

Former Cullen's Union 76
STH 23 – County Shop Road to Minerva Street
City of Darlington, Lafayette County, Wisconsin



Phase 2.5 Environmental Sampling Investigation
WisDOT Project ID No. 5245-02-02
WNDR BRRS No. 03-33-000638

December 2016

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Phase 2.5 Environmental Sampling Investigation

**Former Cullen's Union 76
103 Galena Street
City of Darlington, Lafayette County, Wisconsin
STH 23 – County Shop Road to Minerva Street**

WisDOT Project No. 5245-02-02
WDNR BRRS No. 03-33-000638



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December 22, 2016
Date



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Acronyms and Abbreviations

bgs	below ground surface
DATCP	Wisconsin Department of Agriculture, Trade, and Consumer Protection
DRO	diesel range organics
EPA	U.S. Environmental Protection Agency
ES	enforcement standards
GPS	Global Positioning System
GRO	gasoline range organics
IDW	Investigation Derived Wastes
LUST	leaking underground storage tank
NR 720	Wisconsin Administrative Code, Chapter NR 720
Pace	Pace Analytical Services, Inc.
PAL	preventive action limits
Phase 1	Phase 1 Hazardous Materials Assessment
Phase 2.5	Phase 2.5 Environmental Sampling Investigation
PID	Photoionization detector
RCL	NR 720 Residual Contaminant Level
ROW	right of way
STH	State Highway
TLE	Temporary Limited Easement
UST	underground storage tank
VES	Veolia Environmental Services
VOC	volatile organic compounds
WAC	Wisconsin Administrative Code
WDNR	Wisconsin Department of Natural Resources
WisDOT	Wisconsin Department of Transportation

1.0 Executive Summary

This report summarizes the results of a Phase 2.5 Environmental Sampling Investigation (Phase 2.5) conducted at the Former Cullen's Union 76 (Site No. 1), located at 103 Galena Street, City of Darlington, Lafayette County, Wisconsin. The Former Cullen's Union 76 is a closed leaking underground storage tank (LUST) site, closed Spill and is registered with Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) as having seven underground storage tanks that have all been removed between 1988 and 1993. The types of petroleum products contained in the underground storage tanks (USTs) were leaded gasoline, unleaded gasoline, fuel oil and waste/used motor oil. The purpose of the Phase 2.5 was to investigate for the presence and extent of petroleum hydrocarbon contamination within the planned construction limits adjacent to the Former Cullen's Union 76 site.

On July 8, 2016 three direct push soil borings (DP1-1 through DP1-3) were advanced within the existing STH 23 right-of-way (ROW), proposed fee and temporary lease easement (TLE) area adjacent to the Former Cullen's Union 76 site. The borings were advanced to approximately 10 feet below ground surface (bgs). Up to two soil samples were collected from each boring for volatile organic compounds (VOCs) and lead analysis and one groundwater sample was collected directly from each boring for VOCs analysis. Field and analytical results of the soil and groundwater samples collected during the Phase 2.5 indicated the following:

- The metal detector survey did not identify any potential USTs or associated within the current ROW, proposed fee and TLE areas.
- PID readings of soil cuttings appear to represent background levels of volatile organic compounds.
- VOCs were reported as below the limit of detection in all soil samples and are not anticipated to be present within construction limits at concentrations exceeding Wisconsin Administrative Code, Chapter NR 720 RCLs.
- Lead in soil was detected at a concentration exceeding the Wisconsin Administrative Code, Chapter NR 720 soil to groundwater pathway RCL of 27 mg/kg at the location of DP1-3 (2.0 to 3.0 feet bgs), which is anticipated to be within construction limits.
- Groundwater was encountered within approximately 6 feet of the ground surface.
- VOCs in groundwater were detected at concentrations exceeding Wisconsin Administrative Code, Chapter NR 140 PAL for naphthalene in the groundwater sample collected from DP1-2 and DP1-3. Other low level petroleum compounds were also detected below NR 140 PALs in DP1-2.

Based on the Phase 2.5 results, a notice to contractor in the contract special provisions is warranted for the Former Cullen's Union 76 site.

2.0 Investigation

2.1 Project Background

The Wisconsin Department of Transportation (WisDOT) is developing plans for improvements to State Highway (STH) 23 from County Shop Road to Minerva Street in the City of Darlington, Lafayette County.

Significant project dates include:

- Real Estate Acquisition: July 2017
- PS&E: May, 2019
- Construction: 2020 or 2021

The proposed improvements along the 1.5 mile-long, urban corridor consist of reconstructing STH 23 from County Shop Road to Minerva Street on current alignment with some intersection improvements to accommodate truck turning movements, and other improvements to meet current standards. Numerous areas of ROW acquisition in fee and TLE or grading are anticipated for this project.

Under the proposed improvements, the current estimate for maximum depths of excavation is anticipated to be 3 feet below the proposed final roadway surface elevation for the pavement and 5 to 10 feet below the final roadway surface elevation for water and sewer lines.

JT Engineering, Inc., performed a Phase 1 Hazardous Materials Assessment (Phase 1) for the project and documented their findings in a Phase 1 report, dated March 2016. Based on the Phase 1 results, WisDOT requested a Phase 2.5 investigation at The Former Cullen's Union 76. According to the Phase 1 report, the Former Cullen's Union 76 is a closed leaking underground storage tank (LUST) site and is registered with DATCP as having seven underground storage tanks that have been removed between 1988 and 1993. The types of petroleum products contained in the USTs were leaded gasoline, unleaded gasoline, fuel oil and waste/used motor oil. At present, there is no visible evidence of the former gas station, pump island or USTs on the site. The site is generally pavement and grass covered and the LUST was closed in 1999.

Based on previous site investigations of nearby sites and the proximity of the Pecatonica River, depth to groundwater was estimated to be less than 10 feet below ground surface (bgs).

2.2 Purpose and Scope

The purpose of the Phase 2.5 was to investigate for the presence and extent of petroleum hydrocarbon contamination within existing ROW and proposed Fee and TLE areas at the Former Cullen's Union 76 site.

The Phase 2.5 scope of work included:

- A metal detector survey for potential abandoned USTs and associated piping between the edge of STH 23 pavement to the TLE limit on the east side of STH 23.
- Advancement of three direct-push soil borings within the project limits adjacent to the site to a maximum depth of 10 feet bgs.
- Visual classification of the soil samples obtained from borings and field screening of samples for volatile organic vapors using a photoionization detector (PID).
- Collection of up to two soil samples per boring from the direct contact zone (uppermost 4 feet), interval having the highest PID reading, visible staining, or bottom of the boring. Submittal of the soil samples to a laboratory for VOCs and lead analysis.

- Collection of one representative soil sample from soil cuttings for waste characterization. Submittal of the representative soil sample to the laboratory for Protocol T1 analysis.
- Collection of one groundwater sample directly from each soil boring where groundwater was encountered for laboratory analysis. Groundwater samples were laboratory analyzed for VOCs.
- Borehole closure in accordance with the requirements of Wisconsin Administrative Code (WAC), Chapter NR 141.
- Taking photographs of the soil boring locations and measurement of the locations from site features for use in preparing a site map.
- Collection of global positioning system (GPS) coordinates from the approximate center of the investigation area.
- Investigation derived waste (IDW) (soil cuttings) generated at the site were containerized and placed in a temporary storage area.
- Contacted Veolia Environmental Services (VES) to coordinate IDW pickup and disposal.
- Preparation of this report summarizing results of the Phase 2.5.

2.3 Site Information

General site information includes:

Location:	Southwest 1/4 of the Northeast 1/4, Section 3, Township 2 North, Range 3 east (see Figure 1)
Address:	103 Galena Street, City of Darlington, Wisconsin
County:	Lafayette
Stationing:	approximately STA 48NB+00 to 50NB+00, Right
GPS Coordinates:	Latitude 42.676820, Longitude -90.118107
WTM Coordinates:	X 510,323, Y 244,934

2.4 Description of Field Investigation

On July 8, 2016, three direct-push soil borings (DP1-1 through DP1-3) were advanced along the east side of the STH 23 fee and TLE area adjacent to the Former Cullen's Union 76 site. Soil boring depths were set based on anticipated excavated depths during construction. The borings were advanced using a truck-mounted hydraulic direct-push drilling rig operated by Soils & Engineering Services, Inc. Madison, Wisconsin. The locations of the borings are shown in Figure 2. Photographs are presented in Appendix A. Bentley gINT® boring logs (Wisconsin Department of Natural Resources (WDNR) Form 4400-122) are provided in Appendix B.

Soil samples were collected continuously from the direct-push sampler 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.

Up to two soil samples were collected from each boring for laboratory analysis by Pace Analytical Services, Inc. (Pace). The samples submitted for laboratory analysis were collected from the direct contact zone (uppermost 4 feet), highest PID reading, visible staining or bottom of boring and were analyzed for VOCs and lead. Soil sampling procedures are discussed in Appendix D.

One groundwater sample was collected from each soil probe boring where groundwater was encountered and analyzed for VOCs. Groundwater sampling procedures are discussed in Appendix D.

After sampling, the borings were abandoned with bentonite in general accordance with the requirements of WAC, Chapter NR 141. Abandonment forms (WDNR Form 3300-005) are presented in Appendix E.

Soil cuttings generated during borehole advancement were containerized in a 5-gallon plastic bucket with lid, identified with appropriate WisDOT label, and temporarily stored within the City of Darlington Municipal Building, located at 101-149 Spring Street. A non-hazardous IDW pickup request was emailed to VES with supporting documentation on July 25, 2016. Waste disposal request documentation is presented in Appendix F.

2.5 Subsurface Conditions

Subsurface soils encountered generally included silty sand and silty clay with interbedded siltstone/sandstone to the borings termination depths. The ground surface at the boring locations was grass covered.

Field screening results did not indicate the presence of volatile organic vapor in soil borings DP1-1 through DP1-3.

Based on United States Geological Survey geological mapping, it appears that native soils in the area of the Former Cullen's Union 76 site consists of stratified lake deposits of clay, silt and sand, underlain by undifferentiated dolomite and limestone of the Galena, Decorah and Platteville formations.

Groundwater was encountered within approximately 6 feet of the ground surface during borehole advancement. Regional groundwater flow direction in the project area is generally expected to the south and southwest. Local groundwater flow is generally in the direction of the Pecatonica River. The regional topography of the project area was generally hilly terrain, sloping downward toward the southwest.

The metal detector survey did not indicate the presence of UST's.

2.6 Analytical Parameters and Results

Analytical parameters were selected in general accordance with WisDOT and WDNR guidance for investigations of LUST. Soil and groundwater samples submitted to Pace were analyzed for VOCs and lead (soil). Analytical results for soil samples were compared against the WAC, NR 720 non-industrial direct contact and groundwater pathway residual contamination levels (RCLs), updated June 2016. Analytical results for groundwater samples were compared against the WAC, NR 140 enforcement standards (ES) and preventive action limits (PAL), updated July 2015. Standard analytical procedures are discussed in Appendix G. Analytical results for soil and groundwater are summarized in Tables 1 and 2, respectively. The laboratory report and sample chain of custody form is included in Appendix H.

One representative soil sample was collected from soil cuttings generated during borehole advancement for the purpose of waste characterization. The representative soil sample was submitted to Pace for Protocol T1 analysis (free liquids, flash point, lead (total), benzene (total), diesel range organics (DRO) and gasoline range organics (GRO)).

2.6.1 Soil

VOCs were reported as below the limit of detection in all soil samples collected from the Former Cullen's Union 76 site.

Lead was reported at a concentration of 51.5 mg/kg in soil collected from boring DP1-3 (2.0 to 3.0 feet bgs) which exceeds the NR 720 soil to groundwater pathway RCL of 27 mg/kg.

Lead was reported at a concentration of 35.3 mg/kg in the representative soil sample collected for waste characterization which exceeds the NR 720 soil to groundwater pathway RCL of 27 mg/kg. DRO was also reported at a concentration of 1.1J mg/kg, however there are currently no NR 720 RCLs established for DRO.

2.6.2 Groundwater

VOCs in groundwater were reported as exceeding the NR 140 PAL for naphthalene in DP1-2. N-butylbenzene, tert-butylbenzene, ethylbenzene, isopropylbenzene, p-isopropylbenzene, n-propylbenzene, trimethylbenzenes (combined) and xylenes (combined) were also detected, but at concentrations below the NR 140 PALs. Chloromethane was detected in each sample, however is suspected to be associated with a source other than the closed LUST site.

2.7 Conclusions and Recommendation

Field and analytical results of the soil and groundwater samples collected during the Phase 2.5 indicated the following:

- The metal detector survey did not identify any potential USTs or associated within the current ROW, proposed fee and TLE areas.
- PID readings of soil cuttings appear to represent background levels of volatile organic compounds.
- VOCs were reported as below the limit of detection in all soil samples and are not anticipated to be present within construction limits at concentrations exceeding Wisconsin Administrative Code, Chapter NR 720 RCLs.
- Lead in soil was detected at a concentration exceeding the Wisconsin Administrative Code, Chapter NR 720 soil to groundwater pathway RCL of 27 mg/kg at the location of DP1-3 (2.0 to 3.0 feet bgs), which is anticipated to be within construction limits.
- Groundwater was encountered within approximately 6 feet of the ground surface.
- VOCs in groundwater were detected at concentrations exceeding Wisconsin Administrative Code, Chapter NR 140 PAL for naphthalene in the groundwater sample collected from DP1-2 and DP1-3. Other low level petroleum compounds were also detected below NR 140 PALs in DP1-2.

Based on the Phase 2.5 results, a notice to contractor in the contract special provisions is warranted for the Former Cullen's Union 76 site.

3.0 Limitations

AECOM's scope of services was limited to conducting a Phase 2.5 within, planned fee acquisition and TLE adjacent to the Former Cullen's Union 76 site.

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 WisDOT and are applicable only to this Phase 2.5. AECOM has no obligations to other persons or organizations that may use or rely upon this information.

4.0 References

JT Engineering, Inc., Phase 1 Hazardous Materials Assessment Report, STH 23, County Shop Road to Minerva Street, City of Darlington, Lafayette County, Wisconsin, March 29, 2016.

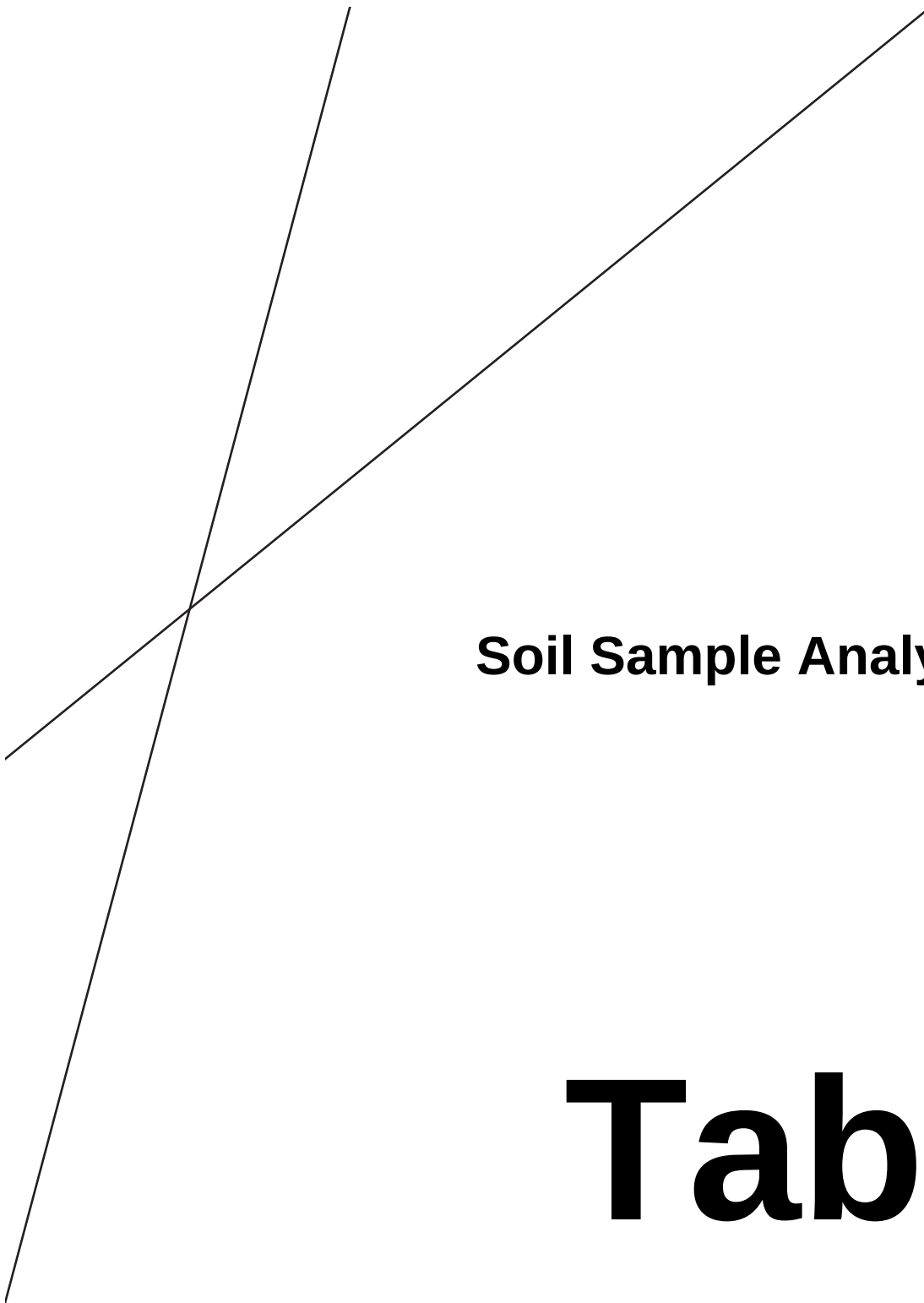
U.S. Geological Survey. 1972. Darlington, Wis., 7.5'-Minute Quadrangle.

S.M. Hindall and E.L. Skinner, Water Resources of Wisconsin – Pecatonica-Sugar River Basin Hydrologic Investigations, Atlas HA-453, 1973.

Wisconsin Administrative Code, Chapter NR 720, Soil Cleanup Standards, Register, November 2013, No. 695.

Wisconsin Administrative Code, Chapter NR 140, Groundwater Quality, Register, July 2015, No. 715

Wisconsin Department of Natural Resources Remediation and Redevelopment Program, RCL spreadsheet, Updated June 2016.



Soil Sample Analytical Results

Table 1

Table 1

Phase 2.5 Soil Sample Analytical Results
Former Cullen's Union 76
103 Galena Street, City of Darlington, Lafayette County, Wisconsin

AECOM Project No. 60492955
WisDOT Project No. 5245-02-02

Soil Boring/Sample ID: Sample Depth (feet): PID Readings (i.u): Sample Date:			DP1-1	DP1-2	DP1-3	DP1-3	WC
			1-2'	2-4'	2-3'	8-9'	-
			6.7	1.5	2.3	-	-
			7/8/2016	7/8/2016	7/8/2016	7/8/2016	7/8/2016
Analyte	Non-Industrial D-C RCL	RCL-gw	Results				
VOCs (µg/kg)							
Benzene	1,490	5.1	<25.0	<25.0	<25.0	<25.0	<25.0
Ethylbenzene	7,470	1,570	<25.0	<25.0	<25.0	<25.0	-
Methyl-tert-butyl ether	59,400	27	<25.0	<25.0	<25.0	<25.0	-
Naphthalene	5,150	658.2	<40.0	<40.0	<40.0	<40.0	-
Toluene	818,000	1,107.2	<25.0	<25.0	<25.0	<25.0	-
1,2,4-Trimethylbenzene	89,800	1,382.1 (combined)	<50.0	<50.0	<50.0	<50.0	-
1,3,5-Trimethylbenzene	182,000						
m&p-Xylene	778,000	3,960 (combined)	<75.0	<75.0	<75.0	<75.0	-
o-Xylene	434,000						
Metals (mg/kg)							
Lead (total)	400	27.0	1.2J	1.2J	51.5	-	35.3
Waste Characterization							
DRO (mg/kg)	NE	NE	-	-	-	-	1.1J
GRO (mg/kg)	NE	NE	-	-	-	-	<3.1
Flashpoint (°F)	NE	NE	-	-	-	-	>210
Paint Filter	NE	NE	-	-	-	-	PASS

Notes:

Only results for detected analytes are provided in this table, all other analytes were below the limit of detection.

Non-Industrial D-C RCL refers to the Not-To-Exceed, non-industrial Direct-Contact Residual Contaminant Levels taken from the WDNR's RCLs spreadsheet, updated June 2016.

RCL-gw refers to the Soil-to-Groundwater Residual Contaminant Level, DF = 2, taken from the WDNR's RCLs spreadsheet, updated June 2016.

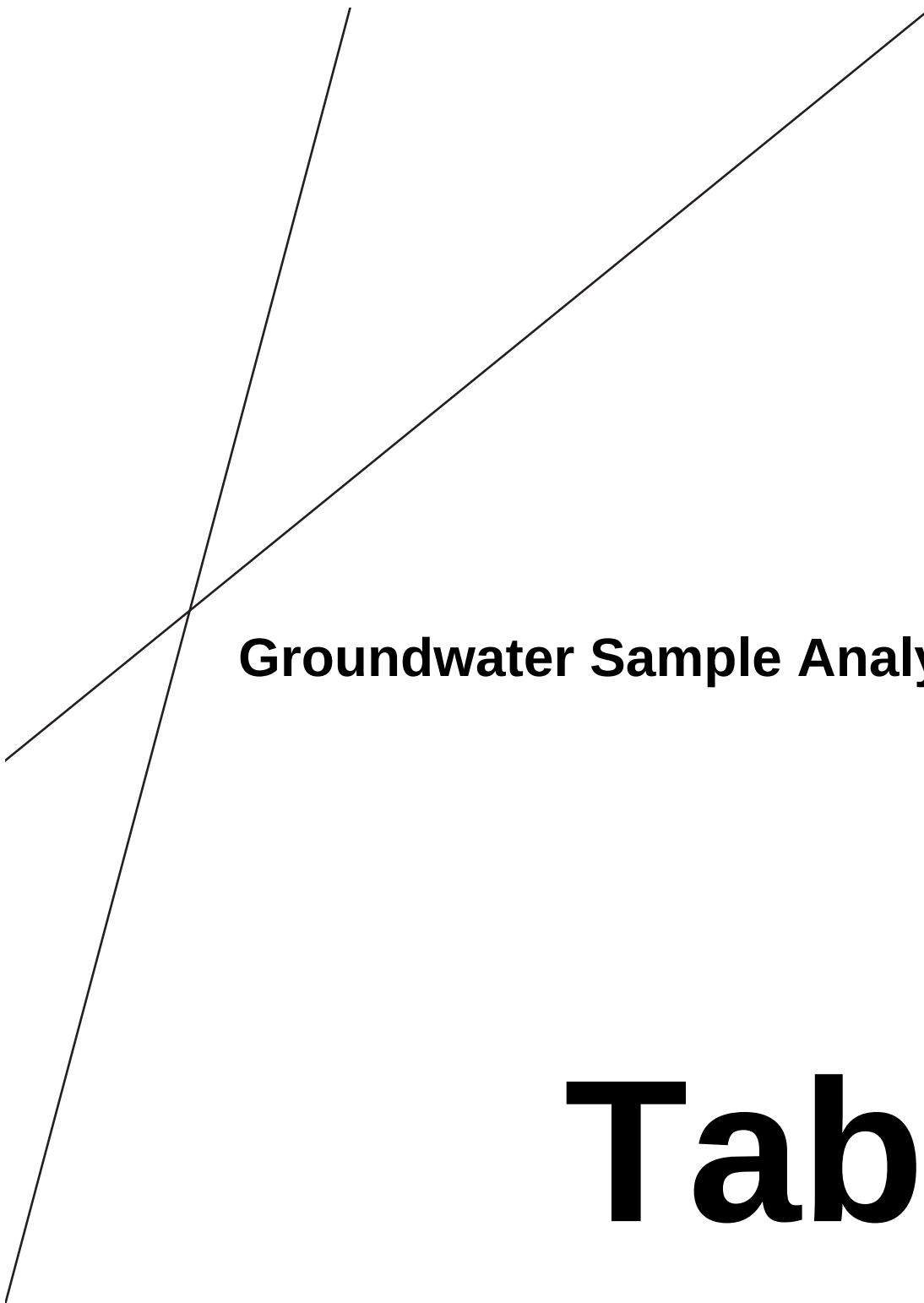
Bold result indicates RCL exceedence (RCL-gw).

Bold data and cell border indicates RCL exceedence (D-C RCL).

NE: Not Established

WC: Waste Characterization sample (Protocol T1).

J: Estimated concentration at or above the LOA and below the LOQ



Groundwater Sample Analytical Results

Table 2

Table 2

Phase 2.5 Groundwater Sample Analytical Results
Former Cullen's Union 76
103 Galena Street, City of Darlington, Lafayette County, Wisconsin

AECOM Project No. 60492955
WisDOT Project No. 5245-02-02

Soil Boring/Sample ID: Depth (feet): Sample Date:			DP1-1	DP1-2	DP1-3
			6	6.5	5
			7/8/2016	7/8/2016	7/8/2016
Analyte	NR 140 ES	NR 140 PAL	Results		
VOCs (µg/l)					
Benzene	5	0.5	<0.5	<1.0	<0.5
n-Butylbenzene	-	-	0.58J	10	<0.5
tert-Butylbenzene	-	-	<0.18	0.4J	<0.18
Chloromethane	30	3	2	3.1	6.4
Ethylbenzene	700	140	<0.5	10.8	<0.5
Isopropylbenzene	-	-	<0.14	10.7	<0.14
p-Isopropyltoluene	-	-	<0.50	2.8	<0.5
Methyl tert-butyl ether	60	12	<0.17	<0.35	<0.17
Naphthalene	100	10	<2.5	12.4	<2.5
n-Propylbenzene	-	-	<0.50	36.3	<0.5
Toluene	800	160	<0.5	<1.0	<0.5
1,2,4-Trimethylbenzene	480	96	<0.5	66.7	<0.5
1,3,5-Trimethylbenzene	480	96	<0.5	35.8	<0.5
Xylenes (total)	2000	400	<1.5	13.4	<1.5

Notes:

ES: Enforcement Standard listed in Ch. NR140, WAC, July 2015.

PAL: Preventive Action Limit listed in Ch. NR140, WAC, July 2015.

Bold data indicates PAL exceedence.

Bold data and cell border indicates ES exceedence.

J: Estimated concentration at or above the LOD and below the LOQ.

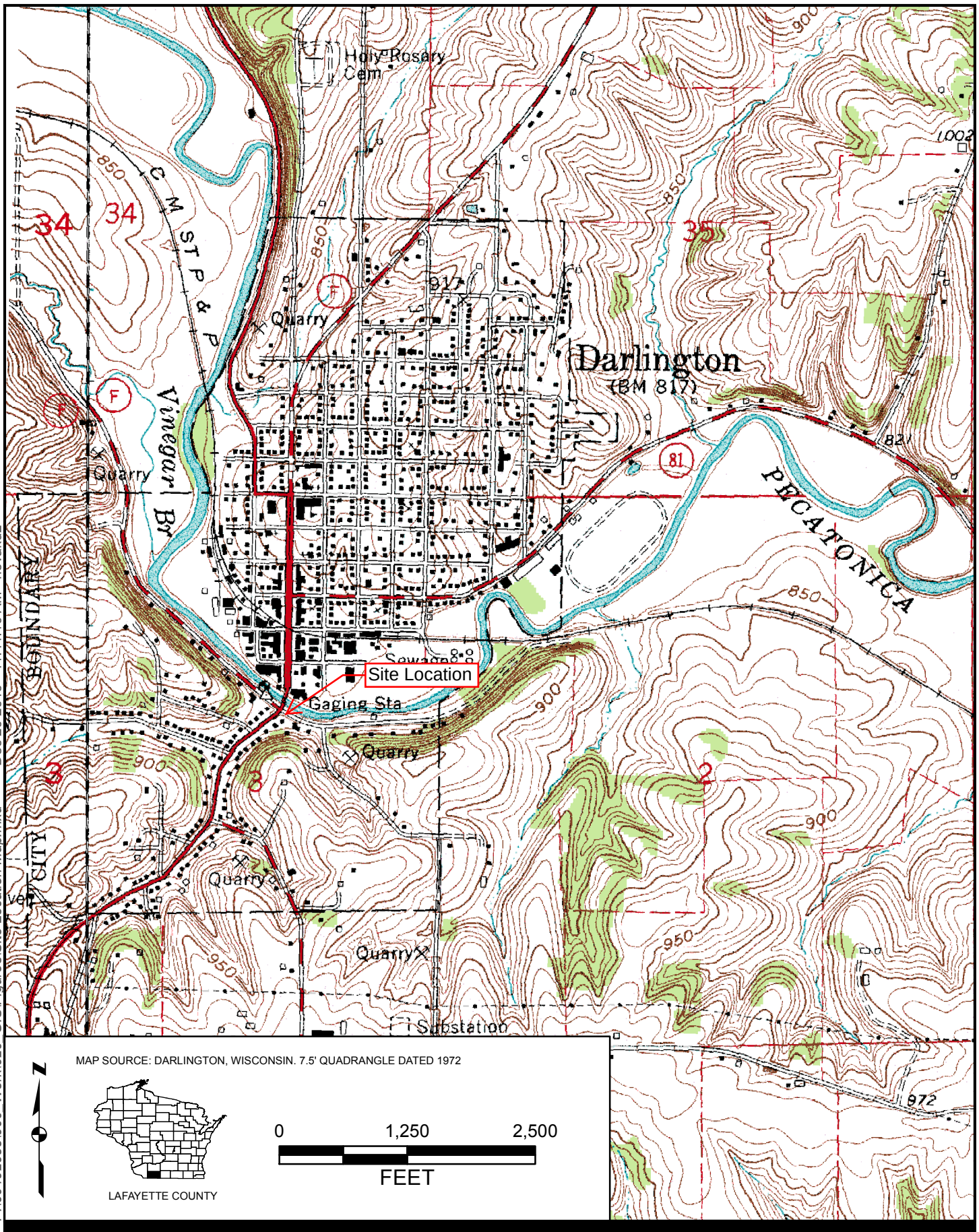
Chloromethane is suspected to be from a source other than the closed LUST site.



Site Location Map

Figure 1

P:\60492955\1900_Work\1920_GIS\Figures\Site Location Map.mxd Dec 20 2016 - 11:44:10 AM novakd2



December 16, 2016
AECOM Project No.: 60492955
WisDOT Project No.: 5245-02-02

Site Location Map
Former Cullen's Union 76
103 Galena Street, Darlington, WI
WDNR BRRTS No. 03-33-000638

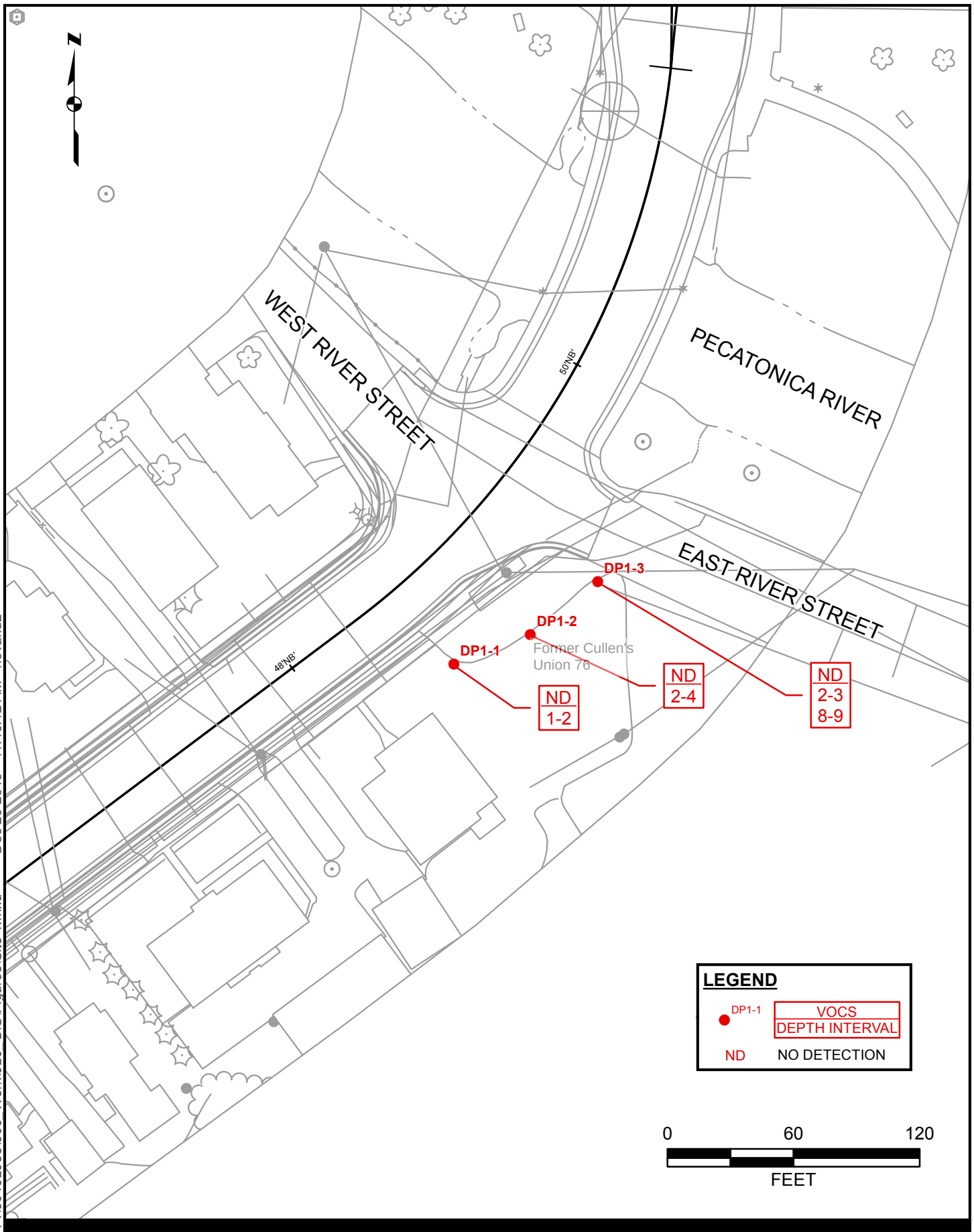
AECOM
Figure: 1



Site Plan – Boring Locations

Figure 2

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December 16, 2016
AECOM Project No.: 60492955
WisDOT Project No.: 5245-02-02

Site Plan
Former Cullen's Union 76
103 Galena Street, Darlington, WI
WDNR BRTS No. 03-33-000638

AECOM
Figure: 2



Photograph Log

Appendix A

PHOTOGRAPHIC LOG

Client Name: Wisconsin Department of Transportation		Site Location: Former Cullen's Union 76 103 Galena Street, City of Darlington, Lafayette County, WI.	Project No. 60492955
Photo No. 1	Date: 07/08/16		
Direction Photo Taken: South			
Description: View of indicated borings located at 103 Galena Street (Site No. 1).			

Photo No. 2	Date: 07/08/16		
Direction Photo Taken: North			
Description: View of indicated borings located at 103 Galena Street (Site No. 1).			



Soil Boring Logs

Appendix B

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

Page 1 of 1

Facility/Project Name Site 1 - Former Cullen's Union 76			License/Permit/Monitoring Number		Boring Number DP1-1	
Boring Drilled By: Name of crew chief (first, last) and Firm Scott Klumb SES			Date Drilling Started 7/8/2016		Date Drilling Completed 7/8/2016	
Drilling Method split spoon						
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level 6.0 Feet MSL	Surface Elevation Feet MSL	Borehole Diameter 2.0 inches	
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane N, E S/C/N			Lat ° ' " Long ° ' "		Local Grid Location ☐ N ☐ E ☐ S ☐ W	
SW 1/4 of NE 1/4 of Section 3, T 2 N, R 3 E						
Facility ID		County Lafayette	County Code 33	Civil Town/City/ or Village Town of Darlington		

Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
	24 12		1	3" Topsoil										No odor
			2	Light tan / white, silty sand with interbedded siltstone / sandstone				6.7						
	24 10		3					1.6						
			4											
	24 5		5		SM			1.5						No odor
			6	Saturated										
			7											
			8											
			9		Gray / tan, fine to very coarse sub-angular sand / sandstone	SM								No odor
			10		End of Boring									

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

Signature 	Firm AECOM 200 Indiana Avenue, Stevens Point, WI 54481
--	---

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.

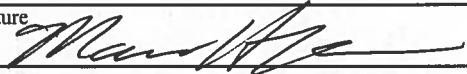
Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Page 1 of 1

Facility/Project Name Site 1 - Former Cullen's Union 76			License/Permit/Monitoring Number		Boring Number DP1-2	
Boring Drilled By: Name of crew chief (first, last) and Firm Scott Klumb SES			Date Drilling Started 7/8/2016		Date Drilling Completed 7/8/2016	
					Drilling Method split spoon	
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level 6.5 Feet MSL		Surface Elevation Feet MSL	
					Borehole Diameter 2.0 inches	
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐			Lat		Local Grid Location	
State Plane N, E S/C/N			Long		☐ N ☐ E	
SW 1/4 of NE 1/4 of Section 3, T 2 N, R 3 E					Feet ☐ S Feet ☐ W	
Facility ID		County Lafayette	County Code 33	Civil Town/City/ or Village Town of Darlington		

Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
24 15			1	3" Topsoil				1.5						No odor
			4" Silty sandstone / siltstone	SM										
24 10			2	Dark brown / brown, clay with asphalt and wood	SM			1.5						No odor
			Dark brown, smooth, very soft to soft, silty clay	CL										
24 20			4	Black, smooth, silty clay with organics (former riverbed)				1.2						No odor
24 24			7	Saturated	CL			1.1						No odor
			10	End of Boring										

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

Signature 	Firm AECOM 200 Indiana Avenue, Stevens Point, WI 54481
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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.

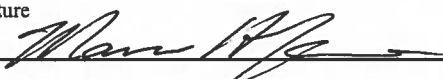
Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Page 1 of 1

Facility/Project Name Site 1 - Former Cullen's Union 76			License/Permit/Monitoring Number		Boring Number DP1-3	
Boring Drilled By: Name of crew chief (first, last) and Firm Scott Klumb SES			Date Drilling Started 7/8/2016		Date Drilling Completed 7/8/2016	
Drilling Method split spoon						
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level 5.0 Feet MSL	Surface Elevation Feet MSL	Borehole Diameter 2.0 inches	
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐			Local Grid Location			
State Plane N, E S/C/N			Lat ☐ N ☐ E			
SW 1/4 of NE 1/4 of Section 3, T 2 N, R 3 E			Long ☐ S ☐ W			
Facility ID		County Lafayette	County Code 33	Civil Town/City/ or Village Town of Darlington		

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
24 15			1	7" Topsoil										No odor
			2	Tan / light brown, very fine to coarse sand with abundant gravel				0.6						
24 10			3					2.3						No odor
			4					2.4						
24 3			5	Saturated	GM									No odor
			6											
			7											
			8											
			9											
			10	End of Boring										

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

Signature 	Firm AECOM 200 Indiana Avenue, Stevens Point, WI 54481
--	---

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.

An abstract graphic consisting of two thin, dark lines that intersect. One line is oriented diagonally from the top-left towards the bottom-right, while the other is more horizontal, sloping upwards from left to right. They cross each other in the upper-left quadrant of the page.

Soil Gas Monitoring

Appendix C

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 and after sampling was conducted.

Soil gas readings for specified depth intervals were obtained using the headspace method. Soil samples were placed in plastic Ziploc 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.



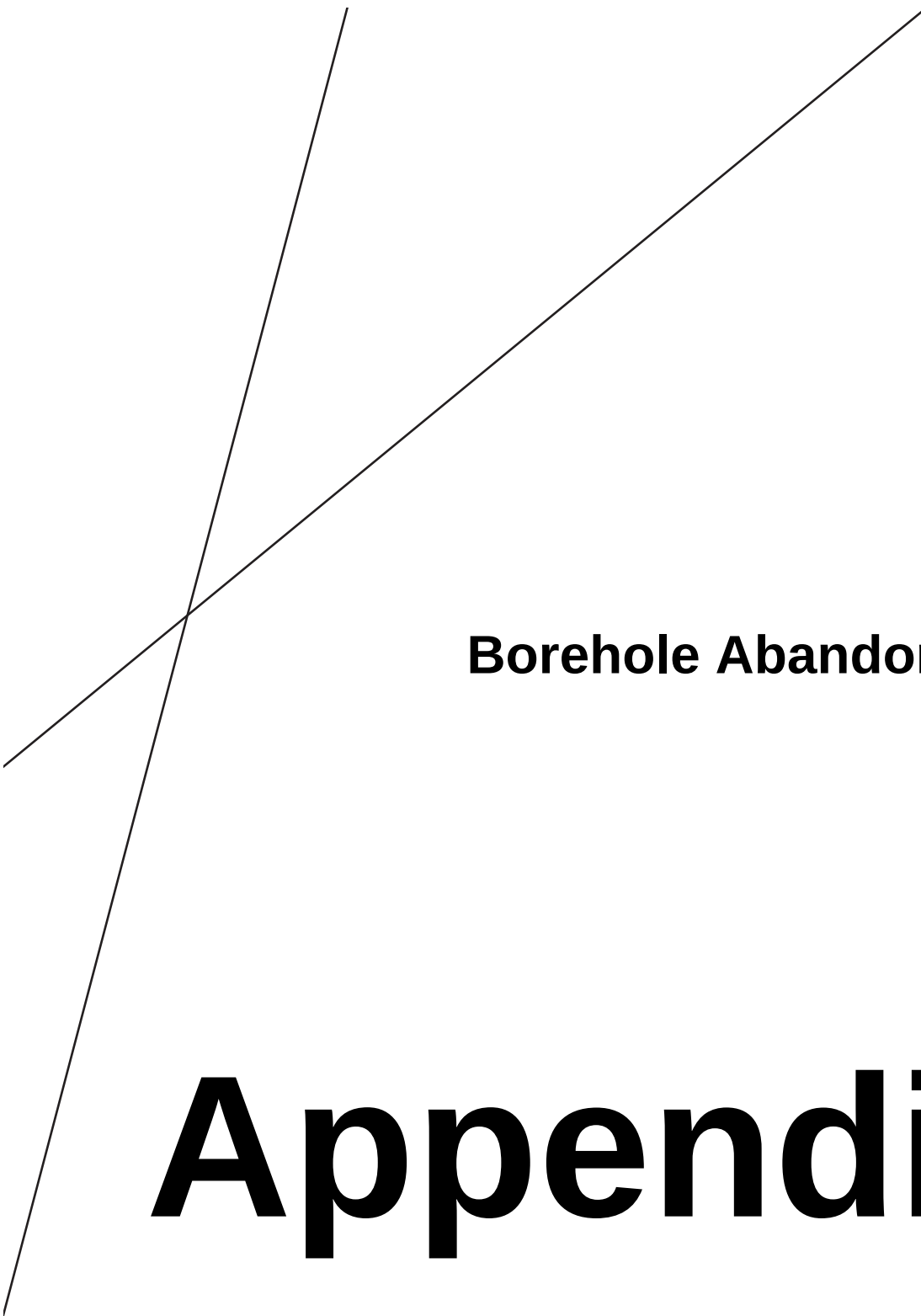
Standard Sampling Procedures

Appendix D

Standard Sampling Procedures

Soil samples were collected continuously from the soil probe using 2-inch diameter samplers with disposable plastic liners. Samples collected for laboratory analysis were removed from the liners and placed directly into laboratory-supplied glass jars using new protective gloves. Protective gloves were disposed after collecting each sample. The liners were replaced between samples. Soil samples were preserved according to WDNR and U.S. Environmental Protection Agency (EPA) protocol.

Groundwater samples were collected from the soil probe borings/temporary monitoring wells using a stainless steel bailer. Samples were placed into laboratory-supplied containers and preserved in accordance with EPA and WDNR protocol. The stainless steel bailer was decontaminated prior to the collection of each sample with and alconox/water mix and distilled water.



Borehole Abandonment Forms

Appendix E

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: _____

1. Well Location Information				2. Facility / Owner Information			
County <u>Lafayette</u>		WI Unique Well # of Removed Well _____		Hicap # _____		Facility Name <u>Site 1 - Former Culler's Union 76</u>	
Latitude / Longitude (Degrees and Minutes) ____' ____' ____" N ____' ____' ____" W		Method Code (see instructions) _____		Facility ID (FID or PWS) <u>DP1-1</u>		License/Permit/Monitoring # _____	
1/4 SW 1/4 NE Section or Gov't Lot # <u>3</u>		Township <u>2 N</u>		Range <u>3 E</u>		Original Well Owner <u>WisDOT</u>	
Well Street Address <u>103 Galena Street</u>		Well ZIP Code <u>53630</u>		Present Well Owner <u>WisDOT</u>		Mailing Address of Present Owner <u>4802 Sheboygan Ave</u>	
Well City, Village or Town <u>City of Davington</u>		Subdivision Name _____		City of Present Owner <u>Madison</u>		State <u>WI</u>	
Lot # _____		ZIP Code <u>53707</u>					

Reason For Removal From Service Sampling Complete

WI Unique Well # of Replacement Well _____

3. Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy)
7/8/16

If a Well Construction Report is available, please attach. _____

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): Split-Spoon

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.) 10' Casing Diameter (in.) N/A

Lower Drillhole Diameter (in.) N/A Casing Depth (ft.) N/A

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 and piping removed? ☐ Yes ☐ No ☒ N/A

Liner(s) removed? ☐ Yes ☐ No ☒ N/A

Screen removed? ☐ Yes ☐ No ☒ N/A

Casing left in place? ☐ Yes ☐ No ☒ N/A

Was casing cut off below surface? ☐ Yes ☐ No ☒ N/A

Did sealing material rise to surface? ☒ Yes ☐ No ☐ N/A

Did material settle after 24 hours? ☐ Yes ☒ No ☐ N/A

If yes, was hole retopped? ☐ Yes ☐ No ☒ N/A

If bentonite chips were used, were they hydrated with water from a known safe source? ☒ Yes ☐ No ☐ N/A

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

5. Material Used To Fill Well / Drillhole

From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Surface	10		

6. Comments

7. Supervision of Work				DNR Use Only	
Name of Person or Firm Doing Filling & Sealing <u>Soils & Engineering Services, Inc.</u>		License # _____	Date of Filling & Sealing (mm/dd/yyyy) <u>7/8/16</u>	Date Received _____	Noted By _____
Street or Route <u>1102 Stewart Street</u>		Telephone Number <u>(608) 274-7600</u>		Comments _____	
City <u>Madison</u>	State <u>WI</u>	ZIP Code <u>53713-4648</u>	Signature of Person Doing Work <u>[Signature]</u>	Date Signed <u>10/4/2016</u>	

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: _____																	
1. Well Location Information			2. Facility / Owner Information																		
County Lafayette	WI Unique Well # of Removed Well	Hicap #	Facility Name Site 1 - Former Cullen's union 76																		
Latitude / Longitude (Degrees and Minutes)		Method Code (see instructions)	Facility ID (FID or PWS) DPI-2																		
_____ 'N _____ 'W			License/Permit/Monitoring #																		
1/4 SW 1/4 NE or Gov't Lot #	Section 3	Township 32 N	Range 3 E	Original Well Owner WisDOT																	
Well Street Address 103 Galena Street				Present Well Owner WisDOT																	
Well City, Village or Town City of Darlington		Well ZIP Code 53530		Mailing Address of Present Owner 4802 Sheboygan Ave																	
Subdivision Name		Lot #	City of Present Owner Madison	State WI	ZIP Code 53707																
Reason For Removal From Service Sampling Complete		WI Unique Well # of Replacement Well																			
3. Well / Drillhole / Borehole Information		4. Pump, Liner, Screen, Casing & Sealing Material																			
☐ Monitoring Well ☐ Water Well ☒ Borehole / Drillhole	Original Construction Date (mm/dd/yyyy) 7/8/16		Pump and piping removed? ☐ Yes ☐ No ☒ N/A Liner(s) removed? ☐ Yes ☐ No ☒ N/A Screen removed? ☐ Yes ☐ No ☒ N/A Casing left in place? ☐ Yes ☐ No ☒ N/A																		
Construction Type:		Was casing cut off below surface? ☐ Yes ☐ No ☒ N/A Did sealing material rise to surface? ☒ Yes ☐ No ☐ N/A Did material settle after 24 hours? ☐ Yes ☒ No ☐ N/A If yes, was hole retopped? ☐ Yes ☐ No ☒ N/A If bentonite chips were used, were they hydrated with water from a known safe source? ☒ Yes ☐ No ☐ N/A																			
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug ☒ Other (specify): Split-spoon		Required Method of Placing Sealing Material ☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped ☐ Screened & Poured (Bentonite Chips) ☒ Other (Explain): Gravity																			
Formation Type:		Sealing Materials																			
☒ Unconsolidated Formation ☐ Bedrock		☐ Neat Cement Grout ☐ Clay-Sand Slurry (11 lb./gal. wt.) ☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " " ☐ Concrete ☒ Bentonite Chips																			
Total Well Depth From Ground Surface (ft.) 10'		Casing Diameter (in.) N/A																			
Lower Drillhole Diameter (in.) N/A		Casing Depth (ft.) N/A																			
Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown		For Monitoring Wells and Monitoring Well Boreholes Only:																			
If yes, to what depth (feet)?		☐ Bentonite Chips ☐ Bentonite - Cement Grout ☐ Granular Bentonite ☐ Bentonite - Sand Slurry																			
Depth to Water (feet)																					
5. Material Used To Fill Well / Drillhole			6. Comments																		
3/8" Bentonite chips			<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>From (ft.)</th> <th>To (ft.)</th> <th>No. Yards, Sacks Sealant or Volume (circle one)</th> <th>Mix Ratio or Mud Weight</th> </tr> <tr> <td>Surface</td> <td>10'</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>			From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight	Surface	10'										
From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight																		
Surface	10'																				

7. Supervision of Work			DNR Use Only	
Name of Person or Firm Doing Filling & Sealing Soils & Engineering Services, Inc.	License #	Date of Filling & Sealing (mm/dd/yyyy) 7/8/16	Date Received	Noted By
Street or Route 1102 Stewart Street	Telephone Number (608) 274-7600	Comments		
City Madison	State WI	ZIP Code 53713-4648	Signature of Person Doing Work <i>[Signature]</i>	Date Signed 10/4/2016

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:	

1. Well Location Information				2. Facility / Owner Information			
County <u>Lafayette</u>	WI Unique Well # of Removed Well	Hicap #		Facility Name <u>Site 1 - Former Cullen's Union 76</u>			
Latitude / Longitude (Degrees and Minutes)			Method Code (see instructions)	Facility ID (FID or PWS) <u>DP1-3</u>			
____' N ____' W				License/Permit/Monitoring #			
$\frac{1}{4}$ SW $\frac{1}{4}$ NE	Section <u>3</u>	Township <u>2 N</u>	Range <u>3 E</u>	Original Well Owner <u>WisDOT</u>			
or Gov't Lot #				Present Well Owner <u>WisDOT</u>			
Well Street Address <u>103 Galena street</u>				Mailing Address of Present Owner <u>4802 Sheboygan Ave</u>			
Well City, Village or Town <u>City of Darlington</u>				City of Present Owner <u>Madison</u>			
Subdivision Name				State <u>WI</u>	ZIP Code <u>53707</u>		

Reason For Removal From Service <u>Sampling Complete</u>	WI Unique Well # of Replacement Well	4. Pump, Liner, Screen, Casing & Sealing Material			
---	--------------------------------------	--	--	--	--

☐ Monitoring Well	Original Construction Date (mm/dd/yyyy) <u>7/8/16</u>	Pump and piping removed?	☐ Yes	☐ No	☒ N/A
☐ Water Well	If a Well Construction Report is available, please attach.	Liner(s) removed?	☐ Yes	☐ No	☒ N/A
☒ Borehole / Drillhole		Screen removed?	☐ Yes	☐ No	☒ N/A
Construction Type:		Casing left in place?	☐ Yes	☐ No	☒ N/A
☐ Drilled	☐ Driven (Sandpoint)	Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
☒ Other (specify): <u>Split-Span</u>	☐ Dug	Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
		Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
		If yes, was hole retopped?	☐ Yes	☐ No	☒ N/A
		If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Formation Type:	☒ Unconsolidated Formation	☐ Bedrock	Required Method of Placing Sealing Material		
Total Well Depth From Ground Surface (ft.) <u>10'</u>	Casing Diameter (in.) <u>N/A</u>	☐ Conductor Pipe-Gravity			
Lower Drillhole Diameter (in.) <u>N/A</u>	Casing Depth (ft.) <u>N/A</u>	☐ Conductor Pipe-Pumped			
Was well annular space grouted?	☐ Yes	☒ No	☐ Unknown	☐ Screened & Poured (Bentonite Chips)	
If yes, to what depth (feet)?	Depth to Water (feet)	☒ Other (Explain): <u>Gravity</u>			
		Sealing Materials			
		☐ Neat Cement Grout			
		☐ Sand-Cement (Concrete) Grout			
		☐ Concrete			
		☒ Bentonite Chips			
		For Monitoring Wells and Monitoring Well Boreholes Only:			
		☐ Bentonite Chips			
		☐ Bentonite - Cement Grout			
		☐ Granular Bentonite			
		☐ Bentonite - Sand Slurry			

5. Material Used To Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
<u>3/8" Bentonite chips</u>	Surface			

6. Comments

7. Supervision of Work			DNR Use Only	
Name of Person or Firm Doing Filling & Sealing <u>Soils & Engineering Services, Inc.</u>	License #	Date of Filling & Sealing (mm/dd/yyyy) <u>7/8/16</u>	Date Received	Noted By
Street or Route <u>1102 Stewart Street</u>	Telephone Number <u>(608) 274-7600</u>	Comments		
City <u>Madison</u>	State <u>WI</u>	ZIP Code <u>53713-4648</u>	Signature of Person Doing Work <u>[Signature]</u>	Date Signed <u>10/4/2016</u>



Waste Disposal Request Documentation

Appendix F

From: Wagoner, Kyle
To: Dan.szymaszek@veolia.com
Cc: Sharlene.TeBeest@dot.wi.gov; kyle.bartowitz@dot.wi.gov; [Jeremy Williams \(jeremy.williams@cityofdarlingtonwi.org\)](mailto:Jeremy.Williams@cityofdarlingtonwi.org); [Hopkins, Marcus](#)
Subject: Request for Soil Cuttings Pickup & Disposal - STH 23, Darlington (WisDOT 5245-02-02)
Date: Monday, July 25, 2016 4:25:00 PM
Attachments: [dt1229 \(5245-02-02\).pdf](#)
[20160708_124956.jpg](#)
[Location Map for Darlington, WI.pdf](#)
[Pace Lab report \(Site #21\).pdf](#)
[Pace Lab report \(Site #1\).pdf](#)
[Pace Lab Report \(Site #5\).pdf](#)
[Pace Lab Report \(Site #9\).pdf](#)
[Pace Lab Report \(Site #19\).pdf](#)

Dan-

Please process this pickup & disposal request at your earliest convenience.

Kyle

Kyle Wagoner, P.G., CHMM
Project Manager
Environment
D 715.342.3038
Internal Cisco Extension 2103038
kyle.wagoner@aecom.com

-
AECOM
200 Indiana Avenue, Stevens Point, WI 54481
T 715.341.8110 F 715.341.7390

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NON-HAZARDOUS WASTE INVENTORY RECORD

Wisconsin Department of Transportation
DT1229 6/2016 (For use with DT1208)

DTSD Region and Office Southwest- LaCrosse		
WisDOT Project ID 5245-02-02	County Lafayette	Highway and Termini STH 23 - County Shop Rd to Minerva St.
Site Name Site Nos. 1, 5, 9, 19, and 21		Phase of Investigation 2.5
Consultant Company AECOM		
Consultant Contact Kyle Wagoner		
Contact (Area Code) Telephone Number (715) 342-3038		
Contact Email Address kyle.wagoner@aecom.com		
Consultant ID for this Site 60492955		
Generation Date (m/d/yyyy) 8/1/2016		
Comments, special instructions for pickup or site access 4 buckets of soil cuttings from Project 5245-02-02 have been temporarily stored with 1 bucket from Project 1693-05-02 next to the SW corner of the Municipal Building (see photo) at 627 Main Street, Darlington, WI. The contact in Darlington is Jeremy Williams, DPW, Phone (608) 776-4973, email jeremy.williams@cityofdarlingtonwi.org.		

Waste Description – describe containers of similar size and contents in one row. Insert additional rows as needed. <i>Number and Label Each Container.</i>				
Container ID Number	Container Size and Type	Estimated Volume of Waste	Source: Tank, Well, Boring	Contents: Soil, Water, Other (Describe)
Example: 1, 4, 5, 6, 7, 18, 22, 23	Example: 30 gallon metal drum	Example: 8 drums x 30 gal = 240 gallons	Example: monitoring wells # MW3, MW4, and MW7	Example: wash water, alconox
Bucket nos. 1, 2, 3 and 4	5 gallon plastic bucket	20 gallons	Soil borings	soil
Total Number of Containers to be picked up:				

Container Location: Attach map or site sketch to Email

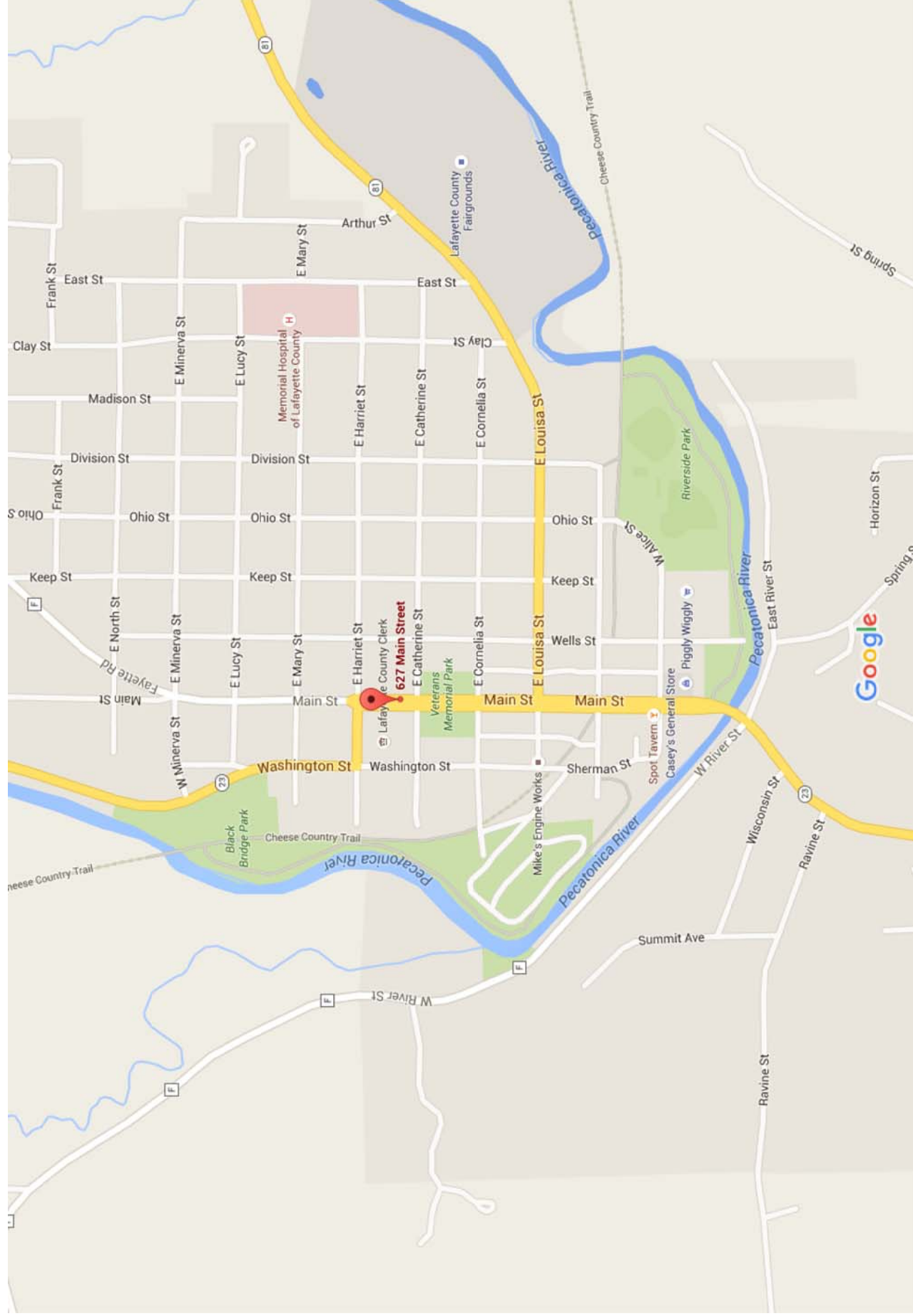
Analytical Results: Attach analytical results to Email

Email one copy of this form to each of the following:

- [DOT Hazardous Materials Specialist](#)
- [Regional Environmental or Hazardous Materials Coordinator](#)
- [Hazardous Waste Contractor](#)

Include a copy of this form as the final appendix in the report for this site.

Google Maps 627 Main St







Standard Analytical Procedures

Appendix G

Standard Analytical Procedures

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

The analytical methods used were:

- VOCs by EPA Method 8260
- Lead by EPA Method 6010

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



**Laboratory Report and
Chain of Custody Form**

Appendix H

July 25, 2016

Kyle Wagoner
AECOM, Inc. - Stevens Point
200 INDIANA AVE
Stevens Point, WI 54481

RE: Project: 60492955 STH 23-DARLINGTON
Pace Project No.: 40135081

Dear Kyle Wagoner:

Enclosed are the analytical results for sample(s) received by the laboratory on July 12, 2016. 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,



Christopher Hyska
christopher.hyska@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

CERTIFICATIONS

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

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

Virginia VELAP ID: 460263

North Dakota Certification #: R-150

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

US Dept of Agriculture #: S-76505

Virginia VELAP Certification ID: 460263

Virginia VELAP ID: 460263

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

SAMPLE SUMMARY

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40135081001	DP1-1 (1-2')	Solid	07/08/16 10:57	07/12/16 10:10
40135081002	DP1-2 (2-4')	Solid	07/08/16 10:44	07/12/16 10:10
40135081003	DP1-3 (2-3')	Solid	07/08/16 11:26	07/12/16 10:10
40135081004	DP1-3 (8-9')	Solid	07/08/16 11:31	07/12/16 10:10
40135081005	WASTE CHAR (SITE 1)	Solid	07/08/16 11:44	07/12/16 10:10
40135085001	DP1-1	Water	07/08/16 12:22	07/12/16 10:10
40135085002	DP1-2	Water	07/08/16 12:29	07/12/16 10:10
40135085003	DP1-3	Water	07/08/16 12:35	07/12/16 10:10

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

SAMPLE ANALYTE COUNT

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40135081001	DP1-1 (1-2')	EPA 6010	DLB	1	PASI-G
		EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	BTH	1	PASI-G
40135081002	DP1-2 (2-4')	EPA 6010	DLB	1	PASI-G
		EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	BTH	1	PASI-G
40135081003	DP1-3 (2-3')	EPA 6010	DLB	1	PASI-G
		EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	BTH	1	PASI-G
40135081004	DP1-3 (8-9')	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	BTH	1	PASI-G
40135081005	WASTE CHAR (SITE 1)	WI MOD DRO	CAH	1	PASI-G
		WI MOD GRO	PMS	3	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	BTH	1	PASI-G
		EPA 1010	DEY	1	PASI-G
		EPA 9095	DEY	1	PASI-G
40135085001	DP1-1	EPA 8260	HNW	64	PASI-G
40135085002	DP1-2	EPA 8260	HNW	64	PASI-G
40135085003	DP1-3	EPA 8260	HNW	64	PASI-G

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Method: WI MOD DRO

Description: WIDRO GCS

Client: AECOM, Inc. - Stevens Point

Date: July 25, 2016

General Information:

1 sample was analyzed for WI MOD DRO. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with WI MOD DRO with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 229731

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: 1362923)
 - Diesel Range Organics
- LCSD (Lab ID: 1362924)
 - Diesel Range Organics

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 229731

P2: Re-extraction or re-analysis could not be performed due to insufficient sample amount.

- WASTE CHAR (SITE 1) (Lab ID: 40135081005)
 - Diesel Range Organics

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PROJECT NARRATIVE

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Method: WI MOD GRO

Description: WIGRO GCV

Client: AECOM, Inc. - Stevens Point

Date: July 25, 2016

General Information:

1 sample was analyzed for WI MOD GRO. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with TPH GRO/PVOC WI ext. with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Method: EPA 6010

Description: 6010 MET ICP

Client: AECOM, Inc. - Stevens Point

Date: July 25, 2016

General Information:

4 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 60492955 STH 23-DARLINGTON
Pace Project No.: 40135081

Method: EPA 8260
Description: 8260 MSV Med Level Normal List
Client: AECOM, Inc. - Stevens Point
Date: July 25, 2016

General Information:

4 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 5035/5030B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Method: EPA 8260

Description: 8260 MSV

Client: AECOM, Inc. - Stevens Point

Date: July 25, 2016

General Information:

3 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

pH: Post-analysis pH measurement indicates insufficient VOA sample preservation.

- DP1-2 (Lab ID: 40135085002)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 229821

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- DP1-2 (Lab ID: 40135085002)
- 4-Bromofluorobenzene (S)

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PROJECT NARRATIVE

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Method: EPA 1010

Description: 1010 Flashpoint,Closed Cup

Client: AECOM, Inc. - Stevens Point

Date: July 25, 2016

General Information:

1 sample was analyzed for EPA 1010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Method: EPA 9095

Description: 9095 Paint Filter Liquid Test

Client: AECOM, Inc. - Stevens Point

Date: July 25, 2016

General Information:

1 sample was analyzed for EPA 9095. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Sample: DP1-1 (1-2') **Lab ID: 40135081001** Collected: 07/08/16 10:57 Received: 07/12/16 10:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Lead	1.2J	mg/kg	1.2	0.45	1	07/13/16 13:22	07/14/16 12:08	7439-92-1	
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Benzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	07/13/16 07:30	07/13/16 17:19	74-83-9	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	104-51-8	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	98-06-6	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	07/13/16 07:30	07/13/16 17:19	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	07/13/16 07:30	07/13/16 17:19	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	74-87-3	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	106-43-4	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	07/13/16 07:30	07/13/16 17:19	96-12-8	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	124-48-1	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	106-93-4	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	74-95-3	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	95-50-1	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	541-73-1	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	106-46-7	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	75-71-8	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	75-34-3	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	107-06-2	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	75-35-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	156-59-2	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	156-60-5	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	78-87-5	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	142-28-9	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	594-20-7	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	563-58-6	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	10061-01-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	10061-02-6	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	98-82-8	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	99-87-6	W
Methylene Chloride	30.6J	ug/kg	62.5	26.1	1	07/13/16 07:30	07/13/16 17:19	75-09-2	
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	1634-04-4	W

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ANALYTICAL RESULTS

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Sample: DP1-1 (1-2') **Lab ID:** 40135081001 **Collected:** 07/08/16 10:57 **Received:** 07/12/16 10:10 **Matrix:** Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

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									
Naphthalene	<40.0	ug/kg	250	40.0	1	07/13/16 07:30	07/13/16 17:19	91-20-3	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	103-65-1	W
Styrene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	100-42-5	W
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	630-20-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	79-34-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	108-88-3	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	87-61-6	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	07/13/16 07:30	07/13/16 17:19	120-82-1	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	71-55-6	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	79-00-5	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	75-69-4	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	96-18-4	W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	95-63-6	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	108-67-8	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	75-01-4	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	07/13/16 07:30	07/13/16 17:19	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:19	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	102	%	53-165		1	07/13/16 07:30	07/13/16 17:19	1868-53-7	
Toluene-d8 (S)	102	%	54-163		1	07/13/16 07:30	07/13/16 17:19	2037-26-5	
4-Bromofluorobenzene (S)	93	%	48-138		1	07/13/16 07:30	07/13/16 17:19	460-00-4	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	4.0	%	0.10	0.10	1		07/19/16 10:19		
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ANALYTICAL RESULTS

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Sample: DP1-2 (2-4') Lab ID: 40135081002 Collected: 07/08/16 10:44 Received: 07/12/16 10:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Lead	1.2J	mg/kg	1.3	0.45	1	07/13/16 13:22	07/14/16 12:15	7439-92-1	
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Benzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	07/13/16 07:30	07/13/16 17:42	74-83-9	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	104-51-8	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	98-06-6	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	07/13/16 07:30	07/13/16 17:42	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	07/13/16 07:30	07/13/16 17:42	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	74-87-3	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	106-43-4	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	07/13/16 07:30	07/13/16 17:42	96-12-8	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	124-48-1	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	106-93-4	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	74-95-3	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	95-50-1	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	541-73-1	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	106-46-7	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	75-71-8	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	75-34-3	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	107-06-2	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	75-35-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	156-59-2	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	156-60-5	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	78-87-5	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	142-28-9	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	594-20-7	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	563-58-6	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	10061-01-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	10061-02-6	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	98-82-8	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	99-87-6	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	75-09-2	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	1634-04-4	W

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ANALYTICAL RESULTS

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Sample: DP1-2 (2-4') **Lab ID:** 40135081002 **Collected:** 07/08/16 10:44 **Received:** 07/12/16 10:10 **Matrix:** Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

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									
Naphthalene	<40.0	ug/kg	250	40.0	1	07/13/16 07:30	07/13/16 17:42	91-20-3	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	103-65-1	W
Styrene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	100-42-5	W
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	630-20-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	79-34-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	108-88-3	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	87-61-6	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	07/13/16 07:30	07/13/16 17:42	120-82-1	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	71-55-6	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	79-00-5	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	75-69-4	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	96-18-4	W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	95-63-6	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	108-67-8	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	75-01-4	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	07/13/16 07:30	07/13/16 17:42	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 17:42	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	99	%	53-165		1	07/13/16 07:30	07/13/16 17:42	1868-53-7	
Toluene-d8 (S)	97	%	54-163		1	07/13/16 07:30	07/13/16 17:42	2037-26-5	
4-Bromofluorobenzene (S)	88	%	48-138		1	07/13/16 07:30	07/13/16 17:42	460-00-4	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	5.8	%	0.10	0.10	1		07/19/16 10:19		
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ANALYTICAL RESULTS

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Sample: DP1-3 (2-3') **Lab ID: 40135081003** Collected: 07/08/16 11:26 Received: 07/12/16 10:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Lead	51.5	mg/kg	1.4	0.49	1	07/13/16 13:22	07/14/16 12:18	7439-92-1	
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Benzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	07/13/16 07:30	07/13/16 18:05	74-83-9	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	104-51-8	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	98-06-6	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	07/13/16 07:30	07/13/16 18:05	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	07/13/16 07:30	07/13/16 18:05	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	74-87-3	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	106-43-4	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	07/13/16 07:30	07/13/16 18:05	96-12-8	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	124-48-1	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	106-93-4	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	74-95-3	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	95-50-1	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	541-73-1	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	106-46-7	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	75-71-8	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	75-34-3	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	107-06-2	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	75-35-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	156-59-2	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	156-60-5	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	78-87-5	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	142-28-9	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	594-20-7	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	563-58-6	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	10061-01-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	10061-02-6	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	98-82-8	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	99-87-6	W
Methylene Chloride	34.0J	ug/kg	75.2	31.3	1	07/13/16 07:30	07/13/16 18:05	75-09-2	
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	1634-04-4	W

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ANALYTICAL RESULTS

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Sample: DP1-3 (2-3') **Lab ID:** 40135081003 **Collected:** 07/08/16 11:26 **Received:** 07/12/16 10:10 **Matrix:** Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

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									
Naphthalene	<40.0	ug/kg	250	40.0	1	07/13/16 07:30	07/13/16 18:05	91-20-3	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	103-65-1	W
Styrene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	100-42-5	W
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	630-20-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	79-34-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	108-88-3	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	87-61-6	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	07/13/16 07:30	07/13/16 18:05	120-82-1	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	71-55-6	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	79-00-5	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	75-69-4	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	96-18-4	W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	95-63-6	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	108-67-8	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	75-01-4	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	07/13/16 07:30	07/13/16 18:05	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:05	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	101	%	53-165		1	07/13/16 07:30	07/13/16 18:05	1868-53-7	
Toluene-d8 (S)	99	%	54-163		1	07/13/16 07:30	07/13/16 18:05	2037-26-5	
4-Bromofluorobenzene (S)	88	%	48-138		1	07/13/16 07:30	07/13/16 18:05	460-00-4	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	20.2	%	0.10	0.10	1		07/19/16 10:19		

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ANALYTICAL RESULTS

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Sample: DP1-3 (8-9') Lab ID: 40135081004 Collected: 07/08/16 11:31 Received: 07/12/16 10:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

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									
Benzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	07/13/16 07:30	07/13/16 18:27	74-83-9	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	104-51-8	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	98-06-6	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	07/13/16 07:30	07/13/16 18:27	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	07/13/16 07:30	07/13/16 18:27	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	74-87-3	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	106-43-4	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	07/13/16 07:30	07/13/16 18:27	96-12-8	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	124-48-1	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	106-93-4	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	74-95-3	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	95-50-1	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	541-73-1	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	106-46-7	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	75-71-8	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	75-34-3	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	107-06-2	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	75-35-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	156-59-2	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	156-60-5	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	78-87-5	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	142-28-9	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	594-20-7	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	563-58-6	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	10061-01-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	10061-02-6	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	98-82-8	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	99-87-6	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	75-09-2	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	1634-04-4	W
Naphthalene	<40.0	ug/kg	250	40.0	1	07/13/16 07:30	07/13/16 18:27	91-20-3	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	103-65-1	W
Styrene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	100-42-5	W

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ANALYTICAL RESULTS

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Sample: DP1-3 (8-9') **Lab ID: 40135081004** Collected: 07/08/16 11:31 Received: 07/12/16 10:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

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	07/13/16 07:30	07/13/16 18:27	630-20-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	79-34-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	108-88-3	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	87-61-6	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	07/13/16 07:30	07/13/16 18:27	120-82-1	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	71-55-6	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	79-00-5	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	75-69-4	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	96-18-4	W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	95-63-6	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	108-67-8	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	75-01-4	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	07/13/16 07:30	07/13/16 18:27	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	07/13/16 07:30	07/13/16 18:27	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	96	%	53-165		1	07/13/16 07:30	07/13/16 18:27	1868-53-7	
Toluene-d8 (S)	95	%	54-163		1	07/13/16 07:30	07/13/16 18:27	2037-26-5	
4-Bromofluorobenzene (S)	83	%	48-138		1	07/13/16 07:30	07/13/16 18:27	460-00-4	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	29.4	%	0.10	0.10	1		07/19/16 10:20		
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ANALYTICAL RESULTS

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Sample: WASTE CHAR (SITE 1) **Lab ID: 40135081005** Collected: 07/08/16 11:44 Received: 07/12/16 10:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

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	1.1J	mg/kg	2.1	0.83	1	07/13/16 09:13	07/14/16 11:49		L2,P2
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	<25.0	ug/kg	60.0	25.0	1	07/13/16 06:30	07/13/16 15:41	71-43-2	W
Gasoline Range Organics	<3.1	mg/kg	6.3	3.1	1	07/13/16 06:30	07/13/16 15:41		
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-120		1	07/13/16 06:30	07/13/16 15:41	98-08-8	
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Lead	35.3	mg/kg	1.3	0.46	1	07/13/16 13:22	07/14/16 12:20	7439-92-1	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	20.0	%	0.10	0.10	1		07/19/16 10:20		
1010 Flashpoint,Closed Cup Analytical Method: EPA 1010									
Flashpoint	>210	deg F			1		07/13/16 11:31		
9095 Paint Filter Liquid Test Analytical Method: EPA 9095									
Free Liquids	Pass	no units			1		07/14/16 11:13		

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ANALYTICAL RESULTS

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Sample: DP1-1 **Lab ID: 40135085001** Collected: 07/08/16 12:22 Received: 07/12/16 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Benzene	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		07/14/16 11:20	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		07/14/16 11:20	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		07/14/16 11:20	74-83-9	
n-Butylbenzene	0.58J	ug/L	1.0	0.50	1		07/14/16 11:20	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		07/14/16 11:20	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		07/14/16 11:20	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		07/14/16 11:20	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		07/14/16 11:20	67-66-3	
Chloromethane	2.0	ug/L	1.0	0.50	1		07/14/16 11:20	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		07/14/16 11:20	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		07/14/16 11:20	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		07/14/16 11:20	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		07/14/16 11:20	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		07/14/16 11:20	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		07/14/16 11:20	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		07/14/16 11:20	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		07/14/16 11:20	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		07/14/16 11:20	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		07/14/16 11:20	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		07/14/16 11:20	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		07/14/16 11:20	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		07/14/16 11:20	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		07/14/16 11:20	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		07/14/16 11:20	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		07/14/16 11:20	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		07/14/16 11:20	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		07/14/16 11:20	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		07/14/16 11:20	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		07/14/16 11:20	630-20-6	

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ANALYTICAL RESULTS

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Sample: DP1-1 **Lab ID: 40135085001** Collected: 07/08/16 12:22 Received: 07/12/16 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		07/14/16 11:20	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		07/14/16 11:20	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		07/14/16 11:20	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		07/14/16 11:20	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		07/14/16 11:20	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		07/14/16 11:20	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		07/14/16 11:20	75-01-4	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		07/14/16 11:20	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		07/14/16 11:20	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		07/14/16 11:20	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		07/14/16 11:20	1868-53-7	
Toluene-d8 (S)	107	%	70-130		1		07/14/16 11:20	2037-26-5	

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ANALYTICAL RESULTS

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Sample: DP1-2 **Lab ID: 40135085002** Collected: 07/08/16 12:29 Received: 07/12/16 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Benzene	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	71-43-2	
Bromobenzene	<0.46	ug/L	2.0	0.46	2		07/14/16 16:55	108-86-1	
Bromochloromethane	<0.68	ug/L	2.0	0.68	2		07/14/16 16:55	74-97-5	
Bromodichloromethane	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	75-27-4	
Bromoform	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	75-25-2	
Bromomethane	<4.9	ug/L	10.0	4.9	2		07/14/16 16:55	74-83-9	
n-Butylbenzene	10.0	ug/L	2.0	1.0	2		07/14/16 16:55	104-51-8	
sec-Butylbenzene	<4.4	ug/L	10.0	4.4	2		07/14/16 16:55	135-98-8	
tert-Butylbenzene	0.40J	ug/L	2.0	0.36	2		07/14/16 16:55	98-06-6	
Carbon tetrachloride	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	56-23-5	
Chlorobenzene	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	108-90-7	
Chloroethane	<0.75	ug/L	2.0	0.75	2		07/14/16 16:55	75-00-3	
Chloroform	<5.0	ug/L	10.0	5.0	2		07/14/16 16:55	67-66-3	
Chloromethane	3.1	ug/L	2.0	1.0	2		07/14/16 16:55	74-87-3	
2-Chlorotoluene	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	95-49-8	
4-Chlorotoluene	<0.43	ug/L	2.0	0.43	2		07/14/16 16:55	106-43-4	
1,2-Dibromo-3-chloropropane	<4.3	ug/L	10.0	4.3	2		07/14/16 16:55	96-12-8	
Dibromochloromethane	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	124-48-1	
1,2-Dibromoethane (EDB)	<0.36	ug/L	2.0	0.36	2		07/14/16 16:55	106-93-4	
Dibromomethane	<0.85	ug/L	2.0	0.85	2		07/14/16 16:55	74-95-3	
1,2-Dichlorobenzene	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	95-50-1	
1,3-Dichlorobenzene	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	541-73-1	
1,4-Dichlorobenzene	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	106-46-7	
Dichlorodifluoromethane	<0.45	ug/L	2.0	0.45	2		07/14/16 16:55	75-71-8	
1,1-Dichloroethane	<0.48	ug/L	2.0	0.48	2		07/14/16 16:55	75-34-3	
1,2-Dichloroethane	<0.34	ug/L	2.0	0.34	2		07/14/16 16:55	107-06-2	
1,1-Dichloroethene	<0.82	ug/L	2.0	0.82	2		07/14/16 16:55	75-35-4	
cis-1,2-Dichloroethene	<0.51	ug/L	2.0	0.51	2		07/14/16 16:55	156-59-2	
trans-1,2-Dichloroethene	<0.51	ug/L	2.0	0.51	2		07/14/16 16:55	156-60-5	
1,2-Dichloropropane	<0.47	ug/L	2.0	0.47	2		07/14/16 16:55	78-87-5	
1,3-Dichloropropane	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	142-28-9	
2,2-Dichloropropane	<0.97	ug/L	2.0	0.97	2		07/14/16 16:55	594-20-7	
1,1-Dichloropropene	<0.88	ug/L	2.0	0.88	2		07/14/16 16:55	563-58-6	
cis-1,3-Dichloropropene	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	10061-01-5	
trans-1,3-Dichloropropene	<0.46	ug/L	2.0	0.46	2		07/14/16 16:55	10061-02-6	
Diisopropyl ether	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	108-20-3	
Ethylbenzene	10.8	ug/L	2.0	1.0	2		07/14/16 16:55	100-41-4	
Hexachloro-1,3-butadiene	<4.2	ug/L	10.0	4.2	2		07/14/16 16:55	87-68-3	
Isopropylbenzene (Cumene)	10.7	ug/L	2.0	0.29	2		07/14/16 16:55	98-82-8	
p-Isopropyltoluene	2.8	ug/L	2.0	1.0	2		07/14/16 16:55	99-87-6	
Methylene Chloride	<0.47	ug/L	2.0	0.47	2		07/14/16 16:55	75-09-2	
Methyl-tert-butyl ether	<0.35	ug/L	2.0	0.35	2		07/14/16 16:55	1634-04-4	
Naphthalene	12.4	ug/L	10.0	5.0	2		07/14/16 16:55	91-20-3	
n-Propylbenzene	36.3	ug/L	2.0	1.0	2		07/14/16 16:55	103-65-1	
Styrene	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	100-42-5	
1,1,1,2-Tetrachloroethane	<0.36	ug/L	2.0	0.36	2		07/14/16 16:55	630-20-6	

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ANALYTICAL RESULTS

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Sample: DP1-2 **Lab ID:** 40135085002 Collected: 07/08/16 12:29 Received: 07/12/16 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
1,1,2,2-Tetrachloroethane	<0.50	ug/L	2.0	0.50	2		07/14/16 16:55	79-34-5	
Tetrachloroethene	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	127-18-4	
Toluene	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	108-88-3	
1,2,3-Trichlorobenzene	<4.3	ug/L	10.0	4.3	2		07/14/16 16:55	87-61-6	
1,2,4-Trichlorobenzene	<4.4	ug/L	10.0	4.4	2		07/14/16 16:55	120-82-1	
1,1,1-Trichloroethane	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	71-55-6	
1,1,2-Trichloroethane	<0.39	ug/L	2.0	0.39	2		07/14/16 16:55	79-00-5	
Trichloroethene	<0.66	ug/L	2.0	0.66	2		07/14/16 16:55	79-01-6	
Trichlorofluoromethane	<0.37	ug/L	2.0	0.37	2		07/14/16 16:55	75-69-4	
1,2,3-Trichloropropane	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	96-18-4	
1,2,4-Trimethylbenzene	66.7	ug/L	2.0	1.0	2		07/14/16 16:55	95-63-6	
1,3,5-Trimethylbenzene	35.8	ug/L	2.0	1.0	2		07/14/16 16:55	108-67-8	
Vinyl chloride	<0.35	ug/L	2.0	0.35	2		07/14/16 16:55	75-01-4	
m&p-Xylene	13.4	ug/L	4.0	2.0	2		07/14/16 16:55	179601-23-1	
o-Xylene	<1.0	ug/L	2.0	1.0	2		07/14/16 16:55	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		2		07/14/16 16:55	460-00-4	D3,pH
Dibromofluoromethane (S)	108	%	70-130		2		07/14/16 16:55	1868-53-7	
Toluene-d8 (S)	105	%	70-130		2		07/14/16 16:55	2037-26-5	

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ANALYTICAL RESULTS

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Sample: DP1-3 **Lab ID: 40135085003** Collected: 07/08/16 12:35 Received: 07/12/16 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Benzene	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		07/14/16 16:32	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		07/14/16 16:32	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		07/14/16 16:32	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		07/14/16 16:32	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		07/14/16 16:32	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		07/14/16 16:32	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		07/14/16 16:32	67-66-3	
Chloromethane	6.4	ug/L	1.0	0.50	1		07/14/16 16:32	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		07/14/16 16:32	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		07/14/16 16:32	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		07/14/16 16:32	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		07/14/16 16:32	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		07/14/16 16:32	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		07/14/16 16:32	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		07/14/16 16:32	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		07/14/16 16:32	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		07/14/16 16:32	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		07/14/16 16:32	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		07/14/16 16:32	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		07/14/16 16:32	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		07/14/16 16:32	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		07/14/16 16:32	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		07/14/16 16:32	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		07/14/16 16:32	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		07/14/16 16:32	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		07/14/16 16:32	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		07/14/16 16:32	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		07/14/16 16:32	630-20-6	

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ANALYTICAL RESULTS

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Sample: DP1-3 **Lab ID:** 40135085003 Collected: 07/08/16 12:35 Received: 07/12/16 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		07/14/16 16:32	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		07/14/16 16:32	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		07/14/16 16:32	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		07/14/16 16:32	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		07/14/16 16:32	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		07/14/16 16:32	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		07/14/16 16:32	75-01-4	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		07/14/16 16:32	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		07/14/16 16:32	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		07/14/16 16:32	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		07/14/16 16:32	1868-53-7	
Toluene-d8 (S)	107	%	70-130		1		07/14/16 16:32	2037-26-5	

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QUALITY CONTROL DATA

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

QC Batch:	229707	Analysis Method:	WI MOD GRO
QC Batch Method:	TPH GRO/PVOC WI ext.	Analysis Description:	WIGRO Solid GCV
Associated Lab Samples:	40135081005		

METHOD BLANK: 1362874 Matrix: Solid

Associated Lab Samples: 40135081005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/kg	<25.0	50.0	07/13/16 09:41	
Gasoline Range Organics	mg/kg	<1.6	5.0	07/13/16 09:41	
a,a,a-Trifluorotoluene (S)	%	97	80-120	07/13/16 09:41	

LABORATORY CONTROL SAMPLE & LCSD: 1362875

LABORATORY CONTROL SAMPLE & LCSD: 1362875			1362876							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	ug/kg	1000	1060	1060	106	106	80-120	0	20	
Gasoline Range Organics	mg/kg	10	10.5	10.3	105	103	80-120	2	20	
a,a,a-Trifluorotoluene (S)	%				100	100	80-120			

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QUALITY CONTROL DATA

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

QC Batch: 229740 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 40135081001, 40135081002, 40135081003, 40135081005

METHOD BLANK: 1362987 Matrix: Solid
Associated Lab Samples: 40135081001, 40135081002, 40135081003, 40135081005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	<0.43	1.2	07/14/16 11:48	

LABORATORY CONTROL SAMPLE: 1362988

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	50	48.4	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1362989 1362990

Parameter	Units	40135081001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/kg	1.2J	51.8	52.1	48.3	48.8	91	91	75-125	1	20	

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QUALITY CONTROL DATA

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

QC Batch:	229744	Analysis Method:	EPA 8260
QC Batch Method:	EPA 5035/5030B	Analysis Description:	8260 MSV Med Level Normal List
Associated Lab Samples:	40135081001, 40135081002, 40135081003, 40135081004		

METHOD BLANK:	1363021	Matrix:	Solid
Associated Lab Samples:	40135081001, 40135081002, 40135081003, 40135081004		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	07/13/16 10:04	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	07/13/16 10:04	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	07/13/16 10:04	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	07/13/16 10:04	
1,1-Dichloroethane	ug/kg	<17.6	50.0	07/13/16 10:04	
1,1-Dichloroethene	ug/kg	<17.6	50.0	07/13/16 10:04	
1,1-Dichloropropene	ug/kg	<14.0	50.0	07/13/16 10:04	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	07/13/16 10:04	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	07/13/16 10:04	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	07/13/16 10:04	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	07/13/16 10:04	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	07/13/16 10:04	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	07/13/16 10:04	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	07/13/16 10:04	
1,2-Dichloroethane	ug/kg	<15.0	50.0	07/13/16 10:04	
1,2-Dichloropropane	ug/kg	<16.8	50.0	07/13/16 10:04	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	07/13/16 10:04	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	07/13/16 10:04	
1,3-Dichloropropane	ug/kg	<12.0	50.0	07/13/16 10:04	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	07/13/16 10:04	
2,2-Dichloropropane	ug/kg	<12.6	50.0	07/13/16 10:04	
2-Chlorotoluene	ug/kg	<15.8	50.0	07/13/16 10:04	
4-Chlorotoluene	ug/kg	<13.0	50.0	07/13/16 10:04	
Benzene	ug/kg	<9.2	20.0	07/13/16 10:04	
Bromobenzene	ug/kg	<20.6	50.0	07/13/16 10:04	
Bromochloromethane	ug/kg	<21.4	50.0	07/13/16 10:04	
Bromodichloromethane	ug/kg	<9.8	50.0	07/13/16 10:04	
Bromoform	ug/kg	<19.8	50.0	07/13/16 10:04	
Bromomethane	ug/kg	<69.9	250	07/13/16 10:04	
Carbon tetrachloride	ug/kg	<12.1	50.0	07/13/16 10:04	
Chlorobenzene	ug/kg	<14.8	50.0	07/13/16 10:04	
Chloroethane	ug/kg	<67.0	250	07/13/16 10:04	
Chloroform	ug/kg	<46.4	250	07/13/16 10:04	
Chloromethane	ug/kg	<20.4	50.0	07/13/16 10:04	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	07/13/16 10:04	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	07/13/16 10:04	
Dibromochloromethane	ug/kg	<17.9	50.0	07/13/16 10:04	
Dibromomethane	ug/kg	<19.3	50.0	07/13/16 10:04	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	07/13/16 10:04	
Diisopropyl ether	ug/kg	<17.7	50.0	07/13/16 10:04	
Ethylbenzene	ug/kg	<12.4	50.0	07/13/16 10:04	

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QUALITY CONTROL DATA

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

METHOD BLANK: 1363021

Matrix: Solid

Associated Lab Samples: 40135081001, 40135081002, 40135081003, 40135081004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	07/13/16 10:04	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	07/13/16 10:04	
m&p-Xylene	ug/kg	<34.4	100	07/13/16 10:04	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	07/13/16 10:04	
Methylene Chloride	ug/kg	<16.2	50.0	07/13/16 10:04	
n-Butylbenzene	ug/kg	<10.5	50.0	07/13/16 10:04	
n-Propylbenzene	ug/kg	<11.6	50.0	07/13/16 10:04	
Naphthalene	ug/kg	<40.0	250	07/13/16 10:04	
o-Xylene	ug/kg	<14.0	50.0	07/13/16 10:04	
p-Isopropyltoluene	ug/kg	<12.0	50.0	07/13/16 10:04	
sec-Butylbenzene	ug/kg	<11.9	50.0	07/13/16 10:04	
Styrene	ug/kg	<9.0	50.0	07/13/16 10:04	
tert-Butylbenzene	ug/kg	<9.5	50.0	07/13/16 10:04	
Tetrachloroethene	ug/kg	<12.9	50.0	07/13/16 10:04	
Toluene	ug/kg	<11.2	50.0	07/13/16 10:04	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	07/13/16 10:04	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	07/13/16 10:04	
Trichloroethene	ug/kg	<23.6	50.0	07/13/16 10:04	
Trichlorofluoromethane	ug/kg	<24.7	50.0	07/13/16 10:04	
Vinyl chloride	ug/kg	<21.1	50.0	07/13/16 10:04	
4-Bromofluorobenzene (S)	%	95	48-138	07/13/16 10:04	
Dibromofluoromethane (S)	%	106	53-165	07/13/16 10:04	
Toluene-d8 (S)	%	104	54-163	07/13/16 10:04	

LABORATORY CONTROL SAMPLE: 1363022

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2430	97	70-130	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2650	106	70-130	
1,1,2-Trichloroethane	ug/kg	2500	2460	99	70-130	
1,1-Dichloroethane	ug/kg	2500	2550	102	70-133	
1,1-Dichloroethene	ug/kg	2500	2300	92	70-130	
1,2,4-Trichlorobenzene	ug/kg	2500	2580	103	70-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2520	101	50-150	
1,2-Dibromoethane (EDB)	ug/kg	2500	2420	97	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2580	103	70-130	
1,2-Dichloroethane	ug/kg	2500	2610	104	70-138	
1,2-Dichloropropane	ug/kg	2500	2630	105	70-130	
1,3-Dichlorobenzene	ug/kg	2500	2540	102	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2560	103	70-130	
Benzene	ug/kg	2500	2610	104	70-130	
Bromodichloromethane	ug/kg	2500	2620	105	70-130	
Bromoform	ug/kg	2500	1950	78	68-130	
Bromomethane	ug/kg	2500	1880	75	25-163	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

LABORATORY CONTROL SAMPLE: 1363022

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/kg	2500	2420	97	70-130	
Chlorobenzene	ug/kg	2500	2440	98	70-130	
Chloroethane	ug/kg	2500	2330	93	34-151	
Chloroform	ug/kg	2500	2570	103	70-130	
Chloromethane	ug/kg	2500	1410	57	52-130	
cis-1,2-Dichloroethene	ug/kg	2500	2590	103	70-130	
cis-1,3-Dichloropropene	ug/kg	2500	2580	103	70-130	
Dibromochloromethane	ug/kg	2500	2210	88	70-130	
Dichlorodifluoromethane	ug/kg	2500	773	31	27-150	
Ethylbenzene	ug/kg	2500	2390	95	70-130	
Isopropylbenzene (Cumene)	ug/kg	2500	2490	100	70-130	
m&p-Xylene	ug/kg	5000	4660	93	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2400	96	70-130	
Methylene Chloride	ug/kg	2500	2580	103	70-131	
o-Xylene	ug/kg	2500	2290	91	70-130	
Styrene	ug/kg	2500	2420	97	70-130	
Tetrachloroethene	ug/kg	2500	2140	86	70-130	
Toluene	ug/kg	2500	2420	97	70-130	
trans-1,2-Dichloroethene	ug/kg	2500	2340	93	70-130	
trans-1,3-Dichloropropene	ug/kg	2500	2380	95	70-130	
Trichloroethene	ug/kg	2500	2530	101	70-130	
Trichlorofluoromethane	ug/kg	2500	1910	76	50-150	
Vinyl chloride	ug/kg	2500	1870	75	57-130	
4-Bromofluorobenzene (S)	%			96	48-138	
Dibromofluoromethane (S)	%			109	53-165	
Toluene-d8 (S)	%			99	54-163	

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QUALITY CONTROL DATA

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

QC Batch:	229821	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples: 40135085001, 40135085002, 40135085003			

METHOD BLANK: 1363615 Matrix: Water

Associated Lab Samples: 40135085001, 40135085002, 40135085003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	07/14/16 07:58	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	07/14/16 07:58	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	07/14/16 07:58	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	07/14/16 07:58	
1,1-Dichloroethane	ug/L	<0.24	1.0	07/14/16 07:58	
1,1-Dichloroethene	ug/L	<0.41	1.0	07/14/16 07:58	
1,1-Dichloropropene	ug/L	<0.44	1.0	07/14/16 07:58	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	07/14/16 07:58	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	07/14/16 07:58	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	07/14/16 07:58	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	07/14/16 07:58	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	07/14/16 07:58	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	07/14/16 07:58	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	07/14/16 07:58	
1,2-Dichloroethane	ug/L	<0.17	1.0	07/14/16 07:58	
1,2-Dichloropropane	ug/L	<0.23	1.0	07/14/16 07:58	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	07/14/16 07:58	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	07/14/16 07:58	
1,3-Dichloropropane	ug/L	<0.50	1.0	07/14/16 07:58	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	07/14/16 07:58	
2,2-Dichloropropane	ug/L	<0.48	1.0	07/14/16 07:58	
2-Chlorotoluene	ug/L	<0.50	1.0	07/14/16 07:58	
4-Chlorotoluene	ug/L	<0.21	1.0	07/14/16 07:58	
Benzene	ug/L	<0.50	1.0	07/14/16 07:58	
Bromobenzene	ug/L	<0.23	1.0	07/14/16 07:58	
Bromochloromethane	ug/L	<0.34	1.0	07/14/16 07:58	
Bromodichloromethane	ug/L	<0.50	1.0	07/14/16 07:58	
Bromoform	ug/L	<0.50	1.0	07/14/16 07:58	
Bromomethane	ug/L	<2.4	5.0	07/14/16 07:58	
Carbon tetrachloride	ug/L	<0.50	1.0	07/14/16 07:58	
Chlorobenzene	ug/L	<0.50	1.0	07/14/16 07:58	
Chloroethane	ug/L	<0.37	1.0	07/14/16 07:58	
Chloroform	ug/L	<2.5	5.0	07/14/16 07:58	
Chloromethane	ug/L	<0.50	1.0	07/14/16 07:58	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	07/14/16 07:58	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	07/14/16 07:58	
Dibromochloromethane	ug/L	<0.50	1.0	07/14/16 07:58	
Dibromomethane	ug/L	<0.43	1.0	07/14/16 07:58	
Dichlorodifluoromethane	ug/L	<0.22	1.0	07/14/16 07:58	
Diisopropyl ether	ug/L	<0.50	1.0	07/14/16 07:58	
Ethylbenzene	ug/L	<0.50	1.0	07/14/16 07:58	

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QUALITY CONTROL DATA

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

METHOD BLANK: 1363615

Matrix: Water

Associated Lab Samples: 40135085001, 40135085002, 40135085003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	07/14/16 07:58	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	07/14/16 07:58	
m&p-Xylene	ug/L	<1.0	2.0	07/14/16 07:58	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	07/14/16 07:58	
Methylene Chloride	ug/L	<0.23	1.0	07/14/16 07:58	
n-Butylbenzene	ug/L	<0.50	1.0	07/14/16 07:58	
n-Propylbenzene	ug/L	<0.50	1.0	07/14/16 07:58	
Naphthalene	ug/L	<2.5	5.0	07/14/16 07:58	
o-Xylene	ug/L	<0.50	1.0	07/14/16 07:58	
p-Isopropyltoluene	ug/L	<0.50	1.0	07/14/16 07:58	
sec-Butylbenzene	ug/L	<2.2	5.0	07/14/16 07:58	
Styrene	ug/L	<0.50	1.0	07/14/16 07:58	
tert-Butylbenzene	ug/L	<0.18	1.0	07/14/16 07:58	
Tetrachloroethene	ug/L	<0.50	1.0	07/14/16 07:58	
Toluene	ug/L	<0.50	1.0	07/14/16 07:58	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	07/14/16 07:58	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	07/14/16 07:58	
Trichloroethene	ug/L	<0.33	1.0	07/14/16 07:58	
Trichlorofluoromethane	ug/L	<0.18	1.0	07/14/16 07:58	
Vinyl chloride	ug/L	<0.18	1.0	07/14/16 07:58	
4-Bromofluorobenzene (S)	%	97	70-130	07/14/16 07:58	
Dibromofluoromethane (S)	%	108	70-130	07/14/16 07:58	
Toluene-d8 (S)	%	104	70-130	07/14/16 07:58	

LABORATORY CONTROL SAMPLE: 1363616

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	46.8	94	70-131	
1,1,2,2-Tetrachloroethane	ug/L	50	54.0	108	67-130	
1,1,2-Trichloroethane	ug/L	50	50.3	101	70-130	
1,1-Dichloroethane	ug/L	50	48.3	97	70-133	
1,1-Dichloroethene	ug/L	50	45.3	91	70-130	
1,2,4-Trichlorobenzene	ug/L	50	44.8	90	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	48.6	97	50-150	
1,2-Dibromoethane (EDB)	ug/L	50	49.5	99	70-130	
1,2-Dichlorobenzene	ug/L	50	49.8	100	70-130	
1,2-Dichloroethane	ug/L	50	51.2	102	70-130	
1,2-Dichloropropane	ug/L	50	46.8	94	70-130	
1,3-Dichlorobenzene	ug/L	50	49.7	99	70-130	
1,4-Dichlorobenzene	ug/L	50	49.5	99	70-130	
Benzene	ug/L	50	49.2	98	60-135	
Bromodichloromethane	ug/L	50	48.4	97	70-130	
Bromoform	ug/L	50	49.1	98	70-130	
Bromomethane	ug/L	50	34.8	70	33-130	

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QUALITY CONTROL DATA

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

LABORATORY CONTROL SAMPLE: 1363616

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	49.0	98	70-138	
Chlorobenzene	ug/L	50	48.3	97	70-130	
Chloroethane	ug/L	50	52.8	106	51-130	
Chloroform	ug/L	50	46.2	92	70-130	
Chloromethane	ug/L	50	38.0	76	25-132	
cis-1,2-Dichloroethene	ug/L	50	46.1	92	69-130	
cis-1,3-Dichloropropene	ug/L	50	39.1	78	70-130	
Dibromochloromethane	ug/L	50	49.9	100	70-130	
Dichlorodifluoromethane	ug/L	50	40.9	82	23-130	
Ethylbenzene	ug/L	50	49.2	98	70-136	
Isopropylbenzene (Cumene)	ug/L	50	48.5	97	70-140	
m&p-Xylene	ug/L	100	93.4	93	70-138	
Methyl-tert-butyl ether	ug/L	50	43.6	87	66-138	
Methylene Chloride	ug/L	50	46.0	92	70-130	
o-Xylene	ug/L	50	46.5	93	70-134	
Styrene	ug/L	50	48.5	97	70-133	
Tetrachloroethene	ug/L	50	45.4	91	70-138	
Toluene	ug/L	50	48.6	97	70-130	
trans-1,2-Dichloroethene	ug/L	50	45.4	91	70-131	
trans-1,3-Dichloropropene	ug/L	50	36.3	73	69-130	
Trichloroethene	ug/L	50	47.9	96	70-130	
Trichlorofluoromethane	ug/L	50	54.2	108	50-150	
Vinyl chloride	ug/L	50	50.6	101	49-130	
4-Bromofluorobenzene (S)	%			97	70-130	
Dibromofluoromethane (S)	%			107	70-130	
Toluene-d8 (S)	%			103	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1363639 1363640

Parameter	Units	40135116001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.50	50	50	47.1	49.0	94	98	70-134	4	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	54.7	57.9	109	116	67-130	6	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	50.1	52.1	100	104	70-130	4	20	
1,1-Dichloroethane	ug/L	<0.24	50	50	48.9	50.5	98	101	70-134	3	20	
1,1-Dichloroethene	ug/L	<0.41	50	50	46.3	47.8	93	96	68-136	3	20	
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	47.2	50.2	94	100	62-139	6	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	49.2	51.7	98	103	50-150	5	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	50.1	52.3	100	105	70-130	4	20	
1,2-Dichlorobenzene	ug/L	<0.50	50	50	50.5	53.0	101	106	70-130	5	20	
1,2-Dichloroethane	ug/L	<0.17	50	50	51.6	53.3	103	107	70-130	3	20	
1,2-Dichloropropane	ug/L	<0.23	50	50	47.0	49.5	94	99	70-130	5	20	
1,3-Dichlorobenzene	ug/L	<0.50	50	50	51.0	53.9	102	108	70-131	5	20	
1,4-Dichlorobenzene	ug/L	<0.50	50	50	50.1	52.7	100	105	70-130	5	20	

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QUALITY CONTROL DATA

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1363639 1363640											
Parameter	Units	40135116001		MS	MSD	MS		MSD	% Rec	Max	
		Result	Conc.	Spike	Spike	Result	Result	% Rec	% Rec	Limits	RPD
Benzene	ug/L	<0.50	50	50	50	49.9	51.5	100	103	57-138	3 20
Bromodichloromethane	ug/L	<0.50	50	50	50	48.4	50.6	97	101	70-130	5 20
Bromoform	ug/L	<0.50	50	50	50	48.7	50.6	97	101	70-130	4 20
Bromomethane	ug/L	<2.4	50	50	50	38.3	41.2	77	82	33-130	7 27
Carbon tetrachloride	ug/L	<0.50	50	50	50	50.1	51.8	100	104	70-138	3 20
Chlorobenzene	ug/L	<0.50	50	50	50	49.1	51.0	98	102	70-130	4 20
Chloroethane	ug/L	<0.37	50	50	50	53.4	55.2	107	110	51-130	3 20
Chloroform	ug/L	<2.5	50	50	50	46.7	47.8	93	96	70-130	2 20
Chloromethane	ug/L	<0.50	50	50	50	38.8	39.9	78	80	25-132	3 20
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	50	46.8	48.1	94	96	61-140	3 20
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	50	41.9	44.0	84	88	70-130	5 20
Dibromochloromethane	ug/L	<0.50	50	50	50	49.7	51.8	99	104	70-130	4 20
Dichlorodifluoromethane	ug/L	<0.22	50	50	50	41.5	42.3	83	85	23-130	2 20
Ethylbenzene	ug/L	<0.50	50	50	50	50.2	52.0	100	104	70-138	4 20
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	50	49.2	51.2	98	102	70-152	4 20
m&p-Xylene	ug/L	<1.0	100	100	100	94.7	99.4	95	99	70-140	5 20
Methyl-tert-butyl ether	ug/L	<0.17	50	50	50	44.5	45.8	89	92	66-139	3 20
Methylene Chloride	ug/L	<0.23	50	50	50	46.3	47.7	93	95	70-130	3 20
o-Xylene	ug/L	<0.50	50	50	50	47.2	49.0	94	98	70-134	4 20
Styrene	ug/L	<0.50	50	50	50	49.4	51.5	99	103	70-138	4 20
Tetrachloroethene	ug/L	<0.50	50	50	50	46.9	49.0	94	98	70-148	4 20
Toluene	ug/L	<0.50	50	50	50	49.4	51.4	99	103	70-130	4 20
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	50	46.3	47.8	93	96	70-133	3 20
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	50	40.2	41.6	80	83	69-130	3 20
Trichloroethene	ug/L	<0.33	50	50	50	47.7	49.6	95	99	70-131	4 20
Trichlorofluoromethane	ug/L	<0.18	50	50	50	55.6	57.1	111	114	50-150	3 20
Vinyl chloride	ug/L	<0.18	50	50	50	51.8	52.5	104	105	49-133	1 20
4-Bromofluorobenzene (S)	%							97	97	70-130	
Dibromofluoromethane (S)	%							107	107	70-130	
Toluene-d8 (S)	%							104	103	70-130	

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QUALITY CONTROL DATA

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

QC Batch:	229731	Analysis Method:	WI MOD DRO
QC Batch Method:	WI MOD DRO	Analysis Description:	WIDRO GCS
Associated Lab Samples:	40135081005		

METHOD BLANK: 1362922 Matrix: Solid

Associated Lab Samples: 40135081005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<0.80	2.0	07/14/16 09:07	

LABORATORY CONTROL SAMPLE & LCSD: 1362923

1362924

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40	26.4	27.1	66	68	70-120	3	20	L0

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QUALITY CONTROL DATA

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

QC Batch:	230190	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	40135081001, 40135081002, 40135081003, 40135081004, 40135081005		

SAMPLE DUPLICATE: 1365736

Parameter	Units	40135386001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	15.4	15.0	3	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

QC Batch: 229732

Analysis Method: EPA 1010

QC Batch Method: EPA 1010

Analysis Description: 1010 Flash Point, Closed Cup

Associated Lab Samples: 40135081005

LABORATORY CONTROL SAMPLE: 1362925

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Flashpoint	deg F		80.6			

SAMPLE DUPLICATE: 1363281

Parameter	Units	40135083019 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	131	111			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

QC Batch: 229870

Analysis Method: EPA 9095

QC Batch Method: EPA 9095

Analysis Description: 9095 PAINT FILTER LIQUID TEST

Associated Lab Samples: 40135081005

SAMPLE DUPLICATE: 1363903

Parameter	Units	40135061001 Result	Dup Result	RPD	Max RPD	Qualifiers
Free Liquids	no units	Pass	Pass			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 60492955 STH 23-DARLINGTON
Pace Project No.: 40135081

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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 at or above the adjusted LOD.

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

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
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.
P2 Re-extraction or re-analysis could not be performed due to insufficient sample amount.
W Non-detect results are reported on a wet weight basis.
pH Post-analysis pH measurement indicates insufficient VOA sample preservation.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60492955 STH 23-DARLINGTON

Pace Project No.: 40135081

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40135081005	WASTE CHAR (SITE 1)	WI MOD DRO	229731	WI MOD DRO	229787
40135081005	WASTE CHAR (SITE 1)	TPH GRO/PVOC WI ext.	229707	WI MOD GRO	229761
40135081001	DP1-1 (1-2')	EPA 3050	229740	EPA 6010	229842
40135081002	DP1-2 (2-4')	EPA 3050	229740	EPA 6010	229842
40135081003	DP1-3 (2-3')	EPA 3050	229740	EPA 6010	229842
40135081005	WASTE CHAR (SITE 1)	EPA 3050	229740	EPA 6010	229842
40135081001	DP1-1 (1-2')	EPA 5035/5030B	229744	EPA 8260	229749
40135081002	DP1-2 (2-4')	EPA 5035/5030B	229744	EPA 8260	229749
40135081003	DP1-3 (2-3')	EPA 5035/5030B	229744	EPA 8260	229749
40135081004	DP1-3 (8-9')	EPA 5035/5030B	229744	EPA 8260	229749
40135085001	DP1-1	EPA 8260	229821		
40135085002	DP1-2	EPA 8260	229821		
40135085003	DP1-3	EPA 8260	229821		
40135081001	DP1-1 (1-2')	ASTM D2974-87	230190		
40135081002	DP1-2 (2-4')	ASTM D2974-87	230190		
40135081003	DP1-3 (2-3')	ASTM D2974-87	230190		
40135081004	DP1-3 (8-9')	ASTM D2974-87	230190		
40135081005	WASTE CHAR (SITE 1)	ASTM D2974-87	230190		
40135081005	WASTE CHAR (SITE 1)	EPA 1010	229732		
40135081005	WASTE CHAR (SITE 1)	EPA 9095	229870		

REPORT OF LABORATORY ANALYSIS

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CHAIN OF CUSTODY

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

(Please Print Clearly)									
Company Name:		AECOM							
Branch/Location:		STEVENS POINT							
Project Contact:		KYLE WAGOMER							
Phone:		(915) 342-2038							
Project Number:		60492955							
Project Name:		5TH ST - Darlington							
Project State:		LOI							
Sampled By (Print):		Marcus Hopkins							
Sampled By (Sign):		<i>Marcus Hopkins</i>							
PO #:									
Regulatory Program:									
Data Package Options (billable) ☐ EPA Level III ☐ EPA Level IV		MS/MSD ☐ On your sample (billable) ☐ NOT needed on your sample		Matr A = Air B = Biota C = Charcoal O = Oil S = Soil SI = Sludge		COLLE			
PACE LAB #		CLIENT FIELD ID		DATE					
001		DP1-1 (1-2')		7/12/16					
002		DP1-2 (2-4')		7/19/16					
003		DP1-3 (2-3)		7/19/16					
004		DP1-3 (2-4)		7/19/16					
005		Waste (bar site 1)		7/19/16					
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									

[illegible]

Received By:	Date/Time:	PACE Project No.
Received By: <i>Swann & Wythe</i>	Date/Time: <i>7-13-76 1010</i>	<i>40135081</i>
Received By:	Date/Time:	Recept Temp = <i>ROTC</i>
Received By:	Date/Time:	Sample Recept pH
Received By:	Date/Time:	OK / Adjusted
Received By:	Date/Time:	<u>Covered</u> Custody Seal
Received By:	Date/Time:	Present / Not Present
Received By:	Date/Time:	Intact / Not Intact



Sample Condition Upon Receipt

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

Project #:

WO#: 40135081



Client Name:

AECOM

Courier: ☐ Fed Ex ☒ UPS ☐ Client ☐ Pace Other:

Tracking #: 12A478E90199570416

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ noCustody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ noPacking 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

Uncorr: ROI /Corr:

Biological Tissue is Frozen: ☐ yesTemp Blank Present: ☐ yes ☒ no☐ no

Person examining contents:

Date: 7-12-16

Initials: SW

Temp should be above freezing to 6°C for all sample except Biota.

Frozen Biota Samples should be received ≤ 0°C.

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.
- VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time:
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	
-Pace IR 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: S		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐ Yes ☐ No ☒ N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO ₃ , H ₂ SO ₄ ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐ Yes ☐ No ☒ N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐ Yes ☒ No	Initial when completed
		Lab Std #ID of preservative
		Date/Time:
Headspace in VOA Vials (>6mm):	☐ Yes ☐ No ☒ N/A	14.
Trip Blank Present:	☐ Yes ☐ No ☒ N/A	15.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review:

Date: 7-12-16



Sample Condition Upon Receipt

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

Client Name:

AECOM

Project:

WO#: 40135085



40135085

Courier: ☐ Fed Ex ☒ UPS ☐ Client ☐ Pace Other:

Tracking #: 12A47 8E90199570416

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ noCustody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ noPacking 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

Uncorr: ROI /Corr:

Biological Tissue is Frozen: ☐ yes☐ no

Temp Blank Present:

☐ yes ☒ no

Temp should be above freezing to 6°C for all sample except Biota.

Frozen Biota Samples should be received ≤ 0°C.

Comments:

Person examining contents:

Date: 7-12-16

Initials: SW

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.
- VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time:
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	
-Pace IR Containers Used:	☐ Yes ☐ No ☒ N/A	
Containers Intact:	☒ Yes ☐ No ☐ N/A	10. 002 + 003 - heavy Sediment 7-12-16 SW
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: W		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐ Yes ☐ No ☒ N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐ Yes ☐ No ☒ N/A	
exceptions: ☒ VOA coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☒ Yes ☐ No	Initial when completed
		Lab Std #ID of preservative
		Date/Time:
Headspace in VOA Vials (>6mm):	☐ Yes ☒ No ☐ N/A	14.
Trip Blank Present:	☐ Yes ☒ No ☐ N/A	15.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Person Contacted:

Date/Time:

If checked, see attached form for additional comments ☐

Comments/ Resolution:

Project Manager Review:

Date:

7-12-16

About AECOM

AECOM (NYSE: ACM) is built to deliver a better world. We design, build, finance and operate infrastructure assets for governments, businesses and organizations in more than 150 countries.

As a fully integrated firm, we connect knowledge and experience across our global network of experts to help clients solve their most complex challenges.

From high-performance buildings and infrastructure, to resilient communities and environments, to stable and secure nations, our work is transformative, differentiated and vital. A Fortune 500 firm, AECOM companies had revenue of approximately US\$19 billion during the 12 months ended June 30, 2015.

See how we deliver what others can only imagine at aecom.com and [@AECOM](https://twitter.com/AECOM).

Contact
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Project Manager
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