AECOM Environment

Prepared for:
Sheboygan County and
Wisconsin Department of Transportation
Northeast Region
WisDOT Project ID No. 4996-01-47

April 2012

Union Pacific Rail Line Conversion Bicycle and Pedestrian Path Adjacent to Imogene's Cleaning Center (Site No. 16) 02-60-~~007460~~
City of Sheboygan
Sheboygan County, Wisconsin

Phase 2 Environmental Sampling Investigation
Project No. 60184606

Phase 2 Environmental Sampling Investigation

Union Pacific Rail Line Conversion Bicycle and Pedestrian Path
City of Sheboygan, Sheboygan County, Wisconsin

UP Rail Line - Pennsylvania Avenue to Martin Avenue
WisDOT Project ID No. 4996-01-47
WDNR BRRTS No. 02-60-552193

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Date 4/10/12

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Date 4/10/2012

Table of Contents

Abbreviations

bgs	below ground surface
EPA	U.S. Environmental Protection Agency
GPS	global positioning system
mg/kg	milligrams per kilogram
NR 720	Wisconsin Administrative Code, Chapter NR 720
PID	photoionization detector
Phase 1	Phase 1 Hazardous Materials Assessment
Phase 2	Phase 2 Environmental Sampling Investigation
VOCs	volatile organic compounds
RCL	NR 720 Residual Contaminant Level
SSL	NR 746 Soil Screening Level
ROW	right of way
US	United States Highway
WDNR	Wisconsin Department of Natural Resources
WisDOT	Wisconsin Department of Transportation

1.0 Executive Summary

This report summarizes the results of a Phase 2 Environmental Sampling Investigation (Phase 2) was conducted for the following sites:

Site No.	Site Name	Site Use & Concern	Action
16	Imogene's Cleaning Center	Dry Cleaner; Open ERP site	Phase 2

The purpose of the Phase 2 was to investigate for evidence of subsurface impacts associated with a known release of dry cleaning chemical within proposed construction limits in the area of the subject property.

Two soil samples were collected and analyzed for volatile organic compounds (VOCs).

Field and analytical results of the samples collected during the Phase 2 indicated the following:

- The soils encountered at each Phase 2 boring location are typical of urban fill materials.
- PCE was detected in one soil sample (SB-2) at Imogene's Cleaning Center, which appears to be associated with the known release of dry cleaning chemical at this site.
- Based on subsurface conditions observed during probing activities, the groundwater table is greater than 3 feet bgs.

Based on the Phase 2 results, no additional hazardous materials investigation is warranted at this site, however, contract special provisions are warranted for the management of contaminated soil that may be encountered during construction.

2.0 Site Investigation

2.1 Project Background

Sheboygan County and the Wisconsin Department of Transportation (WisDOT) Northeast Region are planning to construct a 1.4-mile trail along the Union Pacific Railroad ("UP Rail Line") between Pennsylvania Avenue and Martin Avenue as part of County-wide Bicycle/Pedestrian Program (see Figure 1). The bicycle path construction will occur along acquired railroad corridor and on roadways within existing public right-of-way (ROW).

AECOM completed a Phase 1 Hazardous Materials Assessment (Phase 1) for the UP Rail Line project and documented the findings in a final report dated October 2009. A Phase 2 was recommended for Imogene's Cleaning Center (Site No. 16).

2.2 Purpose and Scope

The purpose of the Phase 2 was to investigate for evidence of subsurface impacts within proposed construction limits in the area of the subject properties. The Phase 2 scope of work included:

- Visually classified soil samples obtained from the borings to a maximum depth of 3 feet using a hand auger.
- Field monitored soil gas in soil sample with a photoionization detector (PID) using the headspace method. Soil descriptions and PID readings were recorded on Wisconsin Department of Natural Resources (WDNR) soil boring logs (WDNR Form 4400-122).
- Collected one soil sample from each soil borings for laboratory analysis. The samples were collected from the interval having the highest PID reading, at the soil/groundwater interface, or bottom in each boring.

2.3 Site Description

General site information includes:

Site No.	Site Name	Site Address
16	Imogene's Cleaning Center	1502 Saemann Avenue, Sheboygan, WI

2.4 Description of Field Investigation

On December 27, 2011, two hand-augered soil samples were collected at the furthest depth (maximum depth 3 feet). Two samples were collected from Site No. 16, Imogene's Cleaning Center. The location of each boring is shown in Figure 2. Photographs of the soil boring locations are presented in Appendix A. Soil boring logs are provided in Appendix B.

Soil samples were collected continuously from the borings and field screened using a PID. The PID is capable of detecting and measuring relative concentrations of volatile organic vapors in the soil gas. PID readings were recorded on the soil boring logs. Soil gas monitoring procedures are described in Appendix C.

One soil sample was collected for laboratory analysis at each boring location. The samples were submitted to Pace Analytical located in Green Bay, Wisconsin. The sample depths and analyses are:

Site ID	Site Name	Depth	Analyses
SB-1	Imogene's Cleaning Center	1 – 2 ft	VOC
SB-2	Imogene's Cleaning Center	1 – 2 ft	VOC

Soil sampling procedures are discussed in Appendix D.

Groundwater was not encountered in the borings. After sampling, the borings were backfilled, and no excess soil cuttings were generated from the borings. Borehole abandonment forms are provided in Appendix E.

2.5 Subsurface Conditions

Subsurface materials encountered generally included topsoil and fill with clay and sand. Hand auger refusal occued at a depth of 2 feet in each boring.

Chemical odor, staining, and/or elevated PID readings (greater than 1 instrument unit) were not identified in the soil samples.

Based on United States Geological Survey geological mapping, subsurface materials include ground moraine till of unstratified clay, silt, sand, gravel, and boulders. The deposits are approximately 100 feet thick and overlie Silurian dolomite bedrock. Surface soils have low permeability (0.05 to 0.2 inches per hour) and are primarily derived from Valders till which locally has a high clay content.

Regional groundwater flow direction is to the east toward Lake Michigan, which is located approximately 0.25 miles east of the project area. Local groundwater flow direction varies, generally flowing toward the Sheboygan River. Groundwater elevation ranges from 20 to 50 feet bgs.

2.6 Analytical Parameters and Results

Analytical parameters were selected in general accordance with WisDOT and WDNR guidance for investigations of dry cleaners. Standard analytical procedures are discussed in Appendix F. Analytical results are summarized in Table 1. The laboratory report and chain of custody form is included in Appendix G.

Tetrachloroethene (PCE), a dry cleaning chemical, was detected at 778 ug/kg in one sample, SB-2, taken from Imogene's Cleaning Center. There is no Wisconsin generic regulatory standard for PCE in soil.

2.7 Conclusions and Recommendations

Field and analytical results of the samples collected during the Phase 2 indicated the following:

- The soils encountered at each Phase 2 boring location are typical of urban fill materials.
- PCE was detected in one soil sample (SB-2) at Imogene's Cleaning Center, which appears to be associated with the known release of dry cleaning chemical at this site.
- Based on subsurface conditions observed during probing activities, the groundwater table is greater than 3 feet bgs.

Based on the Phase 2 results, no further investigation is warranted at this site; however, contract special provisions are warranted for the management of PCE contaminated soil in the vicinity of SB-2 that may be encountered during construction.

3.0 Limitations

AECOM's scope of services was limited to conducting a Phase 2 at the subject property.

AECOM's opinion regarding existing conditions at the site does not constitute a guarantee or warranty as to the potential environmental liability associated with the site. Furthermore, the findings and conclusions given are not scientific certainties, but rather probabilities based on data obtained or activities performed during this assessment and professional judgment concerning the significance of this data. Information was collected in accordance with generally accepted professional standards and practices, accepted in good faith, and are assumed to be factual and accurate.

AECOM is not able to determine whether the site or adjoining land areas contain hazardous waste, oil, or other latent conditions beyond those detected or observed by AECOM at the time the investigation was conducted. The possibility exists for contaminants to migrate through the surface water, air, or groundwater. Detailed analysis and discussion of the environmental risk associated with contaminant transport in these media was beyond the scope of this assessment.

The findings, conclusions, and opinion contained in this report are intended for exclusive use by Sheboygan County and WisDOT and are applicable only to this Phase 2. AECOM has no obligations to other persons or organizations that may use or rely upon this information.

4.0 References

AECOM, *Final Phase 1 Hazardous Materials Assessment, UP Rail Line Conversion (Pennsylvania Avenue to Martin Avenue), City of Sheboygan, Sheboygan County, Wisconsin, October 2009*.

U.S. Geological Survey. 1994. 7.5-Minute Quadrangle, Sheboygan North, Wisconsin.

U.S. Geological Survey. 1982. *Shell Lake, Wis.*, 7.5-Minute Quadrangle.

Wisconsin Administrative Code, Chapter NR 720, Soil Cleanup Standards, Register, September 2007, No. 621.

Wisconsin Administrative Code, Chapter NR 746, Risk Screening and Closure Criteria for Petroleum Contaminated Sites, and Agency Roles and Responsibilities, Register, September 2007, No. 621.

Wisconsin Geological and Natural History Survey (WGNHS), 1973, Water Resources of Wisconsin, Lake Michigan Basin, Hydrologic Investigations Atlas, HA-432.

Table 1

Soil Sample Analytical Results

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PHASE 2 ENVIRONMENTAL SAMPLING INVESTIGATION
UP RAIL ADJACENT TO IMOGENE'S CLEANING CENTER
1502 SAEMANN AVENUE
CITY OF SHEBOYGAN, SHEBOYGAN COUNTY, WISCONSIN
WISDOT PROJECT NO. 4996-01-47

Soil Boring No.: / Sample Depth (feet): / Date Collected: / PID (i.u.):	NR720 RCLs	NR746 SSLs	SB-1 (1-2') 12/27/2011 <1	SB-2 (1-2') 12/27/2011 <1
Analyte				
VOCs (µg/kg)				
Benzene	5.5	8,500	<25	<25
1,2-Dichloroethane	4.9	600	<25	<25
Ethylbenzene	2,900	4,600	<25	<25
Methyl tert-butyl ether (MTBE)	--	--	<25	<25
Tetrachloroethene (PCE)	--	--	<25	778
Toluene	1,500	38,000	<25	<25
1,2,4-Trimethylbenzene	--	83,000	<25	<25
1,3,5-Trimethylbenzene	--	11,000	<25	<25
Xylenes (m&p- and o-)	4,100	42,000	<50	<50

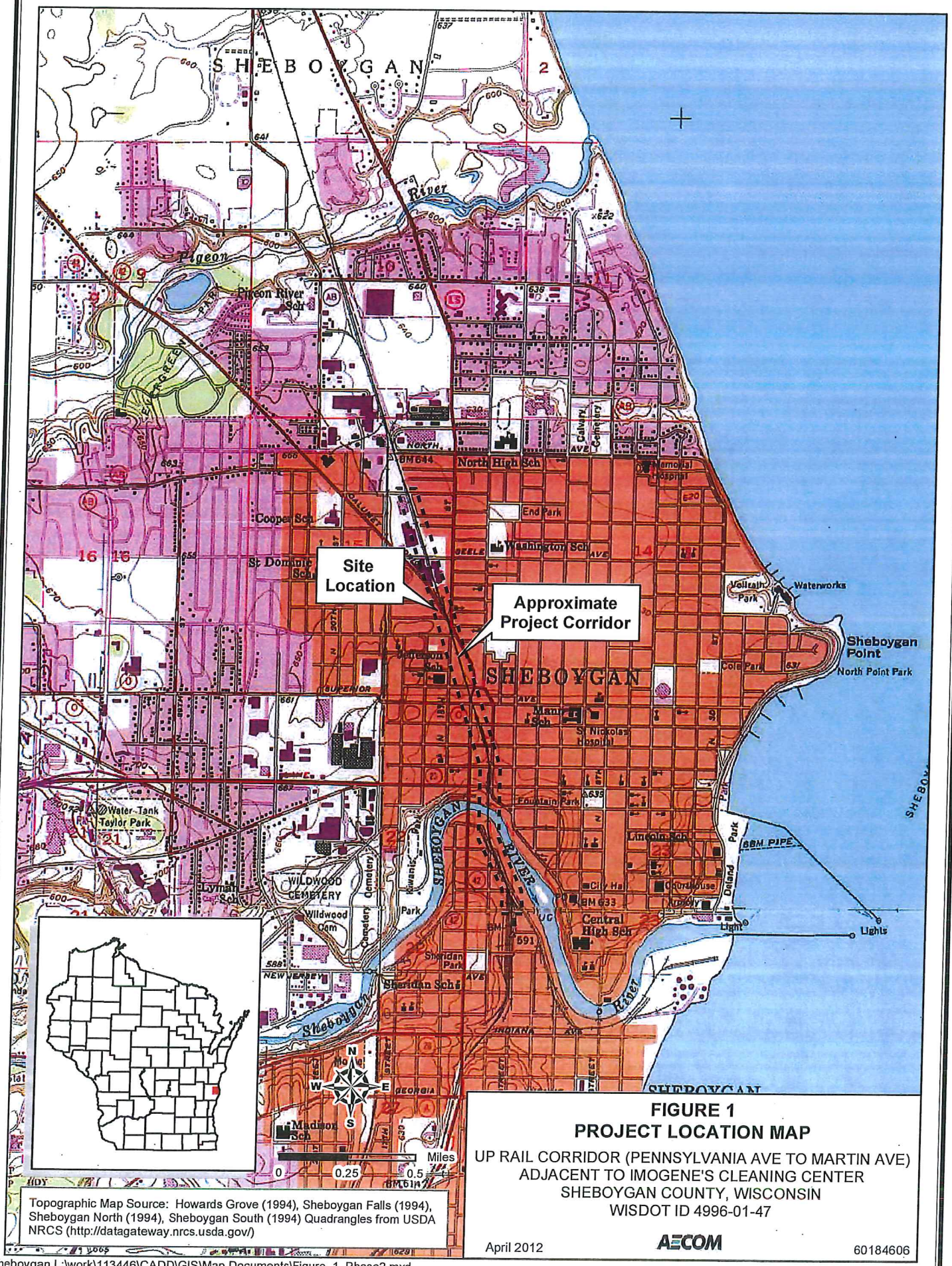
Notes:

µg/kg: micrograms per kilogram
VOCs: Volatile Organic Compounds
PID: Photoionization Detector
i.u.: PID Instrument Units
RCL: Residual Contaminant Level
SSL: Soil Screening Level
--: Not Sampled or Standard Not Established
NR 720: Chapter NR 720, Wisconsin Administrative Code
NR 746: Chapter NR 746, Wisconsin Administrative Code
J: Analyte detected between limit of detection and limit of quantitation.

Bold type indicates RCL or SSL exceedence.

Figure 1

Site Location Map



Topographic Map Source: Howards Grove (1994), Sheboygan Falls (1994), Sheboygan North (1994), Sheboygan South (1994) Quadrangles from USDA NRCS (http://datagateway.nrcs.usda.gov/)

FIGURE 1
PROJECT LOCATION MAP

UP RAIL CORRIDOR (PENNSYLVANIA AVE TO MARTIN AVE)
ADJACENT TO IMOGENE'S CLEANING CENTER
SHEBOYGAN COUNTY, WISCONSIN
WISDOT ID 4996-01-47

April 2012 AECOM 60184606

Sheboygan L:\work\113446\CADD\GIS\Map Documents\Figure_1_Phase2.mxd

Figure 2

Soil Boring Location Diagram

FIGURE 2
SOIL BORING LOCATION DIAGRAM

UP RAIL CORRIDOR (PENNSYLVANIA AVE TO MARTIN AVE)
ADJACENT TO IMOGENE'S CLEANING CENTER (SITE NO. 16)
SHEBOYGAN COUNTY, WISCONSIN
WISDOT ID 4996-01-47

APRIL 2012 AECOM 60187755

Path: \\usshbs01\data\work\113446\CADD\GIS\map documents\Figure_2_Phase2_Imogenes.mxd

Appendix A

Photograph Log

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Wisconsin Department of Transportation	Imogene's Cleaning Center, Sheboygan Sheboygan County, WI	60187755.02.01

Photo No.	Date:
1	12/27/12

Direction Photo Taken:

North

Description:

View north taken from in between the project area and the dry cleaning building. Blue flags mark the soil boring locations.

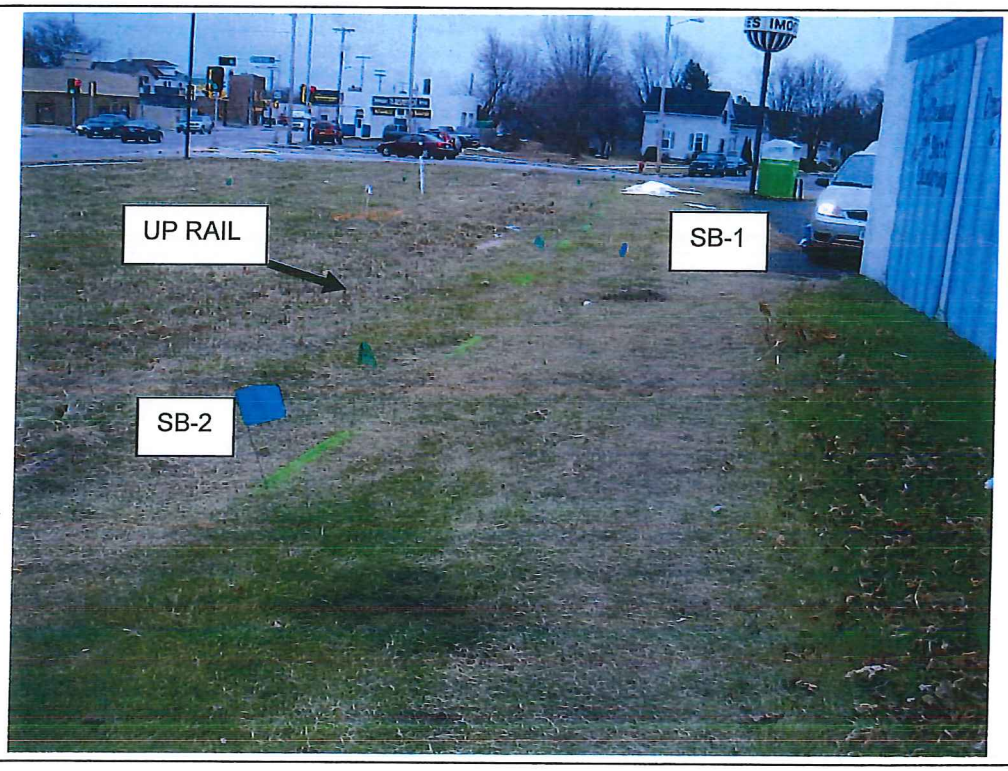
Photo No.	Date:
2	12/27/12

Direction Photo Taken:

South

Description:

Blue flags mark the soil boring locations.



Appendix B

Soil Boring Logs

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☒ Other ☐ _____

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Imogene's Cleaning Center/UP Rail		SB-1

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Heather Last Name: Cleveland Firm: AECOM	12/27/2011 (mm dd yyyy)	12/27/2011 (mm dd yyyy)	Hand Auger

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

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E
SW 1/4 of SE 1/4 of Section 15, T 15 N, R 23E

Lat ° ' "
Long ° ' "

Local Grid Location
_____ Feet ☐ N ☐ S _____ Feet ☐ E ☐ W

Facility ID | County: Sheboygan | County Code: 60 | Civil Town/City/ or Village: City of Sheboygan

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	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	10"		0	Sandy silt fill with some gravel	MS			<1						
			1											
2	6"			Same	MS			<1						lab sample
			2	Refusal at 2 feet										
				EOB										
			3	Backfilled w/ soil										
			4											
			5											
			6											

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

Signature: [signature] Firm: AECOM

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 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

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☒ Other ☐ _____

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Imogene's Cleaning Center		SB-2

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Heather Last Name: Cleveland Firm: AECOM	12/27/2011 (mm/dd/yyyy)	12/27/2011 (mm/dd/yyyy)	Hand Auger

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

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E
SW 1/4 of SE 1/4 of Section 15, T 15 N, R 23E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/or Village
	Sheboygan	60	City of Sheboygan

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	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	6"		0	Sandy silt fill with some gravel	MS			<1						
			1											
2	6"			Same	MS			<1						labsample
			2	Refusal at 2 feet										
				EOB										
			3	Backfilled w/ soil										
			4											
			5											
			6											

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

Signature _____ Firm AECOM

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 used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Appendix C

Soil Gas Monitoring

Soil Gas Monitoring

PID Model:	Process Analyzers DL-102
Probe:	10.2 eV Lamp
Calibration Gas:	100 parts per million Isobutylene/Air

The PID was calibrated before sampling was conducted.

Soil gas readings for specified depth intervals were obtained using the headspace method. Soil samples were placed in plastic Ziplock bags and the air in each bag was allowed to equilibrate with the soil sample for up to 30 minutes. If the outside air temperature was below 70 degrees Fahrenheit, the soil samples were heated. The PID probe was then inserted into the bag headspace and the instrument reading was recorded.

Appendix D

Standard Sampling Procedures

Standard Sampling Procedures

Soil samples were collected using a 2-inch diameter hand auger that was decontaminated between sampling locations. Samples collected for laboratory analysis were removed from the auger and placed directly into dedicated plastic bags using new protective gloves. Protective gloves were disposed after collecting each sample. Soil samples were preserved according to WDNR and U.S. Environmental Protection Agency (EPA) protocols.

Appendix E

Borehole Abandonment Forms

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, 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. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

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

County	WI Unique Well # of Removed Well	~~Hicap #~~ Boring ID
Sheboygan		SB-1

Facility Name: Imogene's Clean Center adjacent to UP Rail

Facility ID (FID or PWS):

License/Permit/Monitoring #:

Lattitude / Longitude (Degrees and Minutes) — Method Code (see instructions)

__ __ ° __ __ . __ __ __ 'N

__ __ ° __ __ . __ __ __ 'W

¼ ¼	¼	Section	Township	Range
SW	SE	15	15 N	23 ☒ E ☐ W

or Gov't Lot #

Original Well Owner: Wisconsin Department of Transportation

Present Well Owner: Same

Well Street Address: 1502 Saemann Avenue

Mailing Address of Present Owner: 2802 Sheboygan Avenue

Well City, Village or Town	Well ZIP Code	City of Present Owner	State	ZIP Code
City of Sheboygan	53081	Madison	WI	53707

Subdivision Name — Lot #

Reason For Removal From Service: Temporary Borehole

WI Unique Well # of Replacement Well:

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy):

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): Hand Auger

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
2	NA
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
2	NA

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)? — Depth to Water (feet)

	Yes	No	N/A
Pump and piping removed?	☐	☐	☒
Liner(s) removed?	☐	☐	☒
Screen removed?	☐	☐	☒
Casing left in place?	☐	☐	☒
Was casing cut off below surface?	☐	☐	☒
Did sealing material rise to surface?	☐	☐	☒
Did material settle after 24 hours?	☐	☒	☐
If yes, was hole retopped?	☐	☐	☐
If bentonite chips were used, were they hydrated with water from a known safe source?	☐	☐	☒

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

Sealing Materials
☐ Neat Cement Grout ☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " "
☐ Concrete ☐ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

Material Used	From	To	Amount
Material Excavated/Backfilled with soil	Surface	2	—

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing (mm/dd/yyyy)
Heather Cleveland, AECOM		12/27/2011

Street or Route	Telephone Number
1020 N Broadway Street, Suite 400	(920) 451-2539

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Milwaukee	WI	53202		3/30/12

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, 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. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

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

County	WI Unique Well # of Removed Well	~~Hicap #~~ Boring ID
Sheboygan	_____	SB-2

Facility Name: Imogene's Cleaning Center Adjacent to UP Rail
Facility ID (FID or PWS):
License/Permit/Monitoring #:

Latitude / Longitude (Degrees and Minutes) ___ ° ___ . ___ ___ ___ 'N / ___ ° ___ . ___ ___ ___ 'W — Method Code (see instructions):

¼ ¼	¼	Section	Township	Range	or Gov't Lot #
SW	SE	15	15 N	23 ☒ E ☐ W	

Original Well Owner: Wisonsin Department of Transportation
Present Well Owner: Same
Well Street Address: 1502 Saemann Avenue
Mailing Address of Present Owner: 2802 Sheboygan Avenue
Well City, Village or Town: City of Sheboygan
Well ZIP Code: 53081
City of Present Owner: Madison
State: WI
ZIP Code: 53707
Subdivision Name:
Lot #:

Reason For Removal From Service: Temporary Borehole
WI Unique Well # of Replacement Well: _____

☐ Monitoring Well ☐ Water Well ☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy):
If a Well Construction Report is available, please attach.

Construction Type: ☐ Drilled ☐ Driven (Sandpoint) ☐ Dug ☒ Other (specify): Hand Auger

Formation Type: ☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
2	NA
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
2	NA

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

	Yes	No	N/A
Pump and piping removed?	☐	☐	☒
Liner(s) removed?	☐	☐	☒
Screen removed?	☐	☐	☒
Casing left in place?	☐	☐	☒
Was casing cut off below surface?	☐	☐	☒
Did sealing material rise to surface?	☐	☐	☒
Did material settle after 24 hours?	☐	☒	☐
If yes, was hole retopped?	☐	☐	☐
If bentonite chips were used, were they hydrated with water from a known safe source?	☐	☐	☒

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

Sealing Materials
☐ Neat Cement Grout ☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " "
☐ Concrete ☐ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout ☐ Granular Bentonite ☐ Bentonite - Sand Slurry

Material	From	To	Amount
Material Excavated/Backfilled with Soil	Surface	2	—

Comments:

Name of Person or Firm Doing Filling & Sealing: HeAther Cleveland, AECOM
License #:
Date of Filling & Sealing (mm/dd/yyyy): 12/27/2011
Street or Route: 1020 N Broadway Street, Suite 400
Telephone Number: (920)451-2539
City: Milwaukee
State: WI
ZIP Code: 53202
Signature of Person Doing Work: Heather Cleveland
Date Signed: 3/30/12

Appendix F

Standard Analytical Procedures

Standard Analytical Procedures

Samples were analyzed by Pace Analytical®, Green Bay, Wisconsin (Wisconsin Certification No. 405132750).

The analytical methods used included:

- VOCs by EPA Method 8260

Sample detection limits for specific analyses are included in the laboratory analytical report.

Appendix G

Laboratory Reports and Chain of Custody Form

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

January 16, 2012

Jeff Maletzke
AECOM - Sheboygan
4135 Technology Parkway
Sheboygan, WI 53083

RE: Project: 60184606 UP RAIL
Pace Project No.: 4055282

Dear Jeff Maletzke:
Enclosed are the analytical results for sample(s) received by the laboratory on December 27, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted 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: 60184606 UP RAIL
Pace Project No.: 4055282

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444

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SAMPLE SUMMARY

Project: 60184606 UP RAIL
Pace Project No.: 4055282

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4055282001	IMOGENE'S SB-1 (1-2')	Solid	12/27/11 12:35	12/27/11 17:55
4055282002	IMOGENE'S SB-2 (1-2')	Solid	12/27/11 12:45	12/27/11 17:55
4055282003	17TH STREET SB-3 (1-2')	Solid	12/27/11 13:05	12/27/11 17:55
4055282004	17TH STREET SB-4 (2-3')	Solid	12/27/11 13:45	12/27/11 17:55
4055282005	TRIP BLANK	Solid	12/27/11 13:00	12/27/11 17:55

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SAMPLE ANALYTE COUNT

Project: 60184606 UP RAIL
Pace Project No.: 4055282

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4055282001	IMOGENE'S SB-1 (1-2')	EPA 8260	JJB	64	PASI-G
		ASTM D2974-87	EMH	1	PASI-G
4055282002	IMOGENE'S SB-2 (1-2')	EPA 8260	JJB	64	PASI-G
		ASTM D2974-87	EMH	1	PASI-G
4055282003	17TH STREET SB-3 (1-2')	WI MOD DRO	KHB	1	PASI-G
		WI MOD GRO	PMS	10	PASI-G
		EPA 6010	DLB	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		ASTM D2974-87	EMH	1	PASI-G
4055282004	17TH STREET SB-4 (2-3')	WI MOD DRO	KHB	1	PASI-G
		WI MOD GRO	PMS	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	EMH	1	PASI-G
4055282005	TRIP BLANK	EPA 8260	JJB	64	PASI-G

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ANALYTICAL RESULTS

Project: 60184606 UP RAIL
Pace Project No.: 4055282

Sample: IMOGENE'S SB-1 (1-2') **Lab ID: 4055282001** Collected: 12/27/11 12:35 Received: 12/27/11 17:55 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	96-18-4	W
1,2,4-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	120-82-1	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	95-63-6	W
1,2-Dibromo-3-chloropropane	**<82.3**	ug/kg	250	82.3	1	01/03/12 12:00	01/04/12 11:34	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	106-93-4	W
1,2-Dichlorobenzene	**<44.4**	ug/kg	60.0	44.4	1	01/03/12 12:00	01/04/12 11:34	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	75-27-4	W
Bromoform	**<25.9**	ug/kg	60.0	25.9	1	01/03/12 12:00	01/04/12 11:34	75-25-2	W
Bromomethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	108-90-7	W
Chloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	75-00-3	W
Chloroform	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	100-41-4	W
Hexachloro-1,3-butadiene	**<26.4**	ug/kg	60.0	26.4	1	01/03/12 12:00	01/04/12 11:34	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	75-09-2	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	100-42-5	W

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ANALYTICAL RESULTS

Project: 60184606 UP RAIL
Pace Project No.: 4055282

Sample: IMOGENE'S SB-1 (1-2') **Lab ID: 4055282001** Collected: 12/27/11 12:35 Received: 12/27/11 17:55 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	75-01-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	01/03/12 12:00	01/04/12 11:34	179601-23-1	W
n-Butylbenzene	**<40.4**	ug/kg	60.0	40.4	1	01/03/12 12:00	01/04/12 11:34	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:34	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	85	%.	57-149		1	01/03/12 12:00	01/04/12 11:34	1868-53-7	
Toluene-d8 (S)	88	%.	55-152		1	01/03/12 12:00	01/04/12 11:34	2037-26-5	
4-Bromofluorobenzene (S)	82	%.	40-139		1	01/03/12 12:00	01/04/12 11:34	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.9**	%	0.10	0.10	1		12/29/11 08:03		

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ANALYTICAL RESULTS

Project: 60184606 UP RAIL
Pace Project No.: 4055282

Sample: IMOGENE'S SB-2 (1-2') **Lab ID: 4055282002** Collected: 12/27/11 12:45 Received: 12/27/11 17:55 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	96-18-4	W
1,2,4-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	120-82-1	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	95-63-6	W
1,2-Dibromo-3-chloropropane	**<82.3**	ug/kg	250	82.3	1	01/03/12 12:00	01/04/12 11:57	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	106-93-4	W
1,2-Dichlorobenzene	**<44.4**	ug/kg	60.0	44.4	1	01/03/12 12:00	01/04/12 11:57	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	75-27-4	W
Bromoform	**<25.9**	ug/kg	60.0	25.9	1	01/03/12 12:00	01/04/12 11:57	75-25-2	W
Bromomethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	108-90-7	W
Chloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	75-00-3	W
Chloroform	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	100-41-4	W
Hexachloro-1,3-butadiene	**<26.4**	ug/kg	60.0	26.4	1	01/03/12 12:00	01/04/12 11:57	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	75-09-2	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	100-42-5	W

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ANALYTICAL RESULTS

Project: 60184606 UP RAIL
Pace Project No.: 4055282

Sample: IMOGENE'S SB-2 (1-2') **Lab ID: 4055282002** Collected: 12/27/11 12:45 Received: 12/27/11 17:55 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Tetrachloroethene	**778**	ug/kg	70.0	29.2	1	01/03/12 12:00	01/04/12 11:57	127-18-4	
Toluene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	75-01-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	01/03/12 12:00	01/04/12 11:57	179601-23-1	W
n-Butylbenzene	**<40.4**	ug/kg	60.0	40.4	1	01/03/12 12:00	01/04/12 11:57	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 11:57	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	84	%.	57-149		1	01/03/12 12:00	01/04/12 11:57	1868-53-7	
Toluene-d8 (S)	85	%.	55-152		1	01/03/12 12:00	01/04/12 11:57	2037-26-5	
4-Bromofluorobenzene (S)	82	%.	40-139		1	01/03/12 12:00	01/04/12 11:57	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**14.3**	%	0.10	0.10	1		12/29/11 08:03		

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ANALYTICAL RESULTS

Project: 60184606 UP RAIL
Pace Project No.: 4055282

Sample: 17TH STREET SB-3 (1-2') **Lab ID: 4055282003** Collected: 12/27/11 13:05 Received: 12/27/11 17:55 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	**156**	mg/kg	10.6	5.3	5	11/29/11 12:00	01/06/12 10:57		1q,L2
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	12/30/11 12:00	12/30/11 14:25	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	12/30/11 12:00	12/30/11 14:25	100-41-4	W
Gasoline Range Organics	**<3.2**	mg/kg	3.2	3.2	1	12/30/11 12:00	12/30/11 14:25		
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	12/30/11 12:00	12/30/11 14:25	1634-04-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	12/30/11 12:00	12/30/11 14:25	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	12/30/11 12:00	12/30/11 14:25	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	12/30/11 12:00	12/30/11 14:25	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	12/30/11 12:00	12/30/11 14:25	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	12/30/11 12:00	12/30/11 14:25	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	103	%.	80-120		1	12/30/11 12:00	12/30/11 14:25	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**121**	mg/kg	1.1	0.16	1	01/04/12 15:45	01/05/12 20:01	7439-92-1	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**13.8J**	ug/kg	21.5	3.0	1	01/16/12 12:00	01/16/12 10:47	83-32-9	H2
Acenaphthylene	**42.5**	ug/kg	21.5	3.4	1	01/16/12 12:00	01/16/12 10:47	208-96-8	H2
Anthracene	**93.0**	ug/kg	21.5	5.0	1	01/16/12 12:00	01/16/12 10:47	120-12-7	H2
Benzo(a)anthracene	**107**	ug/kg	21.5	3.1	1	01/16/12 12:00	01/16/12 10:47	56-55-3	H2
Benzo(a)pyrene	**114**	ug/kg	21.5	3.5	1	01/16/12 12:00	01/16/12 10:47	50-32-8	H2
Benzo(b)fluoranthene	**170**	ug/kg	21.5	3.7	1	01/16/12 12:00	01/16/12 10:47	205-99-2	H2
Benzo(g,h,i)perylene	**138**	ug/kg	21.5	2.8	1	01/16/12 12:00	01/16/12 10:47	191-24-2	H2
Benzo(k)fluoranthene	**105**	ug/kg	21.5	4.0	1	01/16/12 12:00	01/16/12 10:47	207-08-9	H2
Chrysene	**169**	ug/kg	21.5	3.9	1	01/16/12 12:00	01/16/12 10:47	218-01-9	H2
Dibenz(a,h)anthracene	**36.0**	ug/kg	21.5	5.8	1	01/16/12 12:00	01/16/12 10:47	53-70-3	H2
Fluoranthene	**217**	ug/kg	21.5	10.7	1	01/16/12 12:00	01/16/12 10:47	206-44-0	H2
Fluorene	**20.0J**	ug/kg	21.5	5.3	1	01/16/12 12:00	01/16/12 10:47	86-73-7	H2
Indeno(1,2,3-cd)pyrene	**88.2**	ug/kg	21.5	3.1	1	01/16/12 12:00	01/16/12 10:47	193-39-5	H2
1-Methylnaphthalene	**253**	ug/kg	21.5	3.3	1	01/16/12 12:00	01/16/12 10:47	90-12-0	H2
2-Methylnaphthalene	**314**	ug/kg	21.5	3.3	1	01/16/12 12:00	01/16/12 10:47	91-57-6	H2
Naphthalene	**237**	ug/kg	21.5	3.8	1	01/16/12 12:00	01/16/12 10:47	91-20-3	2q,H2
Phenanthrene	**250**	ug/kg	21.5	4.7	1	01/16/12 12:00	01/16/12 10:47	85-01-8	H2
Pyrene	**172**	ug/kg	21.5	3.9	1	01/16/12 12:00	01/16/12 10:47	129-00-0	H2
Surrogates									
2-Fluorobiphenyl (S)	69	%.	43-130		1	01/16/12 12:00	01/16/12 10:47	321-60-8	
Terphenyl-d14 (S)	76	%.	32-130		1	01/16/12 12:00	01/16/12 10:47	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**22.5**	%	0.10	0.10	1		12/29/11 08:30		

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ANALYTICAL RESULTS

Project: 60184606 UP RAIL
Pace Project No.: 4055282

Sample: 17TH STREET SB-4 (2-3') **Lab ID: 4055282004** Collected: 12/27/11 13:45 Received: 12/27/11 17:55 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	**6.1**	mg/kg	2.3	1.1	1	11/29/11 12:00	01/06/12 11:02		1q,L2
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	**<3.3**	mg/kg	3.3	3.3	1	12/30/11 12:00	12/30/11 14:51		
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**18.0**	mg/kg	1.2	0.17	1	01/04/12 15:45	01/05/12 20:05	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**24.1**	%	0.10	0.10	1		12/29/11 08:30		

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ANALYTICAL RESULTS

Project: 60184606 UP RAIL
Pace Project No.: 4055282

Sample: TRIP BLANK **Lab ID: 4055282005** Collected: 12/27/11 13:00 Received: 12/27/11 17:55 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	96-18-4	W
1,2,4-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	120-82-1	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	95-63-6	W
1,2-Dibromo-3-chloropropane	**<82.3**	ug/kg	250	82.3	1	01/03/12 12:00	01/04/12 10:48	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	106-93-4	W
1,2-Dichlorobenzene	**<44.4**	ug/kg	60.0	44.4	1	01/03/12 12:00	01/04/12 10:48	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	75-27-4	W
Bromoform	**<25.9**	ug/kg	60.0	25.9	1	01/03/12 12:00	01/04/12 10:48	75-25-2	W
Bromomethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	108-90-7	W
Chloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	75-00-3	W
Chloroform	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	100-41-4	W
Hexachloro-1,3-butadiene	**<26.4**	ug/kg	60.0	26.4	1	01/03/12 12:00	01/04/12 10:48	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	75-09-2	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	100-42-5	W

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ANALYTICAL RESULTS

Project: 60184606 UP RAIL
Pace Project No.: 4055282

Sample: TRIP BLANK **Lab ID: 4055282005** Collected: 12/27/11 13:00 Received: 12/27/11 17:55 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	75-01-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	01/03/12 12:00	01/04/12 10:48	179601-23-1	W
n-Butylbenzene	**<40.4**	ug/kg	60.0	40.4	1	01/03/12 12:00	01/04/12 10:48	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/03/12 12:00	01/04/12 10:48	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	89	%.	57-149		1	01/03/12 12:00	01/04/12 10:48	1868-53-7	
Toluene-d8 (S)	85	%.	55-152		1	01/03/12 12:00	01/04/12 10:48	2037-26-5	
4-Bromofluorobenzene (S)	88	%.	40-139		1	01/03/12 12:00	01/04/12 10:48	460-00-4	

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QUALITY CONTROL DATA

Project: 60184606 UP RAIL
Pace Project No.: 4055282

QC Batch: GCV/7814
QC Batch Method: TPH GRO/PVOC WI ext.
Analysis Method: WI MOD GRO
Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 4055282003, 4055282004

METHOD BLANK: 552496 Matrix: Solid
Associated Lab Samples: 4055282003, 4055282004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	12/30/11 10:09	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	12/30/11 10:09	
Benzene	ug/kg	<25.0	60.0	12/30/11 10:09	
Ethylbenzene	ug/kg	<25.0	60.0	12/30/11 10:09	
Gasoline Range Organics	mg/kg	<2.5	2.5	12/30/11 10:09	
m&p-Xylene	ug/kg	<50.0	120	12/30/11 10:09	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	12/30/11 10:09	
o-Xylene	ug/kg	<25.0	60.0	12/30/11 10:09	
Toluene	ug/kg	<25.0	60.0	12/30/11 10:09	
a,a,a-Trifluorotoluene (S)	%.	104	80-120	12/30/11 10:09	

LABORATORY CONTROL SAMPLE & LCSD: 552497 552498

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	985	990	99	99	80-120	.5	20	
1,3,5-Trimethylbenzene	ug/kg	1000	995	997	100	100	80-120	.2	20	
Benzene	ug/kg	1000	1090	1110	109	111	80-120	1	20	
Ethylbenzene	ug/kg	1000	1040	1060	104	106	80-120	1	20	
Gasoline Range Organics	mg/kg	10	10.0	10.1	100	101	80-120	1	20	
m&p-Xylene	ug/kg	2000	2100	2130	105	107	80-120	2	20	
Methyl-tert-butyl ether	ug/kg	1000	1070	1080	107	108	80-120	.9	20	
o-Xylene	ug/kg	1000	1040	1070	104	107	80-120	2	20	
Toluene	ug/kg	1000	1050	1070	105	107	80-120	2	20	
a,a,a-Trifluorotoluene (S)	%.				101	101	80-120			

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QUALITY CONTROL DATA

Project: 60184606 UP RAIL
Pace Project No.: 4055282

QC Batch: MPRP/6445
QC Batch Method: EPA 3050
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Associated Lab Samples: 4055282003, 4055282004

METHOD BLANK: 553366 Matrix: Solid
Associated Lab Samples: 4055282003, 4055282004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	<0.14	1.0	01/05/12 18:29	

LABORATORY CONTROL SAMPLE: 553367

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	50	45.9	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 553368 553369

Parameter	Units	4055345001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/kg	12.2	52.2	52.6	54.4	55.1	81	82	75-125	1	20	

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QUALITY CONTROL DATA

Project: 60184606 UP RAIL
Pace Project No.: 4055282

QC Batch: MSV/13783 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 4055282001, 4055282002, 4055282005

METHOD BLANK: 553230 Matrix: Solid
Associated Lab Samples: 4055282001, 4055282002, 4055282005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<25.0	60.0	01/04/12 08:53	
1,1,1-Trichloroethane	ug/kg	<25.0	60.0	01/04/12 08:53	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	60.0	01/04/12 08:53	
1,1,2-Trichloroethane	ug/kg	<25.0	60.0	01/04/12 08:53	
1,1-Dichloroethane	ug/kg	<25.0	60.0	01/04/12 08:53	
1,1-Dichloroethene	ug/kg	<25.0	60.0	01/04/12 08:53	
1,1-Dichloropropene	ug/kg	<25.0	60.0	01/04/12 08:53	
1,2,3-Trichlorobenzene	ug/kg	<25.0	60.0	01/04/12 08:53	
1,2,3-Trichloropropane	ug/kg	<25.0	60.0	01/04/12 08:53	
1,2,4-Trichlorobenzene	ug/kg	<25.0	60.0	01/04/12 08:53	
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	01/04/12 08:53	
1,2-Dibromo-3-chloropropane	ug/kg	<82.3	250	01/04/12 08:53	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	60.0	01/04/12 08:53	
1,2-Dichlorobenzene	ug/kg	<44.4	60.0	01/04/12 08:53	
1,2-Dichloroethane	ug/kg	<25.0	60.0	01/04/12 08:53	
1,2-Dichloropropane	ug/kg	<25.0	60.0	01/04/12 08:53	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	01/04/12 08:53	
1,3-Dichlorobenzene	ug/kg	<25.0	60.0	01/04/12 08:53	
1,3-Dichloropropane	ug/kg	<25.0	60.0	01/04/12 08:53	
1,4-Dichlorobenzene	ug/kg	<25.0	60.0	01/04/12 08:53	
2,2-Dichloropropane	ug/kg	<25.0	60.0	01/04/12 08:53	
2-Chlorotoluene	ug/kg	<25.0	60.0	01/04/12 08:53	
4-Chlorotoluene	ug/kg	<25.0	60.0	01/04/12 08:53	
Benzene	ug/kg	<25.0	60.0	01/04/12 08:53	
Bromobenzene	ug/kg	<25.0	60.0	01/04/12 08:53	
Bromochloromethane	ug/kg	<25.0	60.0	01/04/12 08:53	
Bromodichloromethane	ug/kg	<25.0	60.0	01/04/12 08:53	
Bromoform	ug/kg	<25.9	60.0	01/04/12 08:53	
Bromomethane	ug/kg	<25.0	60.0	01/04/12 08:53	
Carbon tetrachloride	ug/kg	<25.0	60.0	01/04/12 08:53	
Chlorobenzene	ug/kg	<25.0	60.0	01/04/12 08:53	
Chloroethane	ug/kg	<25.0	60.0	01/04/12 08:53	
Chloroform	ug/kg	<25.0	60.0	01/04/12 08:53	
Chloromethane	ug/kg	<25.0	60.0	01/04/12 08:53	
cis-1,2-Dichloroethene	ug/kg	<25.0	60.0	01/04/12 08:53	
cis-1,3-Dichloropropene	ug/kg	<25.0	60.0	01/04/12 08:53	
Dibromochloromethane	ug/kg	<25.0	60.0	01/04/12 08:53	
Dibromomethane	ug/kg	<25.0	60.0	01/04/12 08:53	
Dichlorodifluoromethane	ug/kg	<25.0	60.0	01/04/12 08:53	
Diisopropyl ether	ug/kg	<25.0	60.0	01/04/12 08:53	
Ethylbenzene	ug/kg	<25.0	60.0	01/04/12 08:53	
Hexachloro-1,3-butadiene	ug/kg	<26.4	60.0	01/04/12 08:53	
Isopropylbenzene (Cumene)	ug/kg	<25.0	60.0	01/04/12 08:53	

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QUALITY CONTROL DATA

Project: 60184606 UP RAIL
Pace Project No.: 4055282

METHOD BLANK: 553230 Matrix: Solid

Associated Lab Samples: 4055282001, 4055282002, 4055282005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/kg	<50.0	120	01/04/12 08:53	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	01/04/12 08:53	
Methylene Chloride	ug/kg	<25.0	60.0	01/04/12 08:53	
n-Butylbenzene	ug/kg	<40.4	60.0	01/04/12 08:53	
n-Propylbenzene	ug/kg	<25.0	60.0	01/04/12 08:53	
Naphthalene	ug/kg	<25.0	60.0	01/04/12 08:53	
o-Xylene	ug/kg	<25.0	60.0	01/04/12 08:53	
p-Isopropyltoluene	ug/kg	<25.0	60.0	01/04/12 08:53	
sec-Butylbenzene	ug/kg	<25.0	60.0	01/04/12 08:53	
Styrene	ug/kg	<25.0	60.0	01/04/12 08:53	
tert-Butylbenzene	ug/kg	<25.0	60.0	01/04/12 08:53	
Tetrachloroethene	ug/kg	<25.0	60.0	01/04/12 08:53	
Toluene	ug/kg	<25.0	60.0	01/04/12 08:53	
trans-1,2-Dichloroethene	ug/kg	<25.0	60.0	01/04/12 08:53	
trans-1,3-Dichloropropene	ug/kg	<25.0	60.0	01/04/12 08:53	
Trichloroethene	ug/kg	<25.0	60.0	01/04/12 08:53	
Trichlorofluoromethane	ug/kg	<25.0	60.0	01/04/12 08:53	
Vinyl chloride	ug/kg	<25.0	60.0	01/04/12 08:53	
4-Bromofluorobenzene (S)	%.	87	40-139	01/04/12 08:53	
Dibromofluoromethane (S)	%.	86	57-149	01/04/12 08:53	
Toluene-d8 (S)	%.	93	55-152	01/04/12 08:53	

LABORATORY CONTROL SAMPLE & LCSD: 553231 553232

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2730	2560	109	103	70-130	6	20	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2030	2120	81	85	70-133	4	20	
1,1,2-Trichloroethane	ug/kg	2500	2450	2370	98	95	70-130	3	20	
1,1-Dichloroethane	ug/kg	2500	2270	2180	91	87	70-131	4	20	
1,1-Dichloroethene	ug/kg	2500	2400	2240	96	90	64-132	7	20	
1,2,4-Trichlorobenzene	ug/kg	2500	2370	2440	95	97	70-130	3	20	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2110	2180	85	87	50-150	3	20	
1,2-Dibromoethane (EDB)	ug/kg	2500	2510	2450	100	98	70-130	2	20	
1,2-Dichlorobenzene	ug/kg	2500	2390	2420	95	97	70-130	1	20	
1,2-Dichloroethane	ug/kg	2500	2510	2430	100	97	70-138	3	20	
1,2-Dichloropropane	ug/kg	2500	2310	2290	92	92	70-130	.7	20	
1,3-Dichlorobenzene	ug/kg	2500	2420	2380	97	95	70-130	2	20	
1,4-Dichlorobenzene	ug/kg	2500	2330	2250	93	90	70-130	3	20	
Benzene	ug/kg	2500	2170	2060	87	82	70-130	5	20	
Bromodichloromethane	ug/kg	2500	2380	2340	95	94	70-130	2	20	
Bromoform	ug/kg	2500	2230	2390	89	96	52-130	7	20	
Bromomethane	ug/kg	2500	2510	2380	101	95	52-179	6	20	
Carbon tetrachloride	ug/kg	2500	2550	2380	102	95	70-130	7	20	
Chlorobenzene	ug/kg	2500	2500	2440	100	97	70-130	3	20	
Chloroethane	ug/kg	2500	2560	2420	102	97	49-200	5	20	

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QUALITY CONTROL DATA

Project: 60184606 UP RAIL
Pace Project No.: 4055282

LABORATORY CONTROL SAMPLE & LCSD: 553231 553232

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Chloroform	ug/kg	2500	2410	2270	97	91	70-130	6	20	
Chloromethane	ug/kg	2500	2090	1980	84	79	58-130	6	20	
cis-1,2-Dichloroethene	ug/kg	2500	2270	2200	91	88	70-130	3	20	
cis-1,3-Dichloropropene	ug/kg	2500	2400	2340	96	94	64-130	3	20	
Dibromochloromethane	ug/kg	2500	2490	2500	100	100	66-130	2	20	
Dichlorodifluoromethane	ug/kg	2500	1950	1830	78	73	50-150	7	20	
Ethylbenzene	ug/kg	2500	2500	2410	100	96	70-130	4	20	
Isopropylbenzene (Cumene)	ug/kg	2500	2540	2480	101	99	70-130	2	20	
m&p-Xylene	ug/kg	5000	5080	4970	102	99	70-130	2	20	
Methyl-tert-butyl ether	ug/kg	2500	2370	2230	95	89	70-130	6	20	
Methylene Chloride	ug/kg	2500	2340	2270	94	91	70-135	3	20	
o-Xylene	ug/kg	2500	2490	2340	100	94	70-130	6	20	
Styrene	ug/kg	2500	2620	2500	105	100	70-130	5	20	
Tetrachloroethene	ug/kg	2500	2530	2450	101	98	70-130	3	20	
Toluene	ug/kg	2500	2410	2370	97	95	70-130	2	20	
trans-1,2-Dichloroethene	ug/kg	2500	2370	2150	95	86	67-130	10	20	
trans-1,3-Dichloropropene	ug/kg	2500	2420	2350	97	94	59-130	3	20	
Trichloroethene	ug/kg	2500	2490	2410	100	96	70-130	3	20	
Trichlorofluoromethane	ug/kg	2500	2500	2610	100	105	50-150	4	20	
Vinyl chloride	ug/kg	2500	2090	1950	84	78	55-130	7	20	
4-Bromofluorobenzene (S)	%.				95	91	40-139			
Dibromofluoromethane (S)	%.				103	95	57-149			
Toluene-d8 (S)	%.				97	93	55-152			

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QUALITY CONTROL DATA

Project: 60184606 UP RAIL
Pace Project No.: 4055282

QC Batch: OEXT/13623
QC Batch Method: EPA 3546
Analysis Method: EPA 8270 by SIM
Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 4055282003

METHOD BLANK: 557063
Matrix: Solid
Associated Lab Samples: 4055282003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.5	16.7	01/16/12 08:45	
2-Methylnaphthalene	ug/kg	<2.5	16.7	01/16/12 08:45	
Acenaphthene	ug/kg	<2.3	16.7	01/16/12 08:45	
Acenaphthylene	ug/kg	<2.7	16.7	01/16/12 08:45	
Anthracene	ug/kg	<3.9	16.7	01/16/12 08:45	
Benzo(a)anthracene	ug/kg	<2.4	16.7	01/16/12 08:45	
Benzo(a)pyrene	ug/kg	<2.7	16.7	01/16/12 08:45	
Benzo(b)fluoranthene	ug/kg	<2.9	16.7	01/16/12 08:45	
Benzo(g,h,i)perylene	ug/kg	<2.2	16.7	01/16/12 08:45	
Benzo(k)fluoranthene	ug/kg	<3.1	16.7	01/16/12 08:45	
Chrysene	ug/kg	<3.0	16.7	01/16/12 08:45	
Dibenz(a,h)anthracene	ug/kg	<4.5	16.7	01/16/12 08:45	
Fluoranthene	ug/kg	<8.3	16.7	01/16/12 08:45	
Fluorene	ug/kg	<4.1	16.7	01/16/12 08:45	
Indeno(1,2,3-cd)pyrene	ug/kg	<2.4	16.7	01/16/12 08:45	
Naphthalene	ug/kg	<2.9	16.7	01/16/12 08:45	
Phenanthrene	ug/kg	<3.7	16.7	01/16/12 08:45	
Pyrene	ug/kg	<3.1	16.7	01/16/12 08:45	
2-Fluorobiphenyl (S)	%.	76	43-130	01/16/12 08:45	
Terphenyl-d14 (S)	%.	89	32-130	01/16/12 08:45	

LABORATORY CONTROL SAMPLE: 557064

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	283	85	44-130	
2-Methylnaphthalene	ug/kg	333	281	84	45-130	
Acenaphthene	ug/kg	333	288	86	51-130	
Acenaphthylene	ug/kg	333	285	85	53-130	
Anthracene	ug/kg	333	317	95	48-130	
Benzo(a)anthracene	ug/kg	333	276	83	55-130	
Benzo(a)pyrene	ug/kg	333	296	89	56-130	
Benzo(b)fluoranthene	ug/kg	333	261	78	53-130	
Benzo(g,h,i)perylene	ug/kg	333	324	97	58-130	
Benzo(k)fluoranthene	ug/kg	333	323	97	55-130	
Chrysene	ug/kg	333	298	89	59-130	
Dibenz(a,h)anthracene	ug/kg	333	329	99	56-130	
Fluoranthene	ug/kg	333	294	88	56-130	
Fluorene	ug/kg	333	291	87	54-130	
Indeno(1,2,3-cd)pyrene	ug/kg	333	330	99	57-130	
Naphthalene	ug/kg	333	254	76	43-130	
Phenanthrene	ug/kg	333	300	90	56-130	

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QUALITY CONTROL DATA

Project: 60184606 UP RAIL
Pace Project No.: 4055282

LABORATORY CONTROL SAMPLE: 557064

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyrene	ug/kg	333	279	84	54-130	
2-Fluorobiphenyl (S)	%.			80	43-130	
Terphenyl-d14 (S)	%.			90	32-130	

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QUALITY CONTROL DATA

Project: 60184606 UP RAIL
Pace Project No.: 4055282

QC Batch: OEXT/13540
QC Batch Method: WI MOD DRO
Analysis Method: WI MOD DRO
Analysis Description: WIDRO GCS
Associated Lab Samples: 4055282003, 4055282004

METHOD BLANK: 552030 Matrix: Solid
Associated Lab Samples: 4055282003, 4055282004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<0.99	2.0	01/06/12 09:23	

LABORATORY CONTROL SAMPLE & LCSD: 552031 552032

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40	36.0	27.4	90	69	70-120	27	20	D6,L0

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QUALITY CONTROL DATA

Project: 60184606 UP RAIL
Pace Project No.: 4055282

QC Batch: PMST/6585
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 4055282001, 4055282002

SAMPLE DUPLICATE: 552021

Parameter	Units	4055272005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.2	6.1	1	10	

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QUALITY CONTROL DATA

Project: 60184606 UP RAIL
Pace Project No.: 4055282

QC Batch: PMST/6586
QC Batch Method: ASTM D2974-87
Associated Lab Samples: 4055282003, 4055282004

Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture

SAMPLE DUPLICATE: 552022

Parameter	Units	4055274001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.7	6.3	6	10	

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QUALIFIERS

Project: 60184606 UP RAIL
Pace Project No.: 4055282

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.

SG - Silica Gel - Clean-Up

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

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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LABORATORIES

PASI-G Pace Analytical Services - Green Bay

BATCH QUALIFIERS

Batch: MSV/13785

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSSV/4230

[IP] Benzo(b)fluoranthene and benzo(k)fluoranthene were separated in the check standard but did not meet the resolution criteria in SW846 8270C. Sample results included are reported as individual isomers, but the lab and the client must recognize them as an isomeric pair.

ANALYTE QUALIFIERS

1q	Sample was not collected in the appropriate container for WI DRO analysis. Amount extracted was sub-sampled from container received. Results reported and flagged accordingly.
2q	Sample was requested for analysis by client after method defined hold time for extraction had expired.
D6	The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
H2	Extraction or preparation was conducted outside of the recognized method holding time.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.
W	Non-detect results are reported on a wet weight basis.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60184606 UP RAIL
Pace Project No.: 4055282

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4055282003	17TH STREET SB-3 (1-2')	WI MOD DRO	OEXT/13540	WI MOD DRO	GCSV/7016
4055282004	17TH STREET SB-4 (2-3')	WI MOD DRO	OEXT/13540	WI MOD DRO	GCSV/7016
4055282003	17TH STREET SB-3 (1-2')	TPH GRO/PVOC WI ext.	GCV/7814	WI MOD GRO	GCV/7815
4055282004	17TH STREET SB-4 (2-3')	TPH GRO/PVOC WI ext.	GCV/7814	WI MOD GRO	GCV/7815
4055282003	17TH STREET SB-3 (1-2')	EPA 3050	MPRP/6445	EPA 6010	ICP/5480
4055282004	17TH STREET SB-4 (2-3')	EPA 3050	MPRP/6445	EPA 6010	ICP/5480
4055282003	17TH STREET SB-3 (1-2')	EPA 3546	OEXT/13623	EPA 8270 by SIM	MSSV/4230
4055282001	IMOGENE'S SB-1 (1-2')	EPA 5035/5030B	MSV/13783	EPA 8260	MSV/13785
4055282002	IMOGENE'S SB-2 (1-2')	EPA 5035/5030B	MSV/13783	EPA 8260	MSV/13785
4055282005	TRIP BLANK	EPA 5035/5030B	MSV/13783	EPA 8260	MSV/13785
4055282001	IMOGENE'S SB-1 (1-2')	ASTM D2974-87	PMST/6585		
4055282002	IMOGENE'S SB-2 (1-2')	ASTM D2974-87	PMST/6585		
4055282003	17TH STREET SB-3 (1-2')	ASTM D2974-87	PMST/6586		
4055282004	17TH STREET SB-4 (2-3')	ASTM D2974-87	PMST/6586		

Pace Analytical®
www.pacelabs.com

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

Page 1 of 1

CHAIN OF CUSTODY

JBF

4055282

(Please Print Clearly)	
Company Name:	AECOM
Branch/Location:	Sheboygan
Project Contact:	Jeff Maletzke
Phone:	920 451 2541
Project Number:	60184606
Project Name:	UP Rail
Project State:	WI
Sampled By (Print):	Heathee Cleveland
Sampled By (Sign):	
PO #:	Regulatory Program:

*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:	Jeff Maletzke
Mail To Company:	AECOM
Mail To Address:	4135 Technology Parkway Sheboygan, WI 53083
Invoice To Contact:	Jeff Maletzke
Invoice To Company:	AECOM
Invoice To Address:	Same as above
Invoice To Phone:	920 451 2541

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, SI = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	Analyses Requested: DRO	GRO	PVOC	PAH	Lead	VOC
					Y/N	Pick Letter	N A	N F	N F	N A	N A	N F
001	Imogene's SB-1 (0-2')	12/27	1235	S								X
002	Imogene's SB-2 (1-2')	12/27	1245	S								X
003	17th Street SB-3 (1-2')	12/27	1305	S			X	X	X	X	X	
004	17th Street SB-4 (1-2')	12/27	1345	S			X	X			X	
005	Trip Blank	12/27	1350	S								X

CLIENT COMMENTS

only analyze for PAHs if the DRO 100ppm

PVOC GRO in same container dry weight (MC) in Lead sample

LAB COMMENTS (Lab Use Only)

1-40zpA → 1-40zgA 1-40zgA 1-40mF

Profile #

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:
	12/27/11		
	12-27-11 5:55		12/27/11 1755

PACE Project No.: 4055282

Receipt Temp = 8.7 °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

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

Pace Analytical

Sample Condition Upon Receipt

Client Name: AECOM Project # 4055282

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☑ yes ☐ no 12/28 Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☑ no

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

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

Cooler Temperature ROI Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

Person examining contents:
Date: 12/28/11
Initials: KM

		Comments:
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.
-includes date/time/ID/Analysis Matrix: 6		
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 / 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: _____

Project Manager Review: LL **Date:** 12/28/11

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)