ Other (Explain) poured
(Bentonite Chips)

Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☒ Bentonite Chips
☐ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

(5) Sealing Material Used	From (Ft.)	To (Ft.)		Mix Ratio or Mud Weight
Bentonite	Surface	4.0		

(6) Comments _____

(7) Name of Person or Firm Doing Sealing Work: AECOM | Date of Abandonment: 4/1/09

Signature of Person Doing Work | Date Signed

Street or Route: 11425 W. Lake Park Drive | Telephone Number: 414-359-3030

City, State, Zip Code: Milwaukee, Wisconsin 53224

FOR DNR OR COUNTY USE ONLY
Date Received | Noted By
Comments

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
WisDOT STH 32/11		FOX-4

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Kitson Environmental Services - G. Kitson AECOM Project No. 10702-040	4/1/2009	4/1/2009	geoprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		FOX-4	Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SW 1/4 of SW 1/4 of Section 21, T 3 N, R 23 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Racine	52	Village of Mt Pleasant

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 GP	3			Asphalt										
2 GP	21 12		1.5	Fill: Brown fine to coarse sand and gravel - moist				<1						
3 GP	24 24		3.0	Brown to olive silty clay (CL) - trace fine to medium sand - moist	CL			<1						
4 GP	24 24		4.5					<1						
			6.0	End of Boring. Boring advanced from 0.0 feet to 6.0 feet with geoprobe. Boring backfilled with bentonite.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm AECOM
11425 W. Lake Park Drive Milwaukee, WI 53224
Tel: 414-359-3030
Fax: 414-359-0822

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5 2/2000 Page 1 of 2

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Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other _____

(1) GENERAL INFORMATION

WI Unique Well No. | DNR Well ID No. | County: Racine

Common Well Name: FOX-4 Gov't Lot (if applicable): _____

Grid Location: SW 1/4 of SW 1/4 of Sec. 21 ; T. 3 N; R. 23 ☒ E ☐ W

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐

Lat ° ' " Long ° ' " or

State Plane _____ ft. N. _____ ft. E. S ☐ C ☐ N ☐ Zone

Reason For Abandonment: test boring

WI Unique Well No. of Replacement Well:

(2) FACILITY /OWNER INFORMATION

Facility Name: WisDOT STH 32/11

Facility ID | License/Permit/Monitoring No.

Street Address of Well: 2423 Racine Ave.

City, Village, or Town: Village of Mt Pleasant

Present Well Owner: WisDOT | Original Owner: WisDOT

Street Address or Route of Owner: 4802 Sheboygan Avenue, Rm 451

City, State, Zip Code: Madison, Wisconsin 53707

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 4-1-09

☐ Monitoring Well
☐ Water Well
☒ Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☒ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) _____ (From ground surface)
Casing Diameter (in.) _____
Casing Depth (ft.) _____
Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? _____ Feet
Depth to Water (Feet) _____

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☐ No	
Was Casing Cut Off Below Surface?	☐ Yes	☐ No	
Did Sealing Material Rise to Surface?	☒ Yes	☐ No	
Did Material Settle After 24 Hours?	☐ Yes	☒ No	
If Yes, Was Hole Retopped?	☐ Yes	☐ No	

Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Screened & Poured ☒ Other (Explain) poured (Bentonite Chips)

Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☒ Bentonite Chips
☐ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

(5) Sealing Material Used	From (Ft.)	To (Ft.)		Mix Ratio or Mud Weight
Bentonite	Surface	6.0		

(6) Comments _____

(7) Name of Person or Firm Doing Sealing Work: AECOM
Date of Abandonment: 4/1/09
Signature of Person Doing Work
Date Signed
Street or Route: 11425 W. Lake Park Drive
Telephone Number: 414-359-3030
City, State, Zip Code: Milwaukee, Wisconsin 53224

FOR DNR OR COUNTY USE ONLY
Date Received | Noted By
Comments

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
WisDOT STH 32/11		FOX-5

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Kitson Environmental Services - G. Kitson AECOM Project No. 10702-040	4/1/2009	4/1/2009	geoprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		FOX-5	Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SW 1/4 of SW 1/4 of Section 21, T 3 N, R 23 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Racine	52	Village of Mt Pleasant

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 GP	24 12		1.5	Topsoil - black organic silt				<1						
2 GP	24 12		3.0	Fill: Brown silty clay - trace fine to medium sand - moist				<1						
3 GP	24 24		4.5	Brown sandy silt (SM) - moist	SM			<1						
			6.0	End of Boring. Boring advanced from 0.0 feet to 6.0 feet with geoprobe. Temporary groundwater monitoring well installed at 6.0 feet.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	AECOM 11425 W. Lake Park Drive Milwaukee, WI 53224	Tel: 414-359-3030 Fax: 414-359-0822

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5 2/2000 Page 1 of 2

Notice: Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other _____

(1) GENERAL INFORMATION

WI Unique Well No. | DNR Well ID No. | County: Racine

Common Well Name: FOX-5 Gov't Lot (if applicable)

Grid Location: SW 1/4 of SW 1/4 of Sec. 21 ; T. 3 N; R. 23 ☒ E ☐ W

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐

Lat ° ' " Long ° ' " or

State Plane _____ ft. N. _____ ft. E. S ☐ C ☐ N ☐ Zone

Reason For Abandonment: test boring

WI Unique Well No. of Replacement Well:

(2) FACILITY /OWNER INFORMATION

Facility Name: WisDOT STH 32/11

Facility ID | License/Permit/Monitoring No.

Street Address of Well: 2423 Racine Ave.

City, Village, or Town: Village of Mt Pleasant

Present Well Owner: WisDOT | Original Owner: WisDOT

Street Address or Route of Owner: 4802 Sheboygan Avenue, Rm 451

City, State, Zip Code: Madison, Wisconsin 53707

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 4-1-09

☐ Monitoring Well
☐ Water Well
☒ Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☒ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) _____ (From ground surface)
Casing Diameter (in.) _____
Casing Depth (ft.) _____
Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? _____ Feet
Depth to Water (Feet) _____

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☐ No	
Was Casing Cut Off Below Surface?	☐ Yes	☐ No	
Did Sealing Material Rise to Surface?	☒ Yes	☐ No	
Did Material Settle After 24 Hours?	☐ Yes	☒ No	
If Yes, Was Hole Retopped?	☐ Yes	☐ No	

Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Screened & Poured ☒ Other (Explain) poured (Bentonite Chips)

Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☒ Bentonite Chips
☐ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

(5) Sealing Material Used	From (Ft.)	To (Ft.)		Mix Ratio or Mud Weight
Bentonite	Surface	6.0		

(6) Comments _____

(7) Name of Person or Firm Doing Sealing Work: AECOM | Date of Abandonment: 4/1/09

Signature of Person Doing Work | Date Signed

Street or Route: 11425 W. Lake Park Drive | Telephone Number: 414-359-3030

City, State, Zip Code: Milwaukee, Wisconsin 53224

FOR DNR OR COUNTY USE ONLY
Date Received | Noted By
Comments

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
WisDOT STH 32/11		FOX-6

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Kitson Environmental Services - G. Kitson AECOM Project No. 10702-040	4/1/2009	4/1/2009	geoprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		FOX-6	Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SW 1/4 of SW 1/4 of Section 21, T 3 N, R 23 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Racine	52	Village of Mt Pleasant

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 GP	24 12		1.5	Topsoil - black organic				<1						
2 GP	24 12		3.0	Fill: Fine to medium sand and gravel - some crushed stone				<1						
3 GP	24 12		4.5	Brown silt - some fine to medium sand - moist	ML			<1						
			6.0	End of Boring. Boring advanced from 0.0 feet to 6.0 feet. Boring backfilled with bentonite.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm AECOM
11425 W. Lake Park Drive Milwaukee, WI 53224
Tel: 414-359-3030
Fax: 414-359-0822

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5 2/2000 Page 1 of 2

Notice: Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other _____

(1) GENERAL INFORMATION

WI Unique Well No. | DNR Well ID No. | County: Racine

Common Well Name: FOX-6 | Gov't Lot (if applicable)

Grid Location: SW 1/4 of SW 1/4 of Sec. 21 ; T. 3 N; R. 23 ☒ E ☐ W

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐

Lat ° ' " Long ° ' "

State Plane _____ ft. N. _____ ft. E. S ☐ C ☐ N ☐ Zone

Reason For Abandonment: test boring

WI Unique Well No. of Replacement Well:

(2) FACILITY /OWNER INFORMATION

Facility Name: WisDOT STH 32/11

Facility ID | License/Permit/Monitoring No.

Street Address of Well: 2423 Racine Ave.

City, Village, or Town: Village of Mt Pleasant

Present Well Owner: WisDOT | Original Owner: WisDOT

Street Address or Route of Owner: 4802 Sheboygan Avenue, Rm 451

City, State, Zip Code: Madison, Wisconsin 53707

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 4-1-09

☐ Monitoring Well
☐ Water Well
☒ Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☒ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) _____ (From ground surface) Casing Diameter (in.) _____
Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? _____ Feet

Depth to Water (Feet) _____

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☐ No	
Was Casing Cut Off Below Surface?	☐ Yes	☐ No	
Did Sealing Material Rise to Surface?	☒ Yes	☐ No	
Did Material Settle After 24 Hours?	☐ Yes	☒ No	
If Yes, Was Hole Retopped?	☐ Yes	☐ No	

Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Screened & Poured ☒ Other (Explain) poured (Bentonite Chips)

Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☒ Bentonite Chips
☐ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

(5) Sealing Material Used	From (Ft.)	To (Ft.)		Mix Ratio or Mud Weight
Bentonite	Surface	6.0		

(6) Comments _____

(7) Name of Person or Firm Doing Sealing Work: AECOM | Date of Abandonment: 4/1/09

Signature of Person Doing Work | Date Signed

Street or Route: 11425 W. Lake Park Drive | Telephone Number: 414-359-3030

City, State, Zip Code: Milwaukee, Wisconsin 53224

FOR DNR OR COUNTY USE ONLY
Date Received | Noted By
Comments

Appendix C

Sampling Procedures

1.0 Soil Sampling Procedures

1.1 Soil Probe Sampling

The soil probe unit is truck-mounted and hydraulically advances a 1-1/2 inch diameter drive rod to collect soil samples. Soil samples are collected inside of a 2-foot or 4-foot polyethylene sheath inserted into the end of the drive rod. When the selected sample depth is reached, a spring release allows the soil sample to be collected inside of the sheath. A new sheath is used to collect each sample at the specified depth.

To extract the soil sample, the sheath is cut open. Upon opening the sheath, each soil sample to be submitted for analytical testing is preserved. Soil samples to be used for screening/classification purposes are placed in 8-ounce glass jars.

Borings which are not converted to temporary groundwater monitoring wells are backfilled with bentonite from the bottom of the boring to the surface. If surface improvements are present (i.e., concrete or asphalt), bentonite is placed up to the bottom of the improvement and the surface is repaired with a like material. A WDNR Borehole Abandonment Form is completed for each boring.

Drilling equipment is decontaminated in accordance with procedures outlined in Section 3.1.

1.2 Soil Screening

Each soil sample collected during soil probe or auger drilling methods is split to form duplicate samples, upon collection. A portion of the sample, to be utilized for screening purposes and classification is placed in an 8-ounce glass jar, covered with aluminum foil and sealed with a screw-on lid. The remainder of the sample is placed in laboratory provided jars, if the sample is to be submitted to a laboratory for analytical testing (Refer to Section 1.4).

AECOM utilizes an HNu Model PI-101 photoionization detector equipped with a 10.2 eV lamp or a MiniRae Plus (PGM-76) Professional PID equipped with a 10.6 eV lamp. Both instruments are capable of detecting certain volatile organic compounds (VOCs), including many of the volatile components characteristic of petroleum products and common solvents with ionization energies less than or equal to 10.6 eV. When the contaminants of concern, such as 1,1,1-trichloroethane have ionization energies greater than 10.6 eV, a PID equipped with an appropriate lamp will be rented.

The PID operates on the principal of photoionization in which incoming gas molecules are subjected to ultraviolet radiation and transformed into ion pairs. The charged ions create a current between two electrodes and this current is transformed into a meter reading.

PID screening is performed by first allowing the screening sample to warm to approximately room temperature (70° F). The sample is shaken vigorously for several seconds. This procedure breaks up the soil and increases the surface area of the soil particles exposed to the air inside of the jar. The tip of the PID probe is inserted about one inch into the jar through the aluminum foil. The highest value read off of the meter during the first few seconds after inserting the probe tip is recorded as the PID reading for the soil sample.

Because organic compounds have varying ionization potentials, the response of the PID depends on the compounds being ionized. In addition, because the PID responds only to compounds which are present in the vapor phase, the relative volatility is also a factor in the response. As a result, when a variety of VOCs are present in the screening sample, the meter reading does not necessarily indicate the concentrations of any

specific VOC, but a response to total ionizable VOCs present under the conditions specified above at the wavelength of the lamp used relative to the concentrations and ionization potential of each compound.

Prior to screening, the meter is zeroed and calibrated to an isobutylene standard per the manufacturer's specifications. All PID readings are reported in PID Instrument Units (IU). The readings are similar to parts per million, using an isobutylene equivalent to address the variability of the response factor. This nomenclature is recommended by the equipment manufacturer and required by the WDNR field screening procedures guidance document.

1.3 Soil Classification

USCS Classification System - The soil samples are preliminarily classified in the field, at the time of collection. Drilling notes regarding soil types, drilling conditions, PID screening, depth to water and location of stratigraphic changes are documented on the field boring logs. During the classification process, the presence of any odors, staining, or other features which could be construed as indicative of contamination are noted. The soil samples are re-classified in the AECOM laboratory by a geologist or engineer. Soil classification is based upon the texture and plasticity of the soil, in general accordance with the Unified Soil Classification System (USCS). The assigned group symbols according to the USCS are indicated in parentheses following the soil description on the logs.

The soil stratification indicated on the logs are selected by the geologist/engineer based upon the field log information and samples observations. Stratification lines are considered as approximate. The transition between soil types in-situ may be gradual in both the horizontal and vertical directions.

1.4 Soil Sample Preservation

Soil samples to be submitted for analytical testing are collected in accordance with standard WDNR protocol. Based on the results of visual observations, PID screening, the sample odor and sample depth, soil samples are selected for laboratory testing. Samples to be tested for Polycyclic Aromatic Hydrocarbons (PAHs), Resource Conservation and Recovery Act (RCRA) metals, reactive cyanide, and reactive sulfide are collected in 4-ounce laboratory provided glass jars. Soil samples to be analyzed for Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and Volatile Organic Compounds (VOCs) are described in the following sections.

Laboratory analyses are performed using methods specified in WDNR Guidance documents that are current at the time of the analyses. Specified sample holding times and preservation requirements are met, unless specifically noted in the laboratory report and/or text of the report.

All samples for laboratory analysis are stored in a cooler on ice immediately after sampling. A chain-of-custody form is completed at the time of sampling, and accompanied the samples to the laboratory. The samples are either shipped directly to the analytical laboratory or brought to the AECOM office where the samples were stored in a refrigerated unit at 4 degrees Centigrade until shipment.

1.4.1 GRO/VOC Samples

Soil samples to be tested for GRO and VOCs are collected in a similar manner. Each soil sample is weighed immediately after collection. Approximately 25 to 35 grams of soil is placed in pre-weighed laboratory provided 60-ml vials. A pre-measured amount (25-ml) of laboratory grade methanol is added to the sample. The entire soil sample is covered with the methanol. A separate soil sample is prepared and preserved for GRO or VOC analysis. A separate sample of the soil is placed in a plastic container for total solids determination. Each sample is labeled with the sample designation, sample date and time, sampler's initials, project number and preservative added. The sample is placed in a cooler on ice and submitted to the laboratory the same day, if

possible. A chain of custody is filled out immediately after sample collection and accompanies the samples from time of collection until received at the laboratory. Any notes regarding soil sample collection are included in the field book while in the field. The samples are tested following the Wisconsin modified GRO method for GRO and EPA Method 8021 or 8260 for VOCs.

1.4.2 DRO Samples

Soil samples to be tested for DRO are weighed immediately after collection. Approximately 25 to 35 grams of soil are placed in pre-weighed laboratory provided 60-ml vials. No preservatives are used for DRO soil samples. A separate sample of the soil is placed in a plastic container for total solids determination. Each sample is labeled with the sample designation, sample date and time, sampler's initials, project number and preservative added. The sample is placed in a cooler on ice and submitted to the laboratory the same day, if possible. A chain of custody is filled out immediately after sample collection and accompanies the samples from time of collection until received at the laboratory. Any notes regarding soil sample collection are included in the field book while in the field. The samples are tested following the Wisconsin modified DRO method for DRO.

1.4.3 PAH/RCRA Metals/Reactive Cyanide/Reactive Sulfide Samples

Soil samples to be tested for PAHs, RCRA Metals, Reactive Cyanide and Reactive Sulfide are placed in laboratory provided 4 ounce glass jars. Each glass jar is packed full of soil. No preservatives are used for PAHs, RCRA Metals, Reactive Cyanide, and Reactive Sulfide soil samples. A separate sample of the soil is placed in a plastic container for total solids determination. Each sample is labeled with the sample designation, sample date and time, sampler's initials, project number and preservative added. The sample is placed in a cooler on ice and submitted to the laboratory the same day, if possible. A chain of custody is filled out immediately after sample collection and accompanies the samples from time of collection until received at the laboratory. Any notes regarding soil sample collection are included in the field book while in the field. PAH samples are tested following EPA Method 8310. RCRA Metals are tested following EPA Methods 7471A and 6010B. Reactive cyanide samples are tested following EPA Method 7.3.3. Reactive sulfide samples are tested following EPA Method 7.3.4.

2.0 GROUNDWATER SAMPLING PROCEDURES

2.1 Temporary Well Sampling

Typically, temporary wells are sampled using a disposable polyethylene bailer or a Teflon© bailer with bottom check valves or with PVC tubing and a peristaltic pump. In order to minimize disturbance of the water in the well, the bailer is slowly lowered by rope, into the water table. Once the bailer is filled, it is gently brought to the surface and emptied into sample containers.

2.1.1 VOC/PVOC Sampling

A VOC/PVOC sampling port is inserted into the bottom of the bailer, to allow for regulation of flow of water from the bailer. This allows for minimization of disturbance of the sample. During low-flow sampling, groundwater is pumped directly from the well into the sample bottle using PVC tubing, silicone tubing, and a peristaltic pump.

The water is slowly discharged directly into laboratory provided 40-ml VOC vials with laboratory-added HCl as a preservative. The bottle is filled to a positive meniscus and covered with a cap fitted with a Teflon© septum. The bottle is inverted and gently tapped to verify that air bubbles are not present in the sample. Each bottle is labeled, typically with a label provided by the laboratory, with the well number, sampled number, date, sampler's initials, project number and preserves added. After labeling, the samples are placed in a cooler, on ice, for shipment to the analytical laboratory.

VOC and PVOC water samples are tested using EPA Method 8021 or 8260.

2.1.2 RCRA Metals Sampling

Samples to be analyzed for RCRA metals are collected using PVC tubing, silicone tubing, and a peristaltic pump. A piece of silicone tubing is placed at the end of the PVC tubing. The silicone tubing is then fed into the peristaltic pump. A 0.45 μm filter is attached to the silicone tubing. Groundwater is pumped from the well, through the field filter and into a bottle containing a small amount of nitric acid. Nitric acid is a preservative used when sampling for metals. Each bottle is labeled, typically with a label provided by the laboratory, with the well number, sampled number, date, sampler's initials, project number and preserves added. After labeling, the samples are placed in a cooler, on ice, for shipment to the analytical laboratory.

Cadmium and lead water samples are tested using EPA Methods 7131A and 7421, respectively.

2.1.3 Reactive Cyanide and Reactive Sulfide Sampling

Samples to be analyzed for reactive cyanide and reactive sulfide are collected using PVC tubing, silicone tubing, and a peristaltic pump. A piece of silicone tubing is placed at the end of the PVC tubing. The silicone tubing is then fed into the peristaltic pump. A 0.45 μm filter is attached to the silicone tubing. Groundwater is pumped from the well, through the field filter and into a bottle containing a small amount of nitric acid. No preservatives are used when sampling for reactive cyanide and reactive sulfide. Each bottle is labeled, typically with a label provided by the laboratory, with the well number, sampled number, date, sampler's initials, project number and preserves added. After labeling, the samples are placed in a cooler, on ice, for shipment to the analytical laboratory.

Reactive cyanide and reactive sulfide water samples are tested using EPA Methods 9014 and 9034, respectively.

3.0 DECONTAMINATION PROCEDURES

3.1 Geoprobing

To avoid cross-contamination between sites, the Geoprobe equipment is decontaminated before arriving at the site. The downhole sampling equipment is decontaminated between subsequent sampling intervals using a wash of Alconox© soap and clean water, followed by a rinse with clean water. Equipment is scrubbed with a brush during each step of the decontamination process to remove soil particles which may adhere to the equipment.

New nitrile gloves are used for each soil sample interval, therefore no decontamination of this equipment is necessary.

Appendix D

Laboratory Analytical Reports and Associated Chain-of-Custody Forms

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

April 21, 2009

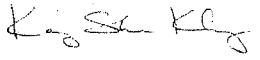
Bryan Bergmann
AECOM - MILWAUKEE (STS)
11425 W. Lake Park Drive
Milwaukee, WI 53224

RE: Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Dear Bryan Bergmann:
Enclosed are the analytical results for sample(s) received by the laboratory on April 04, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kang Khang

kang.khang@pacelabs.com
Project Manager

Enclosures

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Green Bay Certification IDs

Wisconsin DATCP Certification #: 105-444
Wisconsin DATCP Certification #: 105-444
Wisconsin Certification #: 405132750
Wisconsin Certification #: 405132750
South Carolina Certification #: 83006001
South Carolina Certification #: 83006001
North Dakota Certification #: R-200
North Dakota Certification #: R-150
North Carolina Certification #: 503
North Carolina Certification #: 503
New York Certification #: 11887
New York Certification #: 11888
Minnesota Certification #: 055-999-334
Minnesota Certification #: 055-999-334
Louisiana Certification #: 04169
Louisiana Certification #: 04168
Kentucky Certification #: 83
Kentucky Certification #: 82
Illinois Certification #: 200051
Illinois Certification #: 200050
Florida/NELAP Certification #: E87951
Florida/NELAP Certification #: E87948

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SAMPLE SUMMARY

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4015718001	FOX-1 1-3'	Solid	04/01/09 09:54	04/04/09 09:40
4015718002	FOX-1 6-8'	Solid	04/01/09 10:00	04/04/09 09:40
4015718003	FOX-4 1-3'	Solid	04/01/09 11:00	04/04/09 09:40
4015718004	FOX-4 4-6'	Solid	04/01/09 11:00	04/04/09 09:40
4015718005	FOX-3 1-3'	Solid	04/01/09 11:25	04/04/09 09:40
4015718006	FOX-2 2-4'	Solid	04/01/09 11:35	04/04/09 09:40
4015718007	FOX-2 4-6	Solid	04/01/09 11:50	04/04/09 09:40
4015718008	FOX-5 2-4	Solid	04/01/09 12:10	04/04/09 09:40
4015718009	FOX-5 4-6	Solid	04/01/09 12:20	04/04/09 09:40
4015718010	FOX-6 0-2	Solid	04/01/09 12:30	04/04/09 09:40
4015718011	FOX-6 4-6	Solid	04/01/09 12:35	04/04/09 09:40
4015718012	WFM-1 1-3	Solid	04/02/09 08:50	04/04/09 09:40
4015718013	WFM-1 4-6	Solid	04/02/09 09:00	04/04/09 09:40
4015718014	WB-2 1-3	Solid	04/02/09 09:30	04/04/09 09:40
4015718015	WB-2 8-10	Solid	04/02/09 09:45	04/04/09 09:40
4015718016	WB-3 1-3	Solid	04/02/09 10:40	04/04/09 09:40
4015718017	WB-3 6-8	Solid	04/02/09 11:07	04/04/09 09:40
4015718018	WB-4 1-3	Solid	04/02/09 11:07	04/04/09 09:40
4015718019	WB-4 6-8	Solid	04/02/09 12:00	04/04/09 09:40
4015718020	WB-5 2-4	Solid	04/02/09 12:30	04/04/09 09:40
4015718021	WB5 10-12	Solid	04/02/09 13:00	04/04/09 09:40
4015718022	WB1 1-3	Solid	04/02/09 13:10	04/04/09 09:40
4015718023	WB 1 6-8	Solid	04/02/09 15:20	04/04/09 09:40
4015718024	D-2 1-3	Solid	04/02/09 15:53	04/04/09 09:40
4015718025	D-1 1-3	Solid	04/02/09 16:00	04/04/09 09:40
4015718026	D-3 1-3	Solid	04/02/09 16:00	04/04/09 09:40
4015718027	D-3 14-16	Solid	04/02/09 17:00	04/04/09 09:40

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SAMPLE ANALYTE COUNT

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4015718001	FOX-1 1-3'	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4015718002	FOX-1 6-8'	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4015718003	FOX-4 1-3'	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4015718004	FOX-4 4-6'	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4015718005	FOX-3 1-3'	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4015718006	FOX-2 2-4'	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4015718007	FOX-2 4-6	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4015718008	FOX-5 2-4	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4015718009	FOX-5 4-6	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G

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SAMPLE ANALYTE COUNT

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4015718010	FOX-6 0-2	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4015718011	FOX-6 4-6	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4015718012	WFM-1 1-3	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	2	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4015718013	WFM-1 4-6	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4015718014	WB-2 1-3	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4015718015	WB-2 8-10	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4015718016	WB-3 1-3	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4015718017	WB-3 6-8	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	2	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4015718018	WB-4 1-3	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4015718019	WB-4 6-8	ASTM D2974-87	MRN	1	PASI-G

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ANALYTICAL RESULTS

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Sample: FOX-1 1-3' Lab ID: **4015718001** Collected: 04/01/09 09:54 Received: 04/04/09 09:40 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**3.0**	mg/kg	2.4	1.2	1	04/08/09 07:52	04/08/09 20:55		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 11:36	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 11:36	100-41-4	W
Gasoline Range Organics	**<3.0**	mg/kg	3.0	3.0	1	04/08/09 07:44	04/08/09 11:36		
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 11:36	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 11:36	91-20-3	W
Toluene	**53.6J**	ug/kg	71.5	29.8	1	04/08/09 07:44	04/08/09 11:36	108-88-3	
1,2,4-Trimethylbenzene	**115**	ug/kg	71.5	29.8	1	04/08/09 07:44	04/08/09 11:36	95-63-6	
1,3,5-Trimethylbenzene	**58.2J**	ug/kg	71.5	29.8	1	04/08/09 07:44	04/08/09 11:36	108-67-8	
m&p-Xylene	**200**	ug/kg	143	59.6	1	04/08/09 07:44	04/08/09 11:36	1330-20-7	
o-Xylene	**57.7J**	ug/kg	71.5	29.8	1	04/08/09 07:44	04/08/09 11:36	95-47-6	
a,a,a-Trifluorotoluene (S)	103	%	80-120		1	04/08/09 07:44	04/08/09 11:36	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**27.2**	mg/kg	0.60	0.040	1	04/08/09 11:00	04/08/09 17:44	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**16.1**	%	0.10	0.10	1		04/07/09 08:20		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Sample: FOX-1 6-8' Lab ID: **4015718002** Collected: 04/01/09 10:00 Received: 04/04/09 09:40 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**337**	mg/kg	13.8	6.6	6	04/08/09 07:52	04/08/09 21:07		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<100**	ug/kg	240	100	4	04/08/09 07:44	04/08/09 16:42	71-43-2	W
Ethylbenzene	**3460**	ug/kg	275	115	4	04/08/09 07:44	04/08/09 16:42	100-41-4	
Gasoline Range Organics	**778**	mg/kg	11.5	11.5	4	04/08/09 07:44	04/08/09 16:42		
Methyl-tert-butyl ether	**<100**	ug/kg	240	100	4	04/08/09 07:44	04/08/09 16:42	1634-04-4	W
Naphthalene	**2080**	ug/kg	275	115	4	04/08/09 07:44	04/08/09 16:42	91-20-3	Z2
Toluene	**553**	ug/kg	275	115	4	04/08/09 07:44	04/08/09 16:42	108-88-3	
1,2,4-Trimethylbenzene	**3700**	ug/kg	275	115	4	04/08/09 07:44	04/08/09 16:42	95-63-6	
1,3,5-Trimethylbenzene	**3200**	ug/kg	275	115	4	04/08/09 07:44	04/08/09 16:42	108-67-8	
m&p-Xylene	**5150**	ug/kg	550	229	4	04/08/09 07:44	04/08/09 16:42	1330-20-7	
o-Xylene	**2140**	ug/kg	275	115	4	04/08/09 07:44	04/08/09 16:42	95-47-6	
a,a,a-Trifluorotoluene (S)	123	%	80-120		4	04/08/09 07:44	04/08/09 16:42	98-08-8	S7
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Cadmium	**0.16J**	mg/kg	0.29	0.0072	1	04/08/09 11:00	04/08/09 17:48	7440-43-9	
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Leachate Method/Date: EPA 1311; 04/07/09 00:00								
Lead	**0.043J**	mg/L	1.0	0.0069	1	04/08/09 08:45	04/08/09 16:33	7439-92-1	1j
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**12.7**	%	0.10	0.10	1		04/07/09 08:20		

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ANALYTICAL RESULTS

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Sample: FOX-4 1-3' Lab ID: **4015718003** Collected: 04/01/09 11:00 Received: 04/04/09 09:40 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**37.6**	mg/kg	4.9	2.3	2	04/08/09 07:52	04/08/09 21:19		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:02	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:02	100-41-4	W
Gasoline Range Organics	**<3.0**	mg/kg	3.0	3.0	1	04/08/09 07:44	04/08/09 12:02		
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:02	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:02	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:02	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:02	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:02	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	04/08/09 07:44	04/08/09 12:02	1330-20-7	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:02	95-47-6	W
a,a,a-Trifluorotoluene (S)	105	%	80-120		1	04/08/09 07:44	04/08/09 12:02	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**17.6**	mg/kg	0.60	0.040	1	04/08/09 11:00	04/08/09 18:00	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**16.1**	%	0.10	0.10	1		04/07/09 08:20		

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ANALYTICAL RESULTS

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Sample: FOX-4 4-6' **Lab ID: 4015718004** Collected: 04/01/09 11:00 Received: 04/04/09 09:40 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**1.5J**	mg/kg	2.8	1.3	1	04/08/09 07:52	04/08/09 21:31		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:27	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:27	100-41-4	W
Gasoline Range Organics	**<3.3**	mg/kg	3.3	3.3	1	04/08/09 07:44	04/08/09 12:27		
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:27	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:27	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:27	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:27	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:27	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	04/08/09 07:44	04/08/09 12:27	1330-20-7	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:27	95-47-6	W
a,a,a-Trifluorotoluene (S)	103	%	80-120		1	04/08/09 07:44	04/08/09 12:27	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**9.1**	mg/kg	0.65	0.044	1	04/08/09 11:00	04/08/09 18:05	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**23.6**	%	0.10	0.10	1		04/07/09 08:21		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Sample: FOX-3 1-3' **Lab ID: 4015718005** Collected: 04/01/09 11:25 Received: 04/04/09 09:40 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**7.2**	mg/kg	2.6	1.3	1	04/08/09 07:53	04/08/09 21:43		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:53	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:53	100-41-4	W
Gasoline Range Organics	**<2.9**	mg/kg	2.9	2.9	1	04/08/09 07:44	04/08/09 12:53		
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:53	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:53	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:53	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:53	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:53	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	04/08/09 07:44	04/08/09 12:53	1330-20-7	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 12:53	95-47-6	W
a,a,a-Trifluorotoluene (S)	104	%	80-120		1	04/08/09 07:44	04/08/09 12:53	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**39.6**	mg/kg	0.58	0.039	1	04/08/09 11:00	04/08/09 18:09	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**14.5**	%	0.10	0.10	1		04/07/09 08:21		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Sample: FOX-2 2-4' Lab ID: **4015718006** Collected: 04/01/09 11:35 Received: 04/04/09 09:40 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**1.8J**	mg/kg	1.9	0.88	1	04/08/09 07:53	04/08/09 21:55		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 13:19	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 13:19	100-41-4	W
Gasoline Range Organics	**<2.7**	mg/kg	2.7	2.7	1	04/08/09 07:44	04/08/09 13:19		
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 13:19	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 13:19	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 13:19	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 13:19	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 13:19	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	04/08/09 07:44	04/08/09 13:19	1330-20-7	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 13:19	95-47-6	W
a,a,a-Trifluorotoluene (S)	103	%	80-120		1	04/08/09 07:44	04/08/09 13:19	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**7.7**	mg/kg	0.54	0.036	1	04/08/09 11:00	04/08/09 18:13	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**7.3**	%	0.10	0.10	1		04/07/09 08:21		

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ANALYTICAL RESULTS

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Sample: FOX-2 4-6 Lab ID: **4015718007** Collected: 04/01/09 11:50 Received: 04/04/09 09:40 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**<1.0**	mg/kg	2.1	1.0	1	04/08/09 07:53	04/08/09 22:07		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 13:44	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 13:44	100-41-4	W
Gasoline Range Organics	**<3.0**	mg/kg	3.0	3.0	1	04/08/09 07:44	04/08/09 13:44		
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 13:44	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 13:44	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 13:44	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 13:44	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 13:44	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	04/08/09 07:44	04/08/09 13:44	1330-20-7	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 13:44	95-47-6	W
a,a,a-Trifluorotoluene (S)	104	%	80-120		1	04/08/09 07:44	04/08/09 13:44	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**3.7**	mg/kg	0.60	0.040	1	04/08/09 11:00	04/08/09 18:18	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**16.2**	%	0.10	0.10	1		04/07/09 08:21		

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ANALYTICAL RESULTS

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Sample: FOX-5 2-4 **Lab ID: 401571800**8 Collected: 04/01/09 12:10 Received: 04/04/09 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**3.5**	mg/kg	2.9	1.4	1	04/08/09 07:54	04/08/09 22:19		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 14:10	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 14:10	100-41-4	W
Gasoline Range Organics	**<3.2**	mg/kg	3.2	3.2	1	04/08/09 07:44	04/08/09 14:10		
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 14:10	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 14:10	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 14:10	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 14:10	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 14:10	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	04/08/09 07:44	04/08/09 14:10	1330-20-7	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 14:10	95-47-6	W
a,a,a-Trifluorotoluene (S)	104	%	80-120		1	04/08/09 07:44	04/08/09 14:10	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**27.4**	mg/kg	0.64	0.043	1	04/08/09 11:00	04/08/09 18:22	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**21.7**	%	0.10	0.10	1		04/07/09 08:21		

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ANALYTICAL RESULTS

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Sample: FOX-5 4-6 Lab ID: 4015718009 Collected: 04/01/09 12:20 Received: 04/04/09 09:40 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**9.7**	mg/kg	2.5	1.2	1	04/08/09 07:54	04/08/09 22:31		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 14:35	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 14:35	100-41-4	W
Gasoline Range Organics	**<3.0**	mg/kg	3.0	3.0	1	04/08/09 07:44	04/08/09 14:35		
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 14:35	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 14:35	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 14:35	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 14:35	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 14:35	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	04/08/09 07:44	04/08/09 14:35	1330-20-7	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 14:35	95-47-6	W
a,a,a-Trifluorotoluene (S)	104	%	80-120		1	04/08/09 07:44	04/08/09 14:35	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**7.5**	mg/kg	0.61	0.041	1	04/08/09 11:00	04/08/09 18:26	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.7**	%	0.10	0.10	1		04/07/09 08:21		

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ANALYTICAL RESULTS

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Sample: FOX-6 0-2 **Lab ID: 4015718010** Collected: 04/01/09 12:30 Received: 04/04/09 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**11.8**	mg/kg	2.5	1.2	1	04/08/09 07:54	04/08/09 22:43		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 15:00	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 15:00	100-41-4	W
Gasoline Range Organics	**<3.2**	mg/kg	3.2	3.2	1	04/08/09 07:44	04/08/09 15:00		
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 15:00	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 15:00	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 15:00	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 15:00	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 15:00	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	04/08/09 07:44	04/08/09 15:00	1330-20-7	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 15:00	95-47-6	W
a,a,a-Trifluorotoluene (S)	104	%	80-120		1	04/08/09 07:44	04/08/09 15:00	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**26.6**	mg/kg	0.64	0.043	1	04/08/09 11:00	04/08/09 18:30	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**22.3**	%	0.10	0.10	1		04/07/09 08:21		

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ANALYTICAL RESULTS

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Sample: FOX-6 4-6 **Lab ID: 4015718011** Collected: 04/01/09 12:35 Received: 04/04/09 09:40 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**1.4J**	mg/kg	2.3	1.1	1	04/08/09 07:54	04/08/09 22:55		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 15:26	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 15:26	100-41-4	W
Gasoline Range Organics	**<3.1**	mg/kg	3.1	3.1	1	04/08/09 07:44	04/08/09 15:26		
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 15:26	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 15:26	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 15:26	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 15:26	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 15:26	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	04/08/09 07:44	04/08/09 15:26	1330-20-7	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	04/08/09 07:44	04/08/09 15:26	95-47-6	W
a,a,a-Trifluorotoluene (S)	103	%	80-120		1	04/08/09 07:44	04/08/09 15:26	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**5.3**	mg/kg	0.63	0.042	1	04/08/09 11:00	04/08/09 18:35	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.4**	%	0.10	0.10	1		04/07/09 08:21		

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QUALITY CONTROL DATA

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

QC Batch: PMST/2343 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 4015718001, 4015718002, 4015718003, 4015718004, 4015718005, 4015718006, 4015718007, 4015718008, 4015718009, 4015718010, 4015718011, 4015718012, 4015718013, 4015718014, 4015718015, 4015718016, 4015718017, 4015718018

SAMPLE DUPLICATE: 142887

Parameter	Units	4015717001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.0	19.9	5	10	

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QUALITY CONTROL DATA

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

QC Batch: PMST/2344
QC Batch Method: ASTM D2974-87
Analysis Metnod: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 4015718019, 4015718020, 4015718021, 4015718023, 4015718024, 4015718025, 4015718026, 4015718027

SAMPLE DUPLICATE: 142896

Parameter	Units	4015718019 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.5	15.8	5	10	

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QUALITY CONTROL DATA

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

QC Batch: OEXT/4005 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 4015718001, 4015718002, 4015718003, 4015718004, 4015718005, 4015718006, 4015718007, 4015718008, 4015718009, 4015718010, 4015718011, 4015718012, 4015718013, 4015718014, 4015718015, 4015718016, 4015718017, 4015718018, 4015718019, 4015718020

METHOD BLANK: 143390 Matrix: Solid
Associated Lab Samples: 4015718001, 4015718002, 4015718003, 4015718004, 4015718005, 4015718006, 4015718007, 4015718008, 4015718009, 4015718010, 4015718011, 4015718012, 4015718013, 4015718014, 4015718015, 4015718016, 4015718017, 4015718018, 4015718019, 4015718020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<0.95	2.0	04/08/09 20:43	

LABORATORY CONTROL SAMPLE & LCSD: 143391 143392

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	20	19.2	16.8	96	84	70-120	14	20	

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QUALITY CONTROL DATA

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

QC Batch: GCV/3187 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 4015718001, 4015718002, 4015718003, 4015718004, 4015718005, 4015718006, 4015718007, 4015718008, 4015718009, 4015718010, 4015718011, 4015718012, 4015718013

METHOD BLANK: 143397 Matrix: Solid
Associated Lab Samples: 4015718001, 4015718002, 4015718003, 4015718004, 4015718005, 4015718006, 4015718007, 4015718008, 4015718009, 4015718010, 4015718011, 4015718012, 4015718013, 4015718014, 4015718015, 4015718016, 4015718017, 4015718018, 4015718019, 4015718020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	04/08/09 09:54	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	04/08/09 09:54	
Benzene	ug/kg	<25.0	60.0	04/08/09 09:54	
Ethylbenzene	ug/kg	<25.0	60.0	04/08/09 09:54	
Gasoline Range Organics	mg/kg	<2.5	2.5	04/08/09 09:54	
m&p-Xylene	ug/kg	<50.0	120	04/08/09 09:54	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	04/08/09 09:54	
Naphthalene	ug/kg	<25.0	60.0	04/08/09 09:54	
o-Xylene	ug/kg	<25.0	60.0	04/08/09 09:54	
Toluene	ug/kg	<25.0	60.0	04/08/09 09:54	
a,a,a-Trifluorotoluene (S)	%	103	80-120	04/08/09 09:54	

LABORATORY CONTROL SAMPLE & LCSD: 143398 143399

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	997	1000	100	100	80-120	.5	20	
1,3,5-Trimethylbenzene	ug/kg	1000	1010	1020	101	102	80-120	.7	20	
Benzene	ug/kg	1000	982	983	98	98	80-120	.06	20	
Ethylbenzene	ug/kg	1000	1040	1030	104	103	80-120	.5	20	
Gasoline Range Organics	mg/kg	10	9.5	9.4	95	94	80-120	1	20	
m&p-Xylene	ug/kg	2000	2070	2070	104	103	80-120	.4	20	
Methyl-tert-butyl ether	ug/kg	1000	928	905	93	90	80-120	3	20	
Naphthalene	ug/kg	1000	1110	1040	111	104	80-120	7	20	
o-Xylene	ug/kg	1000	1030	1030	103	103	80-120	.4	20	
Toluene	ug/kg	1000	1020	1010	102	101	80-120	.9	20	
a,a,a-Trifluorotoluene (S)	%				104	104	80-120			

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QUALITY CONTROL DATA

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

QC Batch: MPRP/2412 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 4015718001, 4015718002, 4015718003, 4015718004, 4015718005, 4015718006, 4015718007, 4015718008, 4015718009, 4015718010, 4015718011, 4015718012, 4015718013, 4015718014, 4015718015, 4015718016, 4015718017, 4015718018, 4015718019, 4015718020

METHOD BLANK: 143413 Matrix: Solid
Associated Lab Samples: 4015718001, 4015718002, 4015718003, 4015718004, 4015718005, 4015718006, 4015718007, 4015718008, 4015718009, 4015718010, 4015718011, 4015718012, 4015718013, 4015718014, 4015718015, 4015718016, 4015718017, 4015718018, 4015718019, 4015718020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium	mg/kg	<0.0063	0.25	04/08/09 17:23	
Lead	mg/kg	<0.034	0.50	04/08/09 17:23	

LABORATORY CONTROL SAMPLE: 143414

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium	mg/kg	25	23.5	94	80-120	
Lead	mg/kg	25	24.5	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 143415 143416

Parameter	Units	4015718015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	mg/kg	0.080J	30.6	30.6	27.0	26.9	88	88	75-125	.3	20	
Lead	mg/kg	4.5	30.6	30.6	29.0	29.7	80	82	75-125	2	20	

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QUALITY CONTROL DATA

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

QC Batch: MPRP/2413 Analysis Metnod: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 4015718021, 4015718023, 4015718024, 4015718025, 4015718026, 4015718027

METHOD BLANK: 143417 Matrix: Solid
Associated Lab Samples: 4015718021, 4015718023, 4015718024, 4015718025, 4015718026, 4015718027

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium	mg/kg	<0.0063	0.25	04/08/09 19:26	
Lead	mg/kg	0.055J	0.50	04/08/09 19:26	

LABORATORY CONTROL SAMPLE: 143418

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium	mg/kg	25	23.4	94	80-120	
Lead	mg/kg	25	24.6	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 143419 143420

Parameter	Units	4015718021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	mg/kg	0.047J	28	27.9	24.7	25.5	88	91	75-125	3	20	
Lead	mg/kg	3.6	28	27.9	25.4	26.3	78	81	75-125	3	20	

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QUALITY CONTROL DATA

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

QC Batch: GCV/3189 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 4015718021, 4015718022, 4015718023, 4015718024, 4015718025, 4015718026, 4015718027

METHOD BLANK: 143423 Matrix: Solid
Associated Lab Samples: 4015718021, 4015718022, 4015718023, 4015718024, 4015718025, 4015718026, 4015718027

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	04/08/09 14:56	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	04/08/09 14:56	
Benzene	ug/kg	<25.0	60.0	04/08/09 14:56	
Ethylbenzene	ug/kg	<25.0	60.0	04/08/09 14:56	
Gasoline Range Organics	mg/kg	<2.5	2.5	04/08/09 14:56	
m&p-Xylene	ug/kg	<50.0	120	04/08/09 14:56	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	04/08/09 14:56	
Naphthalene	ug/kg	<25.0	60.0	04/08/09 14:56	
o-Xylene	ug/kg	<25.0	60.0	04/08/09 14:56	
Toluene	ug/kg	<25.0	60.0	04/08/09 14:56	
a,a,a-Trifluorotoluene (S)	%	104	80-120	04/08/09 14:56	

LABORATORY CONTROL SAMPLE & LCSD: 143424 143425

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	1030	1040	103	104	80-120	1	20	
1,3,5-Trimethylbenzene	ug/kg	1000	1040	1060	104	106	80-120	2	20	
Benzene	ug/kg	1000	977	992	98	99	80-120	2	20	
Ethylbenzene	ug/kg	1000	1010	1030	101	103	80-120	2	20	
Gasoline Range Organics	mg/kg	10	9.1	10.0	91	100	80-120	9	20	
m&p-Xylene	ug/kg	2000	2020	2050	101	103	80-120	2	20	
Methyl-tert-butyl ether	ug/kg	1000	899	919	90	92	80-120	2	20	
Naphthalene	ug/kg	1000	951	953	95	95	80-120	2	20	
o-Xylene	ug/kg	1000	1010	1030	101	103	80-120	2	20	
Toluene	ug/kg	1000	993	1010	99	101	80-120	2	20	
a,a,a-Trifluorotoluene (S)	%				103	102	80-120			

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QUALITY CONTROL DATA

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

QC Batch: MPRP/2416
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET TCLP
Associated Lab Samples: 4015718002

METHOD BLANK: 143647 Matrix: Water
Associated Lab Samples: 4015718002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.0014	0.20	04/08/09 16:05	

LABORATORY CONTROL SAMPLE: 143648

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	.5	0.49	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 143649 143650

Parameter	Units	4015231001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/L	0.13J	2.5	2.5	2.5	2.5	95	96	75-125	1	20	

MATRIX SPIKE SAMPLE: 143651

Parameter	Units	4015729001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	0.031J	2.5	2.3	92	75-125	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

QC Batch: OEXT/4008 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 4015718021, 4015718022, 4015718023, 4015718024, 4015718025, 4015718026, 4015718027

METHOD BLANK: 143828 Matrix: Solid
Associated Lab Samples: 4015718021, 4015718022, 4015718023, 4015718024, 4015718025, 4015718026, 4015718027

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<0.95	2.0	04/10/09 08:27	

LABORATORY CONTROL SAMPLE & LCSD: 143829 143830

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	20	16.9	17.0	85	85	70-120	.5	20	

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QUALIFIERS

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

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U - Indicates the compound was analyzed for, but not detected.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

1j	Analyte was detected in the associated TCLP extraction blank at 0.0019 mg/L.
B	Analyte was detected in the associated method blank.
S7	Surrogate recovery outside control limits (not confirmed by re-analysis).
W	Non-detect results are reported on a wet weight basis.
Z2	Analyte present in the associated method blank above the detection limit.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4015718001	FOX-1 1-3'	ASTM D2974-87	PMST/2343		
4015718002	FOX-1 6-8'	ASTM D2974-87	PMST/2343		
4015718003	FOX-4 1-3'	ASTM D2974-87	PMST/2343		
4015718004	FOX-4 4-6'	ASTM D2974-87	PMST/2343		
4015718005	FOX-3 1-3'	ASTM D2974-87	PMST/2343		
4015718006	FOX-2 2-4'	ASTM D2974-87	PMST/2343		
4015718007	FOX-2 4-6	ASTM D2974-87	PMST/2343		
4015718008	FOX-5 2-4	ASTM D2974-87	PMST/2343		
4015718009	FOX-5 4-6	ASTM D2974-87	PMST/2343		
4015718010	FOX-6 0-2	ASTM D2974-87	PMST/2343		
4015718011	FOX-6 4-6	ASTM D2974-87	PMST/2343		
4015718012	WFM-1 1-3	ASTM D2974-87	PMST/2343		
4015718013	WFM-1 4-6	ASTM D2974-87	PMST/2343		
4015718014	WB-2 1-3	ASTM D2974-87	PMST/2343		
4015718015	WB-2 8-10	ASTM D2974-87	PMST/2343		
4015718016	WB-3 1-3	ASTM D2974-87	PMST/2343		
4015718017	WB-3 6-8	ASTM D2974-87	PMST/2343		
4015718018	WB-4 1-3	ASTM D2974-87	PMST/2343		
4015718019	WB-4 6-8	ASTM D2974-87	PMST/2344		
4015718020	WB-5 2-4	ASTM D2974-87	PMST/2344		
4015718021	WB5 10-12	ASTM D2974-87	PMST/2344		
4015718023	WB 1 6-8	ASTM D2974-87	PMST/2344		
4015718024	D-2 1-3	ASTM D2974-87	PMST/2344		
4015718025	D-1 1-3	ASTM D2974-87	PMST/2344		
4015718026	D-3 1-3	ASTM D2974-87	PMST/2344		
4015718027	D-3 14-16	ASTM D2974-87	PMST/2344		
4015718001	FOX-1 1-3'	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718002	FOX-1 6-8'	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718003	FOX-4 1-3'	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718004	FOX-4 4-6'	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718005	FOX-3 1-3'	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718006	FOX-2 2-4'	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718007	FOX-2 4-6	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718008	FOX-5 2-4	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718009	FOX-5 4-6	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718010	FOX-6 0-2	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718011	FOX-6 4-6	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718012	WFM-1 1-3	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718013	WFM-1 4-6	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718014	WB-2 1-3	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718015	WB-2 8-10	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718016	WB-3 1-3	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718017	WB-3 6-8	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718018	WB-4 1-3	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718019	WB-4 6-8	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718020	WB-5 2-4	WI MOD DRO	OEXT/4005	WI MOD DRO	GCSV/2608
4015718001	FOX-1 1-3'	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4015718002	FOX-1 6-8'	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718003	FOX-4 1-3'	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718004	FOX-4 4-6'	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718005	FOX-3 1-3'	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718006	FOX-2 2-4'	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718007	FOX-2 4-6	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718008	FOX-5 2-4	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718009	FOX-5 4-6	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718010	FOX-6 0-2	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718011	FOX-6 4-6	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718012	WFM-1 1-3	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718013	WFM-1 4-6	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718014	WB-2 1-3	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718015	WB-2 8-10	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718016	WB-3 1-3	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718017	WB-3 6-8	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718018	WB-4 1-3	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718019	WB-4 6-8	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718020	WB-5 2-4	TPH GRO/PVOC WI ext.	GCV/3187	WI MOD GRO	GCV/3188
4015718001	FOX-1 1-3'	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718002	FOX-1 6-8'	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718003	FOX-4 1-3'	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718004	FOX-4 4-6'	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718005	FOX-3 1-3'	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718006	FOX-2 2-4'	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718007	FOX-2 4-6	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718008	FOX-5 2-4	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718009	FOX-5 4-6	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718010	FOX-6 0-2	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718011	FOX-6 4-6	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718012	WFM-1 1-3	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718013	WFM-1 4-6	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718014	WB-2 1-3	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718015	WB-2 8-10	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718016	WB-3 1-3	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718017	WB-3 6-8	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718018	WB-4 1-3	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718019	WB-4 6-8	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718020	WB-5 2-4	EPA 3050	MPRP/2412	EPA 6010	ICP/2108
4015718021	WB5 10-12	EPA 3050	MPRP/2413	EPA 6010	ICP/2109
4015718023	WB 1 6-8	EPA 3050	MPRP/2413	EPA 6010	ICP/2109
4015718024	D-2 1-3	EPA 3050	MPRP/2413	EPA 6010	ICP/2109
4015718025	D-1 1-3	EPA 3050	MPRP/2413	EPA 6010	ICP/2109
4015718026	D-3 1-3	EPA 3050	MPRP/2413	EPA 6010	ICP/2109
4015718027	D-3 14-16	EPA 3050	MPRP/2413	EPA 6010	ICP/2109
4015718021	WB5 10-12	TPH GRO/PVOC WI ext.	GCV/3189	WI MOD GRO	GCV/3190
4015718022	WB1 1-3	TPH GRO/PVOC WI ext.	GCV/3189	WI MOD GRO	GCV/3190

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 10702-040 STH 11/32
Pace Project No.: 4015718

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4015718023	WB 1 6-8	TPH GRO/PVOC WI ext.	GCV/3189	WI MOD GRO	GCV/3190
4015718024	D-2 1-3	TPH GRO/PVOC WI ext.	GCV/3189	WI MOD GRO	GCV/3190
4015718025	D-1 1-3	TPH GRO/PVOC WI ext.	GCV/3189	WI MOD GRO	GCV/3190
4015718026	D-3 1-3	TPH GRO/PVOC WI ext.	GCV/3189	WI MOD GRO	GCV/3190
4015718027	D-3 14-16	TPH GRO/PVOC WI ext.	GCV/3189	WI MOD GRO	GCV/3190
4015718002	FOX-1 6-8'	EPA 3010	MPRP/2416	EPA 6010	ICP/2112
4015718021	WB5 10-12	WI MOD DRO	OEXT/4008	WI MOD DRO	GCSV/2612
4015718022	WB1 1-3	WI MOD DRO	OEXT/4008	WI MOD DRO	GCSV/2612
4015718023	WB 1 6-8	WI MOD DRO	OEXT/4008	WI MOD DRO	GCSV/2612
4015718024	D-2 1-3	WI MOD DRO	OEXT/4008	WI MOD DRO	GCSV/2612
4015718025	D-1 1-3	WI MOD DRO	OEXT/4008	WI MOD DRO	GCSV/2612
4015718026	D-3 1-3	WI MOD DRO	OEXT/4008	WI MOD DRO	GCSV/2612
4015718027	D-3 14-16	WI MOD DRO	OEXT/4008	WI MOD DRO	GCSV/2612

SIEMENS

April 13, 2009

Pace Analytical
1241 Bellevue Street, Suite 9
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Attn: Kang Khang

REPORT NO.: 0904125 **PROJECT NO.: 4015718**

Please find enclosed the analytical report, including the Sample Summary, Sample Narrative and Chain of Custody for your sample set received April 7, 2009.

All analyses were performed in accordance with NELAC Standards using approved methods as indicated on this report.

If you have any questions about the results, please call. Thank you for using Siemens Water Technologies for your analytical needs.

Sincerely,

Siemens Water Technologies

Bruce Schertz
Lab Manager
Enviroscan Analytical™ Services

I certify that the data contained in this report has been generated and reviewed in accordance with the Siemens Water Technologies Quality Assurance Program. Exceptions, if any, are discussed in the sample narrative. Samples will be retained for 30 days from the date of this report, then disposed in an appropriate manner. Siemens Water Technologies Corp. reserves the right to return samples identified as hazardous. Release of this Final Report is authorized as verified by the following signature.

Approved by: James R. Salbert/o

Certifications:
Wisconsin 737053130
Minnesota 055-999-302
Illinois 100317

Siemens Water Technologies Corp.
301 West Military Road
Rothschild, WI 54474
Tel: 800-338-7226
Fax: 715-355-3221
www.siemens.com/enviroscan

The total number of pages in this report, including this page is 6.

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SAMPLE SUMMARY

Lab Id	Client Sample Id	Date/Time	Matrix
0904125-01	4015718-002 Fox-1 6'-8'	04/01/09 10:00	Solid
0904125-02	4015718-012 WFM-1 1'-3'	04/02/09 08:50	Solid
0904125-03	4015718-017 W3-3 6'-8'	04/02/09 11:07	Solid
0904125-04	4015718-027 B-3 14'-16'	04/02/09 17:00	Solid

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Pace Analytical
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

PROJECT NO. : 4015718
REPORT NO. : 0904125
DATE REC'D: 04/07/09 15:15
REPORT DATE : 04/13/09 13:11
PREPARED BY : BMS

Attn: Kang Khang

Sample ID: **4015718-002** Matrix: **Solid** Sample Date/Time: **04/01/09 10:00** Lab No. : **0904125-01**

Fox-1 6'-8'

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
MOSA21-2								
Total Solids	88.2	% by Weight	0.03	0.03	1		04/10/09	LNB
SW846 Vol 1C Sec 7.3.3.2								
Reactive Cyanide	ND	mg/kg dry	0.015	0.049	1		04/08/09	LNB
Reactive Sulfide	152	mg/kg dry	28.3	28.3	1		04/08/09	JJP

Sample ID: **4015718-012** Matrix: **Solid** Sample Date/Time: **04/02/09 8:50** Lab No. : **0904125-02**

WFM-1 1'-3'

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
MOSA21-2								
Total Solids	83.6	% by Weight	0.03	0.03	1		04/10/09	LNB
SW846 Vol 1C Sec 7.3.3.2								
Reactive Cyanide	ND	mg/kg dry	0.016	0.051	1		04/08/09	LNB
Reactive Sulfide	ND	mg/kg dry	29.9	29.9	1		04/08/09	JJP

Sample ID: **4015718-017** Matrix: **Solid** Sample Date/Time: **04/02/09 11:07** Lab No. : **0904125-03**

WFM-2 6'-8'

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
MOSA21-2								
Total Solids	80.8	% by Weight	0.03	0.03	1		04/10/09	LNB
SW846 Vol 1C Sec 7.3.3.2								
Reactive Cyanide	ND	mg/kg dry	0.016	0.053	1		04/08/09	LNB
Reactive Sulfide	ND	mg/kg dry	30.9	30.9	1		04/08/09	JJP

SIEMENS

Qualifier Descriptions

Definitions

LOD = Limit of Detection (Dilution Corrected)
LOQ = Limit of Quanitation (Dilution Corrected)
ND = Not Detected
COMP = Complete
SUBCON = Subcontracted analysis
mv = millivolts
pci/L = picocuries per Liter
mL/L = milliliters per Liter
mg = milligram

When the word "dry" follows the units on the result page the sample results are dry weight corrected.

LODs and LOQs are dry weight corrected for all soils except WI GRO, EPA 8021 and WI DNR/EPA 8260B methanol and WI DNR methylene chloride preserved

ug/l = Micrograms per Liter = parts per billion (ppb)
ug/kg = Micrograms per kilogram = parts per billion (ppb)
mg/l = Milligrams per liter = parts per million (ppm)
mg/kg = Milligrams per kilogram = parts per million (ppm)
NOT PRES = Not Present
ppth = Parts per thousand
* = Result outside established limits.
mg/m3 = Milligrams per meter cubed
ng/L = Nanograms per Liter = Parts per trillion(ppt)
> = Greater Than

State of Wisconsin Methanol Soils for WI GRO, WI DNR/EPA 8260B and EPA 8021 are reported to the LOQ.

Chain of Custody

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Workorder: 4015718 **Workorder Name:** 10702-040 S+H 11/32 **Results Requested** 4/17/2009 ✓

Report / Invoice To	Subcontract To
Kang Khang Pace Analytical Green Bay 1241 Bellevue Street Suite 9 Green Bay, WI 54302 Phone (920)469-2436 Email: kang.khang@pacelabs.com	US Filter P.O._____

0904125

Reactivity/Sulfide

Client's containers 1-4oz amber glass jar

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	LAB USE ONLY
1	FOX-1 6-8'	4/1/2009 10:00	4015718002	Solid	1	
2	WFM-1 1-3	4/2/2009 08:50	4015718012	Solid	1	
3	WB-3 6-8	4/2/2009 11:07	4015718017	Solid	1	
4	~~D-3 1-3~~	~~4/2/2009 16:00~~	~~4015718026~~	~~Solid~~	MRN 4/4/09	
5	D-3 14-16	4/2/2009 17:00	4015718027	Solid	1	

Transfers	Released By	Date/Time	Received By	Date/Time
1	Steven Dykstra	4-6-09 1600	UPS ✓	
2				
3				
4				
5			Susan Ader	4-7-09 1515

Comments

Rec'd on ice 2.6°

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UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Aecom
Branch/Location:	milwaukee
Project Contact:	Bryan Bergmann
Phone:	414 577 1321
Project Number:	10702-040
Project Name:	STH 11/32
Project State:	WI
Sampled By (Print):	David Markert
Sampled By (Sign):	David Mar
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	Bryan Bergmann
Mail To Company:	Aecom
Mail To Address:	11425 W. Lake Park Dr Milwaukee, WI 53224
Invoice To Contact:	Same
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SL = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

FILTERED? (YES/NO)
PRESERVATION (CODE)*

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Analysis Requested: Pick Letter	Y/N	DRO	GRO/Ave + Naph	Pb	Cd	Reactive Cyanide/ Sulfide		TCLP Pb	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	Fot-1 1-3'	4/1/09	9:54				X	X	X						2-4oz A 1-2oz F	
002	Fot-1 6-8		10:05				X	X	[illegible]	X	X		X	TCLP Pb	5-4oz A	
003	Fot 4 1-3		11:00				X	X	X						2-4oz A	
004	Fot 4 [illegible] 4-6 DUP		11:05				X	X	X							
005	Fot 3 1-3		11:25				X	X	X							
006	Fot 2 2-4		11:35				X	X	X							
007	Fot 2 4-6		11:50				X	X	X							
008	Fot 5 2-4		12:15				X	X	X							
009	Fot 5 4-6		12:20				X	X	X						1-4oz A	
010	Fot 6 0-2		12:20				X	X	X						2-4oz A	
011	Fot 6 4-6		12:35				X	X	X						3-4oz A	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):
Email #1:
Email #2:
Telephone:
Fax:

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	4/3/09	[signature]	4/3/09 12:40
[signature]	4/3/9 1700		
WALTER	4/4/09 940	[signature]	4/4/09 940

PACE Project No.: 4015718
Receipt Temp = R01 °C
Sample Receipt pH OK / Adjusted N/A
Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 6.0 08/14/06

C019a(27Jun2006)

ORIGINAL

(Please Print Clearly)

Company Name:	Aecom
Branch/Location:	Milwaukee
Project Contact:	Bryan Bresman
Phone:	414 577 1321
Project Number:	10702-010
Project Name:	STH 32/11
Project State:	WI
Sampled By (Print):	David Markiz
Sampled By (Sign):	[signature]
PO #:	Regulatory Program:

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CHAIN OF CUSTODY

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Quote #:	
Mail To Contact:	
Mail To Company:	Aecom
Mail To Address:	Milwaukee
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, Sl = Sludge
W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

FILTERED? (YES/NO) — Y/N
PRESERVATION (CODE)* — Pick Letter

Analyses Requested: DRO; GRO/PVOC + Naphth; Pb; Cd; Reactive cyanide/sulfide

PACE LAB #	CLIENT FIELD ID	DATE	TIME	MATRIX	DRO	GRO/PVOC + Naphth	Pb	Cd	Reactive cyanide/sulfide	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
012	WFM-1 1-3	4/2/09	8:50		X	X	X	X	X		5-4oz A 1-2oz F	
013	WFM-1 4-6	4/2/09	9:00		X	X	X				2-4oz A	
014	WB-2 1-3	4/2/09	9:30		X	X	X				↓	↓
015	WB-2 8-10	4/2/09	9:45		X	X	X			ms/msD	6-4oz A 3-2oz F	
016	WB-3 1-3	4/2/09	10:30		X	X	X				2-4oz A 1-2oz F	
017	WB-3 6-8	4/2/09	10:40		X	X	X	X	X		4-4oz A	
018	WB-4 1-3	4/2/09	11:07		X	X	X				2-4oz A	
019	WB 4 6-8	4/2/09	11:15		X	X	X					
020	WB 5 2-4	4/2/09	12:00		X	X	X					
021	WB 5 10-12	4/2/09	12:30		X	X	X				↓	
022	WB 1 1-3	4/2/09	1:00p		X	X	X				1-4oz A	
023	WB 1 6-8	4/2/09	1:10p		X	X	X				2-4oz A	↓

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):
Email #1:
Email #2:
Telephone:
Fax:

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	4/3/09	D. Famuel	4/3/9 1240
D. Famuel	4/3/9 1708		
NMTCO	4/4/09 940	[signature]	4/4/09 940

PACE Project No. 4015718
Receipt Temp = ROI °C
Sample Receipt pH OK / Adjusted N/A
Cooler Custody Seal
Present / Not Present
Intact / Not Intact

C019a(27Jun2006)
Version 6.0 06/14/06
ORIGINAL

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

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CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Arcom
Branch/Location:	Milwaukee
Project Contact:	Bryan Bergmann
Phone:	414 577 1321
Project Number:	10702-040
Project Name:	STH 32/11
Project State:	WI
Sampled By (Print):	Dave Maker
Sampled By (Sign):	Dave Mr
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, W = Water, B = Biota, DW = Drinking Water, C = Charcoal, GW = Ground Water, O = Oil, SW = Surface Water, S = Soil, WW = Waste Water, Sl = Sludge, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	Analyses Requested: DRO	Gasoline / Naphth	Pb	Cd	Reactive Cyanide/ sulfide	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
024	D-2 1-3	4/2/09	3:20				X	X	X				2-4oz A 1-2oz F	
025	D-1 1-3	4/2/09	3:53				X	X	X				1-4oz A	
026	D-3 1-3	4/2/09	4:00				X	X	X				3-4oz A	
027	D-3 14-16	4/2/09	5:20				X	X	X	X	X		4-4oz A	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Dave Mr	4/3/09	D. Fennell	4/3/09 2400
D. Fennell	4/3/09 1700		
WAITED	4/4/09 940		
		Dave Mr	4/4/09 940

PACE Project No.: 4015718

Receipt Temp = 2.01 °C

Sample Receipt pH OK / Adjusted N/A

Cooler Custody Seal: Present / Not Present; Intact / Not Intact

Version 6.0 08/14/06

C019a(27Jun2006)

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical

Client Name: AECOM STS Project # 4015718

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other Waltco

Tracking #:

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals Intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer Used N/A Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 2.0 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C Comments:

Date and initials of person examining contents: 4/4/09 AE

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.	
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.	
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.	
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.	
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	5.	
Short Hold Time Analysis (<72hr):	☐Yes ☒No ☐N/A	6.	
Rush Turn Around Time Requested:	☐Yes ☒No ☐N/A	7.	
Sufficient Volume: MEH 4/4/09	☐Yes ☒No ☐N/A	8.	-022 only rec'd volume for DRO & GRO
Correct Containers Used:	☒Yes ☐No ☐N/A	9.	
-Pace Containers Used:	☒Yes ☐No ☐N/A		
Containers Intact:	☒Yes ☐No ☐N/A	10.	
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.	
Sample Labels match COC:	☐Yes ☐No ☒N/A	12.	NO matrix listed on COC
-Includes date/time/ID/Analysis Matrix: S			
All containers needing preservation have been checked.	☐Yes ☐No ☒N/A	13.	NO preservation codes listed on COC
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☒N/A	14.	
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☒N/A	15.	
Trip Blank Present:	☐Yes ☐No ☒N/A	16.	
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A		
Pace Trip Blank Lot # (If purchased):			

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution: subsampled for DRO for -009, -016, & -025

Project Manager Review: Date: 4/7/09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

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Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

April 28, 2009

Bryan Bergmann
AECOM, Inc.- MILWAUKEE
11425 W. Lake Park Drive
Milwaukee, WI 53224

RE: Project: 10702-040 STH 32/11
Pace Project No.: 4015858

Dear Bryan Bergmann:
Enclosed are the analytical results for sample(s) received by the laboratory on April 09, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kang Khang

kang.khang@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

Minnesota Certification IDs
Wisconsin Certification #: 999407970
Washington Certification #: C754
Tennessee Certification #: 02818
Pennsylvania Certification #: 68-00563
Oregon Certification #: MN200001
North Dakota Certification #: R-036
North Carolina Certification #: 530
New York Certification #: 11647
New Jersey Certification #: MN-002
Montana Certification #: MT CERT0092
Minnesota Certification #: 027-053-137
Maine Certification #: 2007029
Louisiana Certification #: LA080009
Louisiana Certification #: 03086
Kansas Certification #: E-10167
Iowa Certification #: 368
Illinois Certification #: 200011
Florida/NELAP Certification #: E87605
California Certification #: 01155CA
Arizona Certification #: AZ-0014
Alaska Certification #: UST-078

Green Bay Certification IDs
Wisconsin DATCP Certification #: 105-444
Wisconsin DATCP Certification #: 105-444
Wisconsin Certification #: 405132750
Wisconsin Certification #: 405132750
South Carolina Certification #: 83006001
South Carolina Certification #: 83006001
North Dakota Certification #: R-200
North Dakota Certification #: R-150
North Carolina Certification #: 503
North Carolina Certification #: 503
New York Certification #: 11887
New York Certification #: 11888
Minnesota Certification #: 055-999-334
Minnesota Certification #: 055-999-334
Louisiana Certification #: 04169
Louisiana Certification #: 04168
Kentucky Certification #: 83
Kentucky Certification #: 82
Illinois Certification #: 200051
Illinois Certification #: 200050
Florida/NELAP Certification #: E87951
Florida/NELAP Certification #: E87948

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4015858001	D-7 2-4'	Solid	04/03/09 10:18	04/09/09 08:50
4015858002	D-7 6-8'	Solid	04/03/09 10:30	04/09/09 08:50
4015858003	D-9 2-4'	Solid	04/03/09 10:50	04/09/09 08:50
4015858004	D-9 6-8'	Solid	04/03/09 11:09	04/09/09 08:50
4015858005	D-8 2-4'	Solid	04/03/09 11:25	04/09/09 08:50
4015858006	D-8 10-12'	Solid	04/03/09 11:43	04/09/09 08:50
4015858007	D-10 1-3'	Solid	04/03/09 12:21	04/09/09 08:50
4015858008	D-12 1-3'	Solid	04/03/09 12:50	04/09/09 08:50
4015858009	D-14 1-3'	Solid	04/03/09 13:00	04/09/09 08:50
4015858010	D-15 6-8'	Solid	04/03/09 13:20	04/09/09 08:50
4015858011	D-13 2-4'	Solid	04/03/09 14:00	04/09/09 08:50
4015858012	D-11 1-3'	Solid	04/03/09 14:11	04/09/09 08:50
4015858013	TMJ-1 6-8'	Solid	04/03/09 15:00	04/09/09 08:50
4015858014	LP-1 1-3'	Solid	04/06/09 10:05	04/09/09 08:50
4015858015	LP-2 1-3'	Solid	04/06/09 11:20	04/09/09 08:50
4015858016	LP-2 6-8'	Solid	04/06/09 11:30	04/09/09 08:50
4015858017	LP-3 1-3'	Solid	04/06/09 11:42	04/09/09 08:50
4015858018	LP-3 4-6'	Solid	04/06/09 11:50	04/09/09 08:50
4015858019	LP-4 1-3'	Solid	04/06/09 12:00	04/09/09 08:50
4015858020	LP-4 6-8'	Solid	04/06/09 12:05	04/09/09 08:50
4015858021	LP-WP	Solid	04/06/09 12:30	04/09/09 08:50
4015858022	FOX 5	Water	04/06/09 14:50	04/09/09 08:50
4015858023	FOX 1	Water	04/06/09 15:30	04/09/09 08:50
4015858024	TMJ-1	Water	04/06/09 15:50	04/09/09 08:50
4015858025	WFM-1	Water	04/06/09 17:00	04/09/09 08:50
4015858026	WB-2	Water	04/07/09 12:30	04/09/09 08:50
4015858027	WB-3	Water	04/07/09 13:00	04/09/09 08:50
4015858028	WB-4	Water	04/07/09 13:40	04/09/09 08:50
4015858029	TRIP BLANK	Water	04/07/09 00:00	04/09/09 08:50

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www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4015858020	LP-4 6-8'	ASTM D2974-87	MRN	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	PMS	11	PASI-G
4015858021	LP-WP	ASTM D2974-87	MRN	1	PASI-G
		EPA 1010	MY	1	PASI-G
		EPA 420.1 Modified	NMH	1	PASI-M
		EPA 6010	DLB	10	PASI-G
		EPA 7471	LMS	1	PASI-G
		EPA 8082	CAH	10	PASI-G
		EPA 8260	JJB	13	PASI-G
		EPA 8270	RJN	18	PASI-G
		EPA 9045	DEY	1	PASI-G
		EPA 9095	DEY	1	PASI-G
4015858022	FOX 5	EPA 6010	DLB	1	PASI-G
		WI MOD GRO	PMS	10	PASI-G
4015858023	FOX 1	EPA 6010	DLB	2	PASI-G
		WI MOD GRO	PMS	10	PASI-G
4015858024	TMJ-1	EPA 6010	DLB	1	PASI-G
4015858025	WFM-1	EPA 6010	DLB	2	PASI-G
		WI MOD GRO	PMS	10	PASI-G
4015858026	WB-2	EPA 6010	DLB	1	PASI-G
		WI MOD GRO	PMS	10	PASI-G
4015858027	WB-3	EPA 6010	DLB	2	PASI-G
		WI MOD GRO	PMS	10	PASI-G
4015858028	WB-4	EPA 6010	DLB	1	PASI-G
		WI MOD GRO	PMS	10	PASI-G
4015858029	TRIP BLANK	WI MOD GRO	PMS	10	PASI-G

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ANALYTICAL RESULTS

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

Sample: FOX 5 **Lab ID: 4015858022** Collected: 04/06/09 14:50 Received: 04/09/09 08:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.23**	ug/L	1.0	0.23	1		04/10/09 18:52	71-43-2	
Ethylbenzene	**<0.40**	ug/L	1.0	0.40	1		04/10/09 18:52	100-41-4	
Methyl-tert-butyl ether	**<0.36**	ug/L	1.0	0.36	1		04/10/09 18:52	1634-04-4	
Naphthalene	**<0.47**	ug/L	1.0	0.47	1		04/10/09 18:52	91-20-3	
Toluene	**<0.36**	ug/L	1.0	0.36	1		04/10/09 18:52	108-88-3	
1,2,4-Trimethylbenzene	**<0.39**	ug/L	1.0	0.39	1		04/10/09 18:52	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		04/10/09 18:52	108-67-8	
m&p-Xylene	**<0.74**	ug/L	2.0	0.74	1		04/10/09 18:52	1330-20-7	
o-Xylene	**<0.36**	ug/L	1.0	0.36	1		04/10/09 18:52	95-47-6	
a,a,a-Trifluorotoluene (S)	102	%	80-120		1		04/10/09 18:52	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**<1.4**	ug/L	10.0	1.4	1	04/09/09 19:00	04/10/09 12:14	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

Sample: FOX 1 **Lab ID: 4015858023** Collected: 04/06/09 15:30 Received: 04/09/09 08:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**20.2**	ug/L	1.0	0.23	1		04/10/09 16:17	71-43-2	
Ethylbenzene	**68.2**	ug/L	1.0	0.40	1		04/10/09 16:17	100-41-4	
Methyl-tert-butyl ether	**10.4**	ug/L	1.0	0.36	1		04/10/09 16:17	1634-04-4	
Naphthalene	**42.4**	ug/L	1.0	0.47	1		04/10/09 16:17	91-20-3	
Toluene	**7.9**	ug/L	1.0	0.36	1		04/10/09 16:17	108-88-3	
1,2,4-Trimethylbenzene	**4.5**	ug/L	1.0	0.39	1		04/10/09 16:17	95-63-6	
1,3,5-Trimethylbenzene	**11.9**	ug/L	1.0	0.40	1		04/10/09 16:17	108-67-8	
m&p-Xylene	**49.5**	ug/L	2.0	0.74	1		04/10/09 16:17	1330-20-7	
o-Xylene	**1.9**	ug/L	1.0	0.36	1		04/10/09 16:17	95-47-6	
a,a,a-Trifluorotoluene (S)	96	%	80-120		1		04/10/09 16:17	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Cadmium	**0.15J**	ug/L	5.0	0.13	1	04/09/09 19:00	04/10/09 12:27	7440-43-9	
Lead	**1.6J**	ug/L	10.0	1.4	1	04/09/09 19:00	04/10/09 12:27	7439-92-1	

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ANALYTICAL RESULTS

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

Sample: TRIP BLANK **Lab ID: 4015858029** Collected: 04/07/09 00:00 Received: 04/09/09 08:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.23**	ug/L	1.0	0.23	1		04/10/09 18:26	71-43-2	
Ethylbenzene	**<0.40**	ug/L	1.0	0.40	1		04/10/09 18:26	100-41-4	
Methyl-tert-butyl ether	**<0.36**	ug/L	1.0	0.36	1		04/10/09 18:26	1634-04-4	
Naphthalene	**<0.47**	ug/L	1.0	0.47	1		04/10/09 18:26	91-20-3	
Toluene	**<0.36**	ug/L	1.0	0.36	1		04/10/09 18:26	108-88-3	
1,2,4-Trimethylbenzene	**<0.39**	ug/L	1.0	0.39	1		04/10/09 18:26	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		04/10/09 18:26	108-67-8	
m&p-Xylene	**<0.74**	ug/L	2.0	0.74	1		04/10/09 18:26	1330-20-7	
o-Xylene	**<0.36**	ug/L	1.0	0.36	1		04/10/09 18:26	95-47-6	
a,a,a-Trifluorotoluene (S)	104	%	80-120		1		04/10/09 18:26	98-08-8	

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QUALITY CONTROL DATA

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

QC Batch: PMST/2356
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 4015858001, 4015858002, 4015858003, 4015858004, 4015858005, 4015858006, 4015858007, 4015858008, 4015858009, 4015858010, 4015858011, 4015858012, 4015858013, 4015858014, 4015858015, 4015858016, 4015858017, 4015858018, 4015858019, 4015858020

SAMPLE DUPLICATE: 144484

Parameter	Units	4015858001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	11.1	10.8	3	10	

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QUALITY CONTROL DATA

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

QC Batch: PMST/2357
QC Batch Method: ASTM D2974-87
Associated Lab Samples: 4015858021

Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture

SAMPLE DUPLICATE: 144485

Parameter	Units	4015858021 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	22.8	23.4	3	10	

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QUALITY CONTROL DATA

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

QC Batch: OEXT/4013 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 4015858001, 4015858002, 4015858003, 4015858004, 4015858005, 4015858006, 4015858007, 4015858008, 4015858009, 4015858010, 4015858011, 4015858012, 4015858014, 4015858015, 4015858016

METHOD BLANK: 144494 Matrix: Solid
Associated Lab Samples: 4015858001, 4015858002, 4015858003, 4015858004, 4015858005, 4015858006, 4015858007, 4015858008, 4015858009, 4015858010, 4015858011, 4015858012, 4015858014, 4015858015, 4015858016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<0.95	2.0	04/13/09 08:54	

LABORATORY CONTROL SAMPLE & LCSD: 144495 144496

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	20	16.7	17.8	83	89	70-120	7	20	

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QUALITY CONTROL DATA

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

QC Batch: OEXT/4014 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 4015858017, 4015858018, 4015858019, 4015858020

METHOD BLANK: 144497 Matrix: Solid
Associated Lab Samples: 4015858017, 4015858018, 4015858019, 4015858020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<0.95	2.0	04/13/09 13:47	

LABORATORY CONTROL SAMPLE & LCSD: 144498 144499

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	20	14.7	16.9	74	84	70-120	14	20	

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QUALITY CONTROL DATA

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

QC Batch: GCV/3204 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 4015858001, 4015858002, 4015858003, 4015858004, 4015858005, 4015858006, 4015858007, 4015858008, 4015858009, 4015858010, 4015858011, 4015858012, 4015858014

METHOD BLANK: 144545 Matrix: Solid
Associated Lab Samples: 4015858001, 4015858002, 4015858003, 4015858004, 4015858005, 4015858006, 4015858007, 4015858008, 4015858009, 4015858010, 4015858011, 4015858012, 4015858014, 4015858015, 4015858016, 4015858017, 4015858018, 4015858019, 4015858020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	04/10/09 09:45	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	04/10/09 09:45	
Benzene	ug/kg	<25.0	60.0	04/10/09 09:45	
Ethylbenzene	ug/kg	<25.0	60.0	04/10/09 09:45	
Gasoline Range Organics	mg/kg	<2.5	2.5	04/10/09 09:45	
m&p-Xylene	ug/kg	<50.0	120	04/10/09 09:45	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	04/10/09 09:45	
Naphthalene	ug/kg	<25.0	60.0	04/10/09 09:45	
o-Xylene	ug/kg	<25.0	60.0	04/10/09 09:45	
Toluene	ug/kg	<25.0	60.0	04/10/09 09:45	
a,a,a-Trifluorotoluene (S)	%	104	80-120	04/10/09 09:45	

LABORATORY CONTROL SAMPLE & LCSD: 144546 144547

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	1020	988	102	99	80-120	3	20	
1,3,5-Trimethylbenzene	ug/kg	1000	1030	1010	103	101	80-120	2	20	
Benzene	ug/kg	1000	962	949	96	95	80-120	1	20	
Ethylbenzene	ug/kg	1000	1030	1000	103	100	80-120	2	20	
Gasoline Range Organics	mg/kg	10	10.1	9.4	101	94	80-120	8	20	
m&p-Xylene	ug/kg	2000	2060	2020	103	101	80-120	2	20	
Methyl-tert-butyl ether	ug/kg	1000	908	879	91	88	80-120	3	20	
Naphthalene	ug/kg	1000	990	971	99	97	80-120	2	20	
o-Xylene	ug/kg	1000	1030	1010	103	101	80-120	2	20	
Toluene	ug/kg	1000	997	983	100	98	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%				106	105	80-120			

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

QC Batch: MPRP/2423 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 4015858022, 4015858023, 4015858024, 4015858025, 4015858026, 4015858027, 4015858028

METHOD BLANK: 144548 Matrix: Water
Associated Lab Samples: 4015858022, 4015858023, 4015858024, 4015858025, 4015858026, 4015858027, 4015858028

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<1.2	20.0	04/10/09 11:58	
Barium	ug/L	<0.33	5.0	04/10/09 11:58	
Cadmium	ug/L	<0.13	5.0	04/10/09 11:58	
Chromium	ug/L	<1.1	5.0	04/10/09 11:58	
Copper	ug/L	<0.49	10.0	04/10/09 11:58	
Lead	ug/L	<1.4	10.0	04/10/09 11:58	
Nickel	ug/L	<0.15	10.0	04/10/09 11:58	
Selenium	ug/L	<1.6	20.0	04/10/09 11:58	
Silver	ug/L	<0.34	10.0	04/10/09 11:58	
Zinc	ug/L	<2.6	40.0	04/10/09 11:58	

LABORATORY CONTROL SAMPLE: 144549

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	469	94	80-120	
Barium	ug/L	500	472	94	80-120	
Cadmium	ug/L	500	461	92	80-120	
Chromium	ug/L	500	474	95	80-120	
Copper	ug/L	500	464	93	80-120	
Lead	ug/L	500	471	94	80-120	
Nickel	ug/L	500	477	95	80-120	
Selenium	ug/L	500	462	92	80-120	
Silver	ug/L	250	242	97	80-120	
Zinc	ug/L	500	478	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 144550 144551

Parameter	Units	4015858022 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	1.8J	500	500	504	498	101	99	75-125	1	20	
Barium	ug/L	81.7	500	500	559	551	95	94	75-125	1	20	
Cadmium	ug/L	0.47J	500	500	497	490	99	98	75-125	1	20	
Chromium	ug/L	<1.1	500	500	478	472	95	94	75-125	1	20	
Copper	ug/L	2.7J	500	500	506	502	101	100	75-125	.8	20	
Lead	ug/L	<1.4	500	500	458	454	92	91	75-125	.9	20	
Nickel	ug/L	2.0J	500	500	465	461	93	92	75-125	.7	20	
Selenium	ug/L	14.5J	500	500	506	500	98	97	75-125	1	20	
Silver	ug/L	<0.34	250	250	266	262	106	105	75-125	2	20	
Zinc	ug/L	<2.6	500	500	465	461	93	92	75-125	1	20	

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QUALITY CONTROL DATA

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

QC Batch: GCV/3207 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 4015858022, 4015858023, 4015858025, 4015858026, 4015858027, 4015858028, 4015858029

METHOD BLANK: 144598 Matrix: Water
Associated Lab Samples: 4015858022, 4015858023, 4015858025, 4015858026, 4015858027, 4015858028, 4015858029

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.39	1.0	04/10/09 14:34	
1,3,5-Trimethylbenzene	ug/L	<0.40	1.0	04/10/09 14:34	
Benzene	ug/L	<0.23	1.0	04/10/09 14:34	
Ethylbenzene	ug/L	<0.40	1.0	04/10/09 14:34	
m&p-Xylene	ug/L	<0.74	2.0	04/10/09 14:34	
Methyl-tert-butyl ether	ug/L	<0.36	1.0	04/10/09 14:34	
Naphthalene	ug/L	<0.47	1.0	04/10/09 14:34	
o-Xylene	ug/L	<0.36	1.0	04/10/09 14:34	
Toluene	ug/L	<0.36	1.0	04/10/09 14:34	
a,a,a-Trifluorotoluene (S)	%	103	80-120	04/10/09 14:34	

LABORATORY CONTROL SAMPLE & LCSD: 144599 144600

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	20.1	20.4	101	102	80-120	2	20	
1,3,5-Trimethylbenzene	ug/L	20	20.5	20.6	102	103	80-120	.9	20	
Benzene	ug/L	20	20.3	20.3	101	101	80-120	.02	20	
Ethylbenzene	ug/L	20	20.0	20.1	100	100	80-120	.5	20	
m&p-Xylene	ug/L	40	39.9	40.2	100	100	80-120	.7	20	
Methyl-tert-butyl ether	ug/L	20	19.9	21.1	99	105	80-120	6	20	
Naphthalene	ug/L	20	19.0	21.7	95	108	80-120	13	20	
o-Xylene	ug/L	20	20.0	20.2	100	101	80-120	.7	20	
Toluene	ug/L	20	20.1	20.3	101	101	80-120	.6	20	
a,a,a-Trifluorotoluene (S)	%				101	102	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 144601 144602

Parameter	Units	4015858022 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trimethylbenzene	ug/L	<0.39	20	20	20.3	19.7	102	99	10-200	3	20	
1,3,5-Trimethylbenzene	ug/L	<0.40	20	20	20.8	20.1	104	101	48-152	3	20	
Benzene	ug/L	<0.23	20	20	20.6	20.2	103	101	28-167	2	20	
Ethylbenzene	ug/L	<0.40	20	20	20.4	20.0	102	100	43-158	2	20	
m&p-Xylene	ug/L	<0.74	40	40	40.8	39.8	102	100	10-189	2	20	
Methyl-tert-butyl ether	ug/L	<0.36	20	20	19.9	21.3	100	106	77-120	6	20	
Naphthalene	ug/L	<0.47	20	20	20.3	22.1	101	110	50-144	8	20	
o-Xylene	ug/L	<0.36	20	20	20.3	20.0	102	100	37-154	2	20	
Toluene	ug/L	<0.36	20	20	20.5	20.3	103	101	54-151	1	20	
a,a,a-Trifluorotoluene (S)	%						101	101	80-120			

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QUALITY CONTROL DATA

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

QC Batch: MSV/4168
QC Batch Method: EPA 5035/5030B
Associated Lab Samples: 4015858021

Analysis Method: EPA 8260
Analysis Description: 8260 MSV Med Level Normal List

METHOD BLANK: 144744 Matrix: Solid

Associated Lab Samples: 4015858021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/kg	<25.0	60.0	04/10/09 10:56	
1,2-Dichloroethane	ug/kg	<25.0	60.0	04/10/09 10:56	
2-Butanone (MEK)	ug/kg	<82.9	250	04/10/09 10:56	
Benzene	ug/kg	<25.0	60.0	04/10/09 10:56	
Carbon tetrachloride	ug/kg	<25.0	60.0	04/10/09 10:56	
Chlorobenzene	ug/kg	<25.0	60.0	04/10/09 10:56	
Chloroform	ug/kg	<25.0	60.0	04/10/09 10:56	
Tetrachloroethene	ug/kg	<25.0	60.0	04/10/09 10:56	
Trichloroethene	ug/kg	<25.0	60.0	04/10/09 10:56	
Vinyl chloride	ug/kg	<25.0	60.0	04/10/09 10:56	
4-Bromofluorobenzene (S)	%	89	64-133	04/10/09 10:56	
Dibromofluoromethane (S)	%	110	64-140	04/10/09 10:56	
Toluene-d8 (S)	%	94	67-139	04/10/09 10:56	

LABORATORY CONTROL SAMPLE & LCSD: 144745 144746

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1-Dichloroethene	ug/kg	2500	2640	2920	106	117	54-149	10	20	
1,2-Dichloroethane	ug/kg	2500	2760	2800	111	112	75-125	1	20	
2-Butanone (MEK)	ug/kg	2500	2140	2570	86	103	75-125	18	20	
Benzene	ug/kg	2500	2240	2350	89	94	75-125	5	20	
Carbon tetrachloride	ug/kg	2500	2970	3190	119	127	75-125	7	20	
Chlorobenzene	ug/kg	2500	2400	2620	96	105	75-125	9	20	
Chloroform	ug/kg	2500	2680	2840	107	114	75-125	6	20	
Tetrachloroethene	ug/kg	2500	2390	2700	96	108	75-125	12	20	
Trichloroethene	ug/kg	2500	2400	2620	96	105	75-125	9	20	
Vinyl chloride	ug/kg	2500	2050	2210	82	88	49-125	8	20	
4-Bromofluorobenzene (S)	%				93	102	64-133			
Dibromofluoromethane (S)	%				113	116	64-140			
Toluene-d8 (S)	%				95	103	67-139			

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QUALITY CONTROL DATA

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

QC Batch: WET/3380
QC Batch Method: EPA 1010
Analysis Method: EPA 1010
Analysis Description: 1010 Flash Point, Closed Cup
Associated Lab Samples: 4015858021

SAMPLE DUPLICATE: 144829

Parameter	Units	1092570001 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	154	154			1j

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

QC Batch: MPRP/2425 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 4015858001, 4015858002, 4015858003, 4015858004, 4015858005, 4015858006, 4015858007, 4015858008, 4015858009, 4015858010, 4015858011, 4015858012, 4015858013, 4015858014, 4015858015, 4015858016, 4015858017, 4015858018, 4015858019, 4015858020

METHOD BLANK: 145045 Matrix: Solid
Associated Lab Samples: 4015858001, 4015858002, 4015858003, 4015858004, 4015858005, 4015858006, 4015858007, 4015858008, 4015858009, 4015858010, 4015858011, 4015858012, 4015858013, 4015858014, 4015858015, 4015858016, 4015858017, 4015858018, 4015858019, 4015858020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium	mg/kg	<0.016	0.50	04/14/09 20:59	
Lead	mg/kg	<0.069	1.0	04/14/09 20:59	

LABORATORY CONTROL SAMPLE: 145046

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium	mg/kg	50	47.0	94	80-120	
Lead	mg/kg	50	48.7	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 145047 145048

Parameter	Units	4015858001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	mg/kg	0.026J	56.3	56.3	51.4	50.6	91	90	75-125	2	20	
Lead	mg/kg	8.6	56.3	56.3	55.1	54.2	83	81	75-125	2	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

QC Batch: MPRP/2426
QC Batch Method: EPA 3050
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Associated Lab Samples: 4015858021

METHOD BLANK: 145049
Matrix: Solid
Associated Lab Samples: 4015858021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<0.12	2.0	04/14/09 19:01	
Barium	mg/kg	<0.028	0.50	04/14/09 19:01	
Cadmium	mg/kg	<0.016	0.50	04/14/09 19:01	
Chromium	mg/kg	0.060J	0.50	04/14/09 19:01	
Copper	mg/kg	<0.028	1.0	04/14/09 19:01	
Lead	mg/kg	<0.069	1.0	04/14/09 19:01	
Nickel	mg/kg	<0.041	1.0	04/14/09 19:01	
Selenium	mg/kg	<0.24	2.0	04/14/09 19:01	
Silver	mg/kg	<0.019	1.0	04/14/09 19:01	
Zinc	mg/kg	<0.20	4.0	04/14/09 19:01	

LABORATORY CONTROL SAMPLE: 145050

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	46.3	93	80-120	
Barium	mg/kg	50	47.0	94	80-120	
Cadmium	mg/kg	50	46.0	92	80-120	
Chromium	mg/kg	50	47.4	95	80-120	
Copper	mg/kg	50	45.6	91	80-120	
Lead	mg/kg	50	47.6	95	80-120	
Nickel	mg/kg	50	48.6	97	80-120	
Selenium	mg/kg	50	46.2	92	80-120	
Silver	mg/kg	25	24.0	96	80-120	
Zinc	mg/kg	50	48.6	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 145051 145052

Parameter	Units	4015858021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	9.6J	64.6	64.7	71.5	73.6	96	99	75-125	3	20	
Barium	mg/kg	77.1	64.6	64.7	856	158	1210	125	75-125	138	20	M0,R1
Cadmium	mg/kg	0.20J	64.6	64.7	61.5	61.2	95	94	75-125	.5	20	
Chromium	mg/kg	43.9	64.6	64.7	103	93.4	91	76	75-125	9	20	
Copper	mg/kg	20.5	64.6	64.7	80.5	80.5	93	93	75-125	.07	20	
Lead	mg/kg	11.7J	64.6	64.7	73.9	73.7	96	96	75-125	.2	20	
Nickel	mg/kg	57.5	64.6	64.7	111	99.9	83	65	75-125	11	20	M0
Selenium	mg/kg	<3.1	64.6	64.7	65.2	62.6	99	95	75-125	4	20	
Silver	mg/kg	1.5	32.4	32.4	33.9	31.8	101	94	75-125	6	20	
Zinc	mg/kg	58.2	64.6	64.7	109	121	79	98	75-125	11	20	

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QUALITY CONTROL DATA

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

QC Batch: WET/3386
QC Batch Method: EPA 9045
Analysis Method: EPA 9045
Analysis Description: 9045 pH
Associated Lab Samples: 4015858021

SAMPLE DUPLICATE: 145170

Parameter	Units	4015889001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.3	7.3	.1	5	

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QUALITY CONTROL DATA

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

QC Batch: OEXT/4021
QC Batch Method: EPA 3546
Analysis Method: EPA 8270
Analysis Description: 8270 Solid MSSV Microwave
Associated Lab Samples: 4015858021

METHOD BLANK: 145264
Matrix: Solid
Associated Lab Samples: 4015858021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/kg	<21.5	167	04/14/09 11:48	
2,4,5-Trichlorophenol	ug/kg	<11.0	167	04/14/09 11:48	
2,4,6-Trichlorophenol	ug/kg	<18.4	167	04/14/09 11:48	
2,4-Dinitrotoluene	ug/kg	<13.1	167	04/14/09 11:48	
2-Methylphenol(o-Cresol)	ug/kg	<83.3	167	04/14/09 11:48	
3&4-Methylphenol(m&p Cresol)	ug/kg	<17.4	167	04/14/09 11:48	
Hexachloro-1,3-butadiene	ug/kg	<21.5	167	04/14/09 11:48	
Hexachlorobenzene	ug/kg	<9.8	167	04/14/09 11:48	
Hexachloroethane	ug/kg	<21.1	167	04/14/09 11:48	
Nitrobenzene	ug/kg	<19.1	167	04/14/09 11:48	
Pentachlorophenol	ug/kg	<83.3	167	04/14/09 11:48	
Pyridine	ug/kg	<425	3330	04/14/09 11:48	
2,4,6-Tribromophenol (S)	%	58	23-130	04/14/09 11:48	
2-Fluorobiphenyl (S)	%	73	46-130	04/14/09 11:48	
2-Fluorophenol (S)	%	59	28-130	04/14/09 11:48	
Nitrobenzene-d5 (S)	%	59	37-130	04/14/09 11:48	
Phenol-d6 (S)	%	54	30-130	04/14/09 11:48	
Terphenyl-d14 (S)	%	76	27-135	04/14/09 11:48	

LABORATORY CONTROL SAMPLE: 145265

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/kg	1670	1250	75	51-130	
2,4,5-Trichlorophenol	ug/kg	1670	1380	83	66-130	
2,4,6-Trichlorophenol	ug/kg	1670	1460	88	66-130	
2,4-Dinitrotoluene	ug/kg	1670	1530	92	70-130	
2-Methylphenol(o-Cresol)	ug/kg	1670	1290	77	57-130	
3&4-Methylphenol(m&p Cresol)	ug/kg	1670	1300	78	59-130	
Hexachloro-1,3-butadiene	ug/kg	1670	1380	83	51-130	
Hexachlorobenzene	ug/kg	1670	1550	93	68-130	
Hexachloroethane	ug/kg	1670	1170	70	49-130	
Nitrobenzene	ug/kg	1670	1280	77	55-130	
Pentachlorophenol	ug/kg	1670	1160	69	51-130	
Pyridine	ug/kg	1670	928J	56	28-130	
2,4,6-Tribromophenol (S)	%			77	23-130	
2-Fluorobiphenyl (S)	%			93	46-130	
2-Fluorophenol (S)	%			71	28-130	
Nitrobenzene-d5 (S)	%			77	37-130	
Phenol-d6 (S)	%			72	30-130	
Terphenyl-d14 (S)	%			83	27-135	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 145266 145267

Parameter	Units	4015717002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dichlorobenzene	ug/kg	<2060	2000	2000	<2060	<2060	93	77	51-130		28	
2,4,5-Trichlorophenol	ug/kg	<1050	2000	2000	<1050	<1050	0	0	45-130		21	M0
2,4,6-Trichlorophenol	ug/kg	<1770	2000	2000	<1770	<1770	0	0	45-130		19	M0
2,4-Dinitrotoluene	ug/kg	<1260	2000	2000	<1260	<1260	49	0	41-130		25	M0
2-Methylphenol(o-Cresol)	ug/kg	<7990	2000	2000	<7990	<7990	89	73	42-130		31	
3&4-Methylphenol(m&p Cresol)	ug/kg	<1670	2000	2000	<1670	<1670	78	64	30-130		25	
Hexachloro-1,3-butadiene	ug/kg	<2060	2000	2000	<2060	<2060	95	65	50-130		26	
Hexachlorobenzene	ug/kg	<940	2000	2000	1690J	<940	85	0	51-130		21	M0
Hexachloroethane	ug/kg	<2020	2000	2000	<2020	<2020	61	0	42-130		33	M0
Nitrobenzene	ug/kg	<1840	2000	2000	<1840	<1840	70	0	48-130		28	M0
Pentachlorophenol	ug/kg	<7990	2000	2000	<7990	<7990	0	0	10-130		32	M0
Pyridine	ug/kg	<40800	2000	2000	<40800	<40800	0	0	22-130		40	M0
2,4,6-Tribromophenol (S)	%						0	0	23-130			S4
2-Fluorobiphenyl (S)	%						0	0	46-130			S4
2-Fluorophenol (S)	%						0	0	28-130			S4
Nitrobenzene-d5 (S)	%						0	0	37-130			S4
Phenol-d6 (S)	%						0	0	30-130			S4
Terphenyl-d14 (S)	%						0	0	27-135			S4

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QUALITY CONTROL DATA

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

QC Batch: MERP/1490
QC Batch Method: EPA 7471
Analysis Method: EPA 7471
Analysis Description: 7471 Mercury
Associated Lab Samples: 4015858021

METHOD BLANK: 145329 Matrix: Solid
Associated Lab Samples: 4015858021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.0016	0.010	04/15/09 11:19	

LABORATORY CONTROL SAMPLE: 145330

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.25	0.25	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 145331 145332

Parameter	Units	4015846001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.021	.29	.29	0.32	0.29	104	94	85-115	10	20	

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QUALITY CONTROL DATA

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

QC Batch: OEXT/4028
QC Batch Method: EPA 3541
Analysis Method: EPA 8082
Analysis Description: 8082 GCS PCB
Associated Lab Samples: 4015858021

METHOD BLANK: 145449 Matrix: Solid
Associated Lab Samples: 4015858021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<23.6	100	04/14/09 17:39	
PCB-1221 (Aroclor 1221)	ug/kg	<23.6	100	04/14/09 17:39	
PCB-1232 (Aroclor 1232)	ug/kg	<23.6	100	04/14/09 17:39	
PCB-1242 (Aroclor 1242)	ug/kg	<23.6	100	04/14/09 17:39	
PCB-1248 (Aroclor 1248)	ug/kg	<23.6	100	04/14/09 17:39	
PCB-1254 (Aroclor 1254)	ug/kg	<23.6	100	04/14/09 17:39	
PCB-1260 (Aroclor 1260)	ug/kg	<23.6	100	04/14/09 17:39	
Decachlorobiphenyl (S)	%	67	56-130	04/14/09 17:39	
Tetrachloro-m-xylene (S)	%	65	50-137	04/14/09 17:39	

LABORATORY CONTROL SAMPLE: 145450

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg		<23.6			
PCB-1221 (Aroclor 1221)	ug/kg		<23.6			
PCB-1232 (Aroclor 1232)	ug/kg		<23.6			
PCB-1242 (Aroclor 1242)	ug/kg		<23.6			
PCB-1248 (Aroclor 1248)	ug/kg		<23.6			
PCB-1254 (Aroclor 1254)	ug/kg		<23.6			
PCB-1260 (Aroclor 1260)	ug/kg	500	385	77	53-109	
Decachlorobiphenyl (S)	%			73	56-130	
Tetrachloro-m-xylene (S)	%			72	50-137	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 145451 145452

Parameter	Units	4015956001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<26.5			<26.5	<26.5					21	
PCB-1221 (Aroclor 1221)	ug/kg	<26.5			<26.5	<26.5					21	
PCB-1232 (Aroclor 1232)	ug/kg	<26.5			<26.5	<26.5					21	
PCB-1242 (Aroclor 1242)	ug/kg	<26.5			<26.5	<26.5					21	
PCB-1248 (Aroclor 1248)	ug/kg	<26.5			<26.5	<26.5					21	
PCB-1254 (Aroclor 1254)	ug/kg	<26.5			<26.5	<26.5					21	
PCB-1260 (Aroclor 1260)	ug/kg	<26.5	560	560	407	419	73	75	38-110	3	21	
Decachlorobiphenyl (S)	%						70	72	56-130			
Tetrachloro-m-xylene (S)	%						68	70	50-137			

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QUALITY CONTROL DATA

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

QC Batch: WET/3393
QC Batch Method: EPA 9095
Associated Lab Samples: 4015858021

Analysis Method: EPA 9095
Analysis Description: 9095 PAINT FILTER LIQUID TEST

SAMPLE DUPLICATE: 145464

Parameter	Units	4015858021 Result	Dup Result	RPD	Max RPD	Qualifiers
Free Liquids		Pass	Pass			

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QUALITY CONTROL DATA

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

QC Batch: WETA/7903
QC Batch Method: EPA 420.1 Modified
Analysis Method: EPA 420.1 Modified
Analysis Description: 420.1 Phenolics
Associated Lab Samples: 4015858021

METHOD BLANK: 607933 Matrix: Solid
Associated Lab Samples: 4015858021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phenolics, Total Recoverable	mg/kg	<2.5	5.0	04/20/09 09:37	

LABORATORY CONTROL SAMPLE: 607934

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenolics, Total Recoverable	mg/kg	10	10.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 607935 607936

Parameter	Units	4015858021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phenolics, Total Recoverable	mg/kg	<3.2	12.9	12.9	12.5	11.2	96	85	80-120	11	20	

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 10702-040 STH 32/11
Pace Project No.: 4015858

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

U - Indicates the compound was analyzed for, but not detected.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay
PASI-M	Pace Analytical Services - Minneapolis

BATCH QUALIFIERS

Batch: MSV/4169

[1]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1j	Sample produced a flame at the cup opening at 154.63 degrees Fahrenheit. It did not produce a traditional flash within the cup, however.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M0	Matrix spike recovery was outside laboratory control limits.
R1	RPD value was outside control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
S7	Surrogate recovery outside control limits (not confirmed by re-analysis).
W	Non-detect results are reported on a wet weight basis.
Z2	Analyte present in the associated method blank above the detection limit.

SIEMENS

April 16, 2009

Pace Analytical
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Attn: Kang Khang

REPORT NO.: 0904267 **PROJECT NO.: 10702-040 STH/32-11**

Please find enclosed the analytical report, including the Sample Summary, Sample Narrative and Chain of Custody for your sample set received April 14, 2009.

All analyses were performed in accordance with NELAC Standards using approved methods as indicated on this report.

If you have any questions about the results, please call. Thank you for using Siemens Water Technologies for your analytical needs.

Sincerely,

Siemens Water Technologies

Mariah Peronto

Client Services Chemist
Enviroscan Analytical™ Services

I certify that the data contained in this report has been generated and reviewed in accordance with the Siemens Water Technologies Quality Assurance Program. Exceptions, if any, are discussed in the sample narrative. Samples will be retained for 30 days from the date of this report, then disposed in an appropriate manner. Siemens Water Technologies Corp. reserves the right to return samples identified as hazardous. Release of this Final Report is authorized as verified by the following signature.

Reviewed by: James L. Saltsgaver

Certifications:
Wisconsin 737053130
Minnesota 055-999-302
Illinois 100317

Siemens Water Technologies Corp.
301 West Military Road
Rothschild, WI 54474
Tel: 800-338-7226
Fax: 715-355-3221
www.siemens.com/enviroscan

The total number of pages in this report, including this page is 6.

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SAMPLE SUMMARY

Lab Id	Client Sample Id		Date/Time	Matrix
0904267-01	4015858010	D-15 6-8'	04/03/09 13:20	Soil
0904267-02	4015858013	TMJ-1 6-8'	04/03/09 15:00	Soil
0904267-03	4015858021	LP-WP	04/06/09 12:30	Soil
0904267-04	4015858023	Fox-1	04/06/09 15:30	Water
0904267-05	4015858024	TMJ-1	04/06/09 15:50	Water
0904267-06	4015858025	WFM-1	04/06/09 17:00	Water
0904267-07	4015858027	WB-3	04/07/09 13:00	Water

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Attn: Kang Khang

PROJECT NO. : 10702-040 STH/32-11
REPORT NO. : 0904267
DATE REC'D: 04/14/09 10:56
REPORT DATE : 04/16/09 16:14
PREPARED BY : MKP

Sample ID: **4015858023** Matrix: **Water** Sample Date/Time: **04/06/09 15:30** Lab No. : **0904267-04**

FOX-1

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
SW846 Vol 1C Sec 7.3.3.2								
Reactive Cyanide	ND	mg/L	0.005	0.017	1		04/14/09	LNB
Reactive Sulfide	ND	mg/L	10.0	10.0	1		04/14/09	JJP

Sample ID: **4015858024** Matrix: **Water** Sample Date/Time: **04/06/09 15:50** Lab No. : **0904267-05**

TMJ-1

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
SW846 Vol 1C Sec 7.3.3.2								
Reactive Cyanide	ND	mg/L	0.005	0.017	1		04/14/09	LNB
Reactive Sulfide	ND	mg/L	10.0	10.0	1		04/14/09	JJP

Sample ID: **4015858025** Matrix: **Water** Sample Date/Time: **04/06/09 17:00** Lab No. : **0904267-06**

WFM-1

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
SW846 Vol 1C Sec 7.3.3.2								
Reactive Cyanide	ND	mg/L	0.005	0.017	1		04/14/09	LNB
Reactive Sulfide	ND	mg/L	10.0	10.0	1		04/14/09	JJP

Sample ID: **4015858027** Matrix: **Water** Sample Date/Time: **04/07/09 13:00** Lab No. : **0904267-07**

WB-3

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
SW846 Vol 1C Sec 7.3.3.2								
Reactive Cyanide	ND	mg/L	0.005	0.017	1		04/14/09	LNB
Reactive Sulfide	ND	mg/L	10.0	10.0	1		04/14/09	JJP

SIEMENS

Qualifier Descriptions

Definitions

LOD = Limit of Detection (Dilution Corrected)
LOQ = Limit of Quanitation (Dilution Corrected)
ND = Not Detected
COMP = Complete
SUBCON = Subcontracted analysis
mv = millivolts
pci/L = picocuries per Liter
mL/L = milliliters per Liter
mg = milligram

When the word "dry" follows the units on the result page the sample results are dry weight corrected.

LODs and LOQs are dry weight corrected for all soils except WI GRO, EPA 8021 and WI DNR/EPA 8260B methanol and WI DNR methyiene chloride preserved

ug/l = Micrograms per Liter = parts per billion (ppb)
ug/kg = Micrograms per kilogram = parts per billion (ppb)
mg/l = Milligrams per liter = parts per million (ppm)
mg/kg = Milligrams per kilogram = parts per million (ppm)
NOT PRES = Not Present
ppth = Parts per thousand
* = Result outside established limits.
mg/m3 = Milligrams per meter cubed
ng/L = Nanograms per Liter = Parts per trillion(ppt)
> = Greater Than

State of Wisconsin Methanol Soils for WI GRO, WI DNR/EPA 8260B and EPA 8021 are reported to the LOQ.

Chain of Custody

US Filter

Pace Analytical®
www.pacelabs.com

Workorder: 4015858 **Workorder Name:** 10702-040 STH/32-11 **Results Requested** ~~4/16/2009~~ 4/23

Report / Invoice To **Subcontract To**

Kang Khang
Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436
Email: kang.khang@pacelabs.com

P.O.

0904267

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	Requested Analysis: Reactive Cn & Sulf	LAB USE ONLY
1	D-15 6-8'	4/3/2009 13:20	4015858010	Solid	1	X	
2	TMJ-1 6-8'	4/3/2009 15:00	4015858013	Solid	1	X	4oz Ag.
3	LP-WP	4/6/2009 12:30	4015858021	Solid	1	X	
4	FOX 1	4/6/2009 15:30	4015858023	Water	1	X	
5	TMJ-1	4/6/2009 15:50	4015858024	Water	1	X	250 Poly Unpres.
6	WFM-1	4/6/2009 17:00	4015858025	Water	1	X	
7	WB-3	4/7/2009 13:00	4015858027	Water	1	X	

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	4-13-09 1630	UPS	
2			[signature]	4/14/09 10:55
3				
4				
5				

Comments

3.4°C

(Please Print Clearly)

Company Name:	Aecom
Branch/Location:	Milwaukee
Project Contact:	Bryan Bergmann
Phone:	414 577 1321
Project Number:	10702-040
Project Name:	S+H 32-11
Project State:	WI
Sampled By (Print):	Dave Martell
Sampled By (Sign):	David Mar
PO #:	Regulatory Program:

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www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of

ATE ✓

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Quote #:	
Mail To Contact:	Bryan Bergmann
Mail To Company:	Aecom
Mail To Address:	Milwaukee
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, Sl = Sludge
W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

FILTERED? (YES/NO) — Y/N
PRESERVATION (CODE)* — Pick Letter
Analyses Requested

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	DRO	GRO/PVOC/Naphth	Pb	Cd	Reactive Cyanide/Sulfide	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	D-7 2-4'	4/3/09	10:18		X	X	X				1-4oz AG^A 1-4oz CG^A 1-2oz F	
002	D7 6-8	4/3/09	10:30		X	X	X				↓	
003	D9 2-4	4/3/09	10:50		X	X	X				↓	
004	D9 6-8	4/3/09	11:09		X	X	X				↓	
005	D8 2-4	4/3/09	11:25		X	X	X				↓	
006	D8 10-12	4/3/09	11:43		X	X	X				↓	
007	D10 1-3	4/3/09	12:21		X	X	X				↓	
008	D12 1-3	4/3/09	12:50		X	X	X				↓	
009	D14 1-3	4/3/09	1:05p		X	X	X				↓	
010	D15 6-8	4/3/09	1:20p		X	X	X	X	X	3-4oz AG^A	~~AE~~ ↓	
011	D13 2-4	4/3/09	2:03p		X	X	X			1-4oz AG^A	~~3-4oz AG^A~~	
012	D11 1-3	4/3/09	2:11p		X	X	X			↓	↓	
013	TMJ-1 6-8'	4/3/09	3:00p					X	X		2-4oz AG^A	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Dave Mart	4/8/09 1315	D. Fancuil	4/8/9 1315
D. Fancuil	4/8/9 1700		
Walter	4/9/09 850	[illegible]	4/9/09 850

PACE Project No. 4015858

Receipt Temp = 8.1 °C

Sample Receipt pH
OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

C01 ... 06/14/...

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CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Aecom
Branch/Location:	Milwaukee
Project Contact:	Bryn Bergmann
Phone:	414 577 1321
Project Number:	10702-040
Project Name:	STH 32/11
Project State:	WI
Sampled By (Print):	David Markert
Sampled By (Sign):	
PO #:	Regulatory Program:

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
SI = Sludge	WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	Analyses Requested: DRO	GRO/BTEX/Naphth	Pb	Cd	Protocol B
014	LP1 1-3'	4/6/09	10:05				X	X	X		
015	LP2 1-3	4/6/09	11:20				X	X	X		
016	LP2 6-8	4/6/09	11:30				X	X	X	X	
017	LP3 1-3	4/6/09	11:42				X	X	X		
018	LP3 4-6	4/6/09	11:50				X	X	X		
019	LP4 1-3	4/6/09	12:00				X	X	X		
020	LP4 6-8	4/6/09	12:05				X	X	X		
021	LP-WP	4/6/09	12:30								X

Quote #:	
Mail To Contact:	Bryan Bergmann
Mail To Company:	Aecom
Mail To Address:	Milwaukee
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
	1-4oz NGA 1-4oz CGA 1-2oz F	
PIA 61	3-4oz AGA	
	1-4oz AGA	
1-8oz AGA	1-4oz poly A 2-4oz AGA	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	4/8/09 1315	D. Tennant	4/8/9 1316
D. Tennant	4/8/9 1700		
Walter	4/9/09 850		

PACE Project No.: 40158858
Receipt Temp = 2.0 °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

(Please Print Clearly)

Company Name:	Aecom
Branch/Location:	Milwaukee
Project Contact:	Bryan Bergmann
Phone:	414 577 1321
Project Number:	10702 040
Project Name:	STH 32/11
Project State:	WI
Sampled By (Print):	Dave Malek
Sampled By (Sign):	Dave M
PO #:	
Regulatory Program:	

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www.pacelabs.com

CHAIN OF CUSTODY

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED? (YES/NO) — Y/N
PRESERVATION (CODE)* — Pick Letter

Quote #:	
Mail To Contact:	Bryan Bergmann
Mail To Company:	Aecom
Mail To Address:	Milwaukee
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, Sl = Sludge
W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

Analyses Requested

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	VOC + Naphth	Pb	Cd	Reactive cyanide/sulfide					CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
022	Fat 5	4/6	2:50	GW	X	X							MS/MSD	1-250ml D 9-40ml B	
023	Fox 1	4/6	3:30		X	X	X	X						3-250ml ADA 3-40ml B	
024	TMJ-1	4/6	3:50				X	X						2-250ml AD + AE	
025	WFM-1	4/6	5:00		X	X	X	X						3-250 ADD 3-40ml B	
026	WB-2	4/7	12:30		X	X								1-250ml D ↓	
027	WB-3	4/7	1:00p		X	X	X	X						3-250ml ADD ↓	
028	WB-4	4/7	1:40		X	X							2-40 ml only HCl	1-250ml D 2-40ml B	
029	Trip Blank				X									2-40ml B	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Dave Mal	4/8/09 1315	D Fernand	4/8/9 1315
D Fernand	4/8/9 1700		
WALTCO	4/9/09 850	[illegible]	4/9/09 850

PACE Project No. 4015858

Receipt Temp = 1.0 °C

Sample Receipt pH
OK / Adjusted NA

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

CO un20

Sample Condition Upon Receipt

Pace Analytical

Client Name: AECOM - STS Project # 4015858

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other Walt10

Tracking #:

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals Intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Thermometer Used N/A Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature R07 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Date and initials of person examining contents: 4/9/09 AE

Chain of Custody Present:	☐Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☐Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☒No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☒No ☐N/A	7.
Sufficient Volume:	☐Yes ☐No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No ☐N/A	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
Containers Intact:	☒Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12. Sample D-101-3 has 2 jars labelled D-31-3; should be D-101-3 (Date/Time match)
-Includes date/time/ID/Analysis Matrix: W/S		
All containers needing preservation have been checked.	☐Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☒Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed: AE Lot # of added preservative:
Samples checked for dechlorination:	☐Yes ☐No ☒N/A	14.
Headspace in VOA Vials (>6mm):	☒Yes ☐No ☐N/A	15. For - 5
Trip Blank Present:	☒Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☒Yes ☐No ☐N/A	
Pace Trip Blank Lot # (If purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:** 4/9/09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

AECOM Environment - to enhance and sustain
the world's built, natural, and social environments

AECOM

About AECOM Environment

Evolving to better serve global clients, AECOM has formed a new global business line that combines the environmental management resources of ENSR, Earth Tech, STS and Metcalf & Eddy. With 4200 staff in 20 countries, AECOM's environmental practice is one of five new globally integrated business lines of AECOM (AECOM Water, AECOM Transportation, AECOM Design, AECOM Energy and Power).
As AECOM's global Environment group, we can offer clients broader and deeper environmental health and safety services with greater technical expertise across greater geographies—closer to sites and facilities. Plus, we can deliver more value by leveraging the full resources of AECOM's worldwide staff of 44,000 people in 450 offices. Our commitment to the success of your projects and your organization is our top priority, as we harness the global capabilities of AECOM.

Contact AECOM Environment Worldwide

Asia	+603.7725.0380
Australia	+61.2.8484.8999
Europe	+39.02.31.80.77.1
Latin America	+55.21.2005.3677
Middle East	+97.1.2.410.9401
North America	1.800.722.2440
Email	AskEnvironment@aecom.com