Beth Grant Property
STH 27 – CTH B to USH 63
City of Hayward, Sawyer County, Wisconsin



Phase 2.5 Environmental Sampling Investigation

WisDOT Project ID No. 8140-00-00
WDNR BRRTS No. 03-58-000766

March 2018

AECOM
200 Indiana Avenue
Stevens Point, WI 54481
T 715-341-8110
F 715-341-7390
AECOM Project No. 60553028

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10463 STH 27
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March 9, 2018

Prepared by:
Dan Barton
Environmental Engineer
daniel.barton@aecom.com

Date



March 9, 2018

Reviewed by:
Kyle Wagoner, P.G., CHMM
Project Manager
kyle.wagoner@aecom.com

Date

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Acronyms and Abbreviations

bgs	below ground surface
CTH	County Highway
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
USH	US Highway
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 next to the Beth Grant Property located at 10463 STH 27, Hayward, Sawyer County, Wisconsin. The Beth Grant Property is a former bulk petroleum storage facility and closed leaking underground storage tank (LUST) site (BRRTS No.03-58-000766). The site is registered with the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) as previously having four underground storage tanks (USTs) and nine aboveground storage tanks (ASTs), all of which were listed as closed/removed. The types of petroleum products contained in the removed tanks were leaded gasoline, fuel oil, and "unknown". 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 Beth Grant Property site.

On November 8, 2017, two direct push soil borings (B3-1 and B3-2) were advanced within the existing STH 27 right-of-way (ROW) adjacent to the Beth Grant Property. The borings were advanced to approximately 8 feet below ground surface (bgs). Two soil samples and one groundwater sample were collected from each boring for petroleum volatile organic compounds (VOCs) and lead (soil only) analysis. Field and analytical results for the samples collected during the Phase 2.5 indicated the following:

- A metal detector survey did not identify any potential USTs or associated piping within the investigation area.
- Photoionization detector (PID) readings of soil cuttings did not detect the presence of volatile organic vapors in any of the soil borings.
- VOCs were not detected in soil in any of the borings.
- Lead was detected in soil at apparent background concentrations.
- Groundwater was encountered in each boring within approximately 5 feet of the ground surface.
- VOCs were not detected in groundwater in any of the borings.

Based on the Phase 2.5 results, further investigation is not warranted. A notice to contractor "Contamination Beyond Project Limits" is warranted for the contract special provisions because the Beth Grant Property is a closed LUST site.

2.0 Investigation

2.1 Project Background

The Wisconsin Department of Transportation (WisDOT) is developing plans for improvements to State Highway (STH) 27 from County Highway (CTH) B to US Highway (USH) 63 in the City of Hayward, Sawyer County.

Significant project dates include:

- PS&E: August 1, 2018
- Construction: 2018 or 2019

The project corridor is an urban section of STH 27 between Michigan Avenue and STH 63, measuring approximately 0.5 miles in length. The proposed construction includes replacing pavement, adding curb and gutter, adding sidewalk and shared-use path, which will consist of excavation to an approximate depth of 2 feet below ground surface (bgs). Storm sewer utility will also be added, requiring excavation to an approximate depth of 8 feet bgs. Intersection improvements will be made, including a signalized intersection, which may require strip acquisitions.

Municipal utilities will be upgraded along the project corridor, including sanitary sewer and water main. Utility excavation depths will be as deep as 8 feet bgs in the vicinity of the Phase 2.5 investigation sites.

Ayres Associates performed a Phase 1 Hazardous Materials Assessment (Phase 1) for the project and documented findings in a draft Phase 1 report, dated March 2017. Based on the Phase 1 results, WisDOT requested a Phase 2.5 investigation at the Beth Grant Property (Site No. 3). According to the Phase 1 report, The Beth Grant Property is a former bulk petroleum storage facility and closed leaking underground storage tank (LUST) site (BRRTS No.03-58-000766). The site is registered with the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) as previously having four underground storage tanks (USTs) and nine aboveground storage tanks (ASTs), all of which were listed as closed/removed. The types of petroleum products contained in the removed tanks were leaded gasoline, fuel oil, and “unknown”. 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 Beth Grant Property site.

2.2 Purpose and Scope

The purpose of the Phase 2.5 was to investigate for the presence and/or extent of petroleum hydrocarbon contamination within STH 27 next to the Beth Grant property site.

The Phase 2.5 scope of work included:

- A metal detector survey for abandoned underground storage tanks (USTs) associated piping, and underground utilities within the investigation area.
- Advancement of two direct-push soil borings within the project limits adjacent to the site to a maximum depth of 8 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 two soil samples per boring from the direct contact zone (uppermost 4 feet) and at the bottom of the boring. Submittal of the soil samples to a laboratory for VOCs and naphthalene analysis.
- Collection of one representative soil sample from soil cuttings for waste characterization. Submitted the representative soil sample to the laboratory for Protocol T1 analysis.

- Collection of one groundwater sample directly from each soil boring for laboratory analysis of VOCs.
- Borehole closure in accordance with the requirements of Wisconsin Administrative Code (WAC), Chapter NR 141.
- Taking photographs of the site and 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:	Northwest 1/4 of the Northwest ¼, Section 27, Township 41 North, Range 11 west (see Fig. 1)
Address:	10463 STH 27, Hayward, Wisconsin
County:	Sawyer
Stationing:	approximately STA 510+00 to 513+00
GPS Coordinates:	Latitude 46.0110678 Longitude - 91.4832929
WTM Coordinates:	X 405169, Y 616,347

2.4 Description of Field Investigation

On Nov 8, 2017, two direct-push soil borings (B3-1 and B3-2) were advanced along the west side of the STH 27 ROW area adjacent to the Beth Grant Property. 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 Geiss Soil & Samples, LLC Merrill, 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.

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) and bottom of boring because PID readings did not detect the presence of volatile vapors. Soil sampling procedures are discussed in Appendix D.

One groundwater sample was collected from each soil probe boring for laboratory analysis. Groundwater sampling procedures are discussed in Appendix D.

After completion of 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 outside the City of Hayward Municipal Garage, located at 10395 S. Vermont Avenue. A non-hazardous IDW pickup request was emailed to VES with supporting documentation on December 8, 2017. Waste disposal request documentation is presented in Appendix F.

2.5 Subsurface Conditions

Subsurface soil encountered generally included medium to fine sand with trace pebbles to the borings termination depths. The ground surface at the boring locations is generally pavement and asphalt.

Field screening results did not indicate the presence of volatile organic vapor, odor or visible staining in any of the soil borings.

Based on United States Geological Survey geological mapping, it appears that native material in the area of the Beth Grant Property site is Mahtomedi loamy sand, underlain by undifferentiated sandstone.

Groundwater was encountered within approximately 5 feet of the ground surface during borehole advancement. Regional groundwater flow direction in the project area is generally expected to vary from the southwest to southeast in the direction of the Namekagon River. Local groundwater flow at the Beth Grant Property Site is generally to the southwest based on previous LUST site investigation results. The regional topography of the project area was generally flat.

The metal detector survey did not indicate the presence of UST's or associated piping within the investigation area.

2.6 Analytical Parameters and Results

Analytical parameters were selected in general accordance with WisDOT and WDNR guidance for investigations of LUST sites and past land use. Soil and groundwater samples submitted to Pace were analyzed for VOCs and lead (soil). Analytical results for soil samples were compared against the WAC, Chapter NR 720 direct contact and groundwater pathway residual contamination levels (RCLs), updated December 2017. Analytical results for groundwater samples were compared against the WAC, Chapter NR 140 enforcement standards (ES) and preventive action limits (PAL), updated February 2017. 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 and 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 below detection limits by the lab in both soil borings.

Lead was reported at concentrations ranging 1.6 to 3.3 mg/kg, which are below the NR 720 soil-to-groundwater pathway RCL of 27 mg/kg and the non-industrial direct contact RCL of 400 mg/kg in borings B3-1 and B3-2.

2.6.2 Groundwater

VOCs were reported below detection limits by the lab for the groundwater samples collected from borings B3-1 and B3-2.

2.7 Conclusions and Recommendation

Field and analytical obtained from the Phase 2.5 indicated the following:

- A metal detector survey did not identify any potential USTs or associated piping within the investigation area.
- Photoionization detector (PID) readings of soil cuttings did not detect the presence of volatile organic vapors in any of the soil borings.
- VOCs were not detected in soil in any of the borings.
- Lead was detected in soil at apparent background concentrations.
- Groundwater was encountered in each boring within approximately 5 feet of the ground surface.
- VOCs were not detected in groundwater in any of the borings.

Based on the Phase 2.5 results, further investigation is not warranted. A notice to contractor “Contamination Beyond Project Limits” is warranted for the contract special provisions because the Beth Grant Property is a closed LUST site.

3.0 Limitations

AECOM's scope of services was limited to performing a Phase 2.5 within the STH 27 ROW adjacent to the Beth Grant Property 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

Ayres Associates, Phase 1 Hazardous Materials Assessment Report, STH 27, County Highway B to US Highway 63, City of Hayward, Sawyer County, Wisconsin, March, 2017.

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

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

Wisconsin Administrative Code, Chapter NR 140, Groundwater Quality, Register, December 2017, No. 715

Wisconsin Department of Natural Resources Remediation and Redevelopment Program, RCL spreadsheet, Updated December 2017.

Soil Sample Analytical Results

Table 1

Table 1

Phase 2.5 Soil Sample Analytical Results
Beth Grant Property (Site #3)
WIS 27 - Hayward
City of Hayward, Sawyer County, Wisconsin

AECOM Project No. 60553028
WisDOT Project No. 8140-00-00

			Soil Boring/Sample ID:	**B3-1**	**B3-1**	**B3-2**	**B3-2**	**Waste Char T1**
			Sample Depth (feet):	**3-4'**	**7-8'**	**1-2'**	**7-8'**	**-**
			PID Readings (i.u):	**0.3**	**1.7**	**0.7**	**0.4**	**-**
			Sample Date:	**11/8/2017**	**11/8/2017**	**11/8/2017**	**11/8/2017**	**11/8/2017**
Analyte	**NR 720 Direct Contact RCLs**		**Soil-to-Groundwater Pathway RCL**	**Results**				
	Non-Industrial	**Industrial**						
VOCs by EPA Method 8260 (µg/kg)								
Benzene	1,600	7,070	5.1	<25.0	<25.0	<25.0	<25.0	<25.0
Ethylbenzene	8,020	35,400	1,570	<25.0	<25.0	<25.0	<25.0	-
Methyl-tert-butyl ether	63,800	282,000	27	<25.0	<25.0	<25.0	<25.0	-
Naphthalene	5,520	24,100	658.2	<40.0	<40.0	<40.0	<40.0	-
Toluene	818,000	818,000	1,107.2	<25.0	<25.0	<25.0	<25.0	-
1,2,4-Trimethylbenzene	219,000	219,000	1,382.1 (combined)	<25.0	<25.0	<25.0	<25.0	-
1,3,5-Trimethylbenzene	182,000	182,000		<25.0	<25.0	<25.0	<25.0	-
m&p-Xylene	778,000	778,000	3,960 (combined)	<50.0	<50.0	<50.0	<50.0	-
o-Xylene	434,000	434,000		<25.0	<25.0	<25.0	<25.0	-
Metals by EPA Method 6010 (mg/kg)								
Lead (total)	400	800	27.0	3.3	-	1.6	-	2.8
Waste Characterization								
DRO (mg/kg)	NE	NE	NE	-	-	-	-	<1.1
GRO (mg/kg)	NE	NE	NE	-	-	-	-	<2.6
Flashpoint (°F)	NE	NE	NE	-	-	-	-	>210
Paint Filter Test (free liquids)	NE	NE	NE	-	-	-	-	Pass

Notes:

All results were below WI regulatory standards.

Non-Industrial and Industrial Not-to-Exceed Direct-Contact Residual Contaminant Levels taken from the WDNR's NR 720 RCLs spreadsheet, updated December 2017. Soil-to-Groundwater Pathway Residual Contaminant Level, DF = 2, taken from the WDNR's NR 720 RCLs spreadsheet, updated December 2017.

NE: Not Established

Waste Char T1: Waste Characterization sample analyzed for Veolia Environmental Services Protocol T1

Groundwater Sample Analytical Results

Table 2

Table 2
Phase 2.5 Groundwater Sample Analytical Results
Beth Grant Property (Site #3)
WIS 27 - Hayward
City of Hayward, Sawyer County, Wisconsin

AECOM Project No. 60553028
WisDOT Project No. 8140-00-00

			Soil Boring ID:	**B3-1**	**B3-2**
			Depth to Water (ft.):	**5'**	**5'**
			Sample Date:	**11/8/2017**	**11/8/2017**
Analyte	**NR 140 Standards**		**Results**	
	ES	**PAL**		
VOCs by EPA Method 8260 (µg/L)				
Benzene	5	0.50	<0.50	<0.50
Ethylbenzene	700	140	<0.50	<0.50
Methyl-tert-butyl ether	60	12	<0.17	<0.17
Naphthalene	100	10	<2.5	<2.5
Toluene	800	160	<0.50	<0.50
1,2,4-Trimethylbenzene	480 (combined)	96 (combined)	<0.50	<0.50
1,3,5-Trimethylbenzene			<0.50	<0.50
m&p-Xylene	2,000 (combined)	400 (combined)	<1.0	<1.0
o-Xylene			<0.50	<0.50

Notes:

All results were below WI regulatory standards.

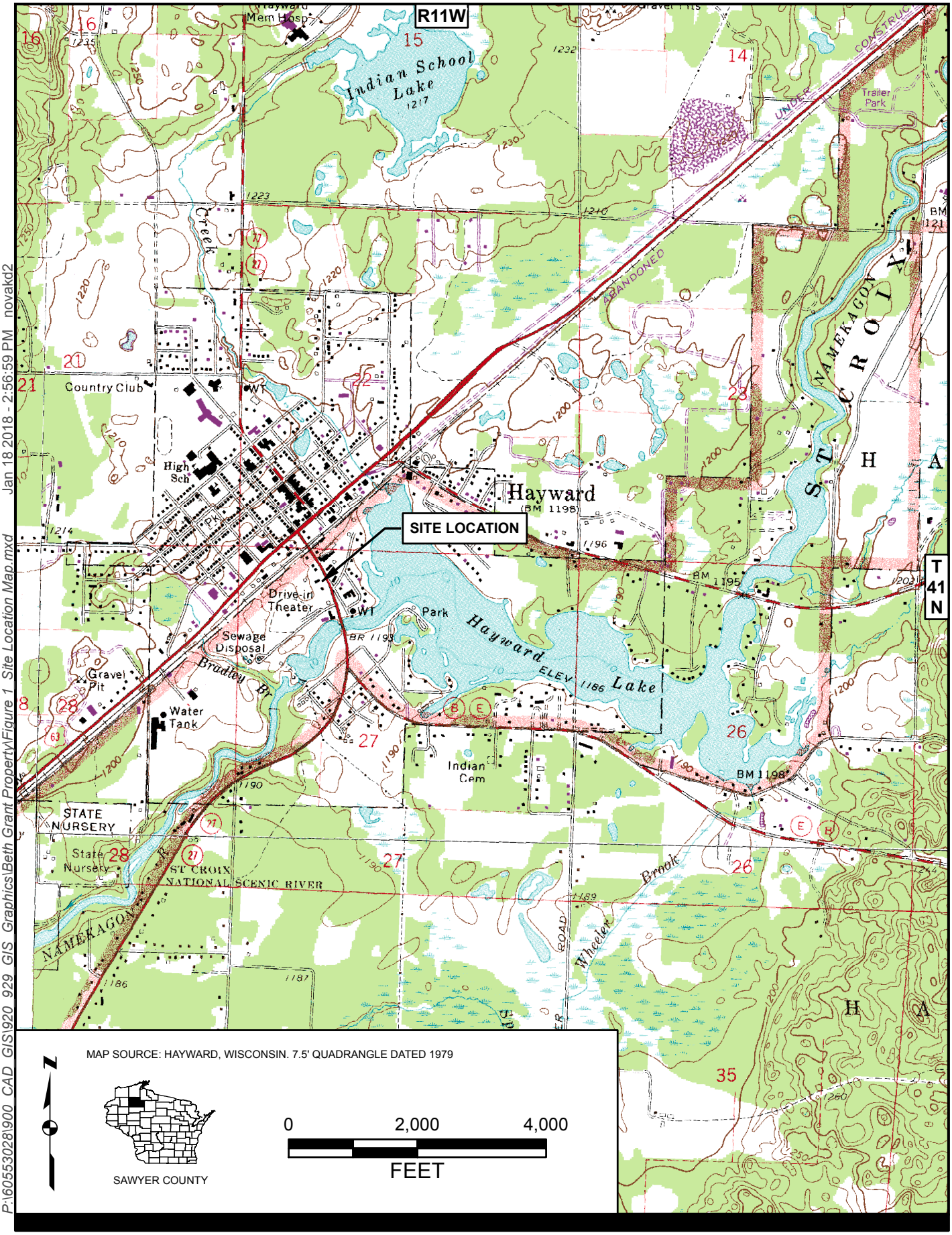
Water quality standards taken from Chapter NR 140, Wis Admin. Code, February 2017.

ES: Enforcement Standard.

PAL: Preventative Action Limit.

Site Location Map

Figure 1



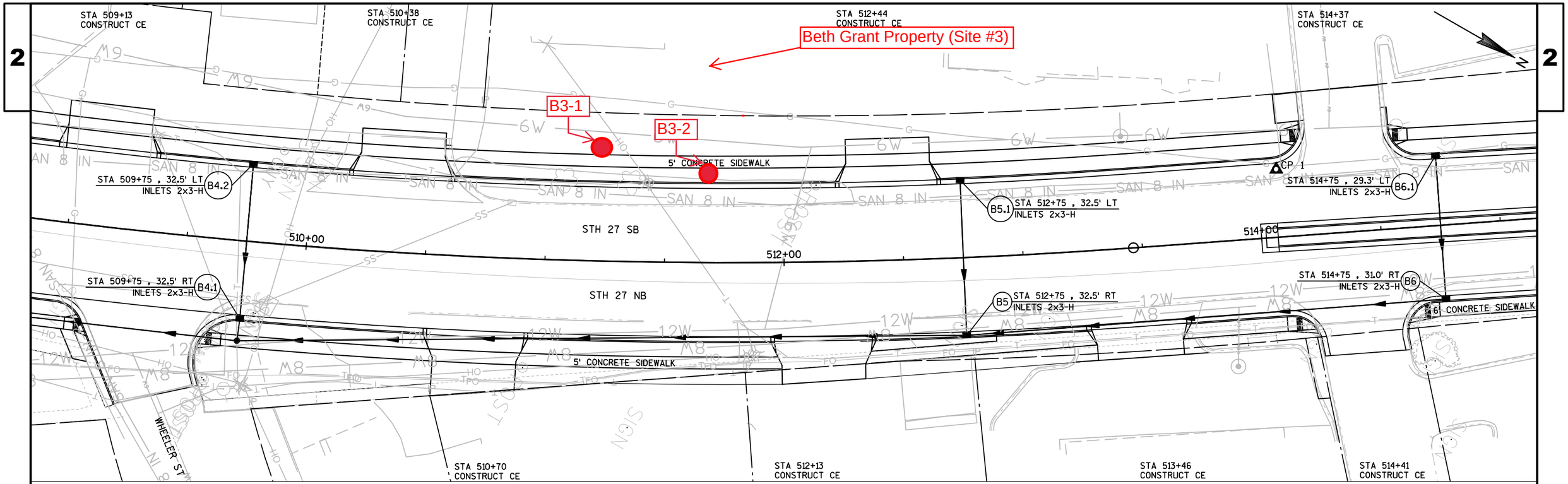
SITE LOCATION MAP
SAWYER COUNTY
AECOM Project No.60553028
WISDOT Project No. 8140-00-00
Date: 2018/01

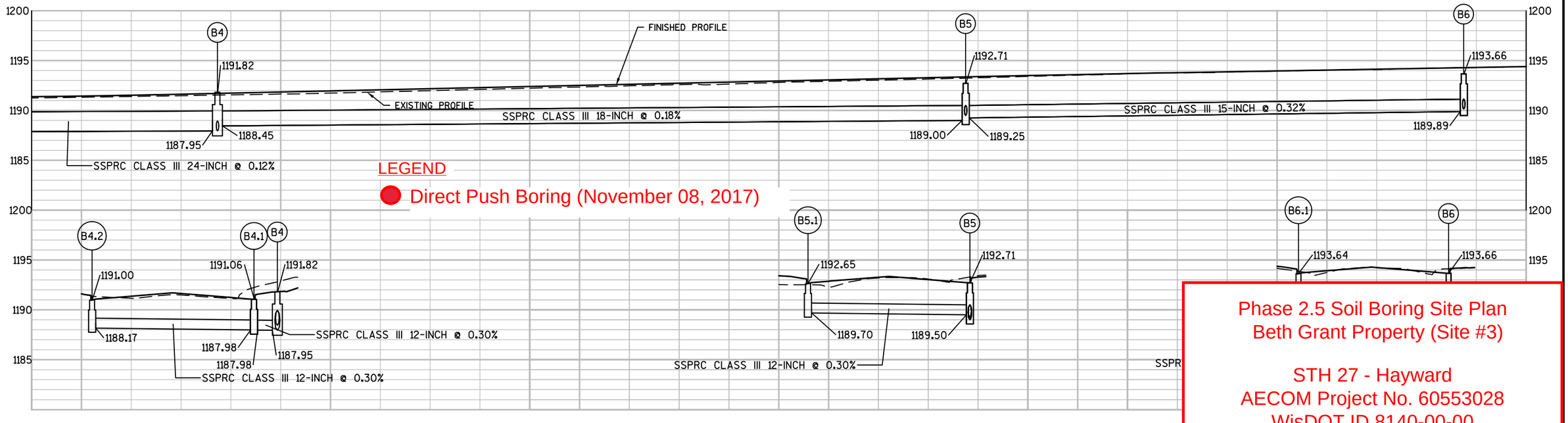
BETH GRANT PROPERTY
10463 STH 27
HAYWARD, WISCONSIN

AECOM
Figure: 1

Site Plan – Boring Locations

Figure 2





Phase 2.5 Soil Boring Site Plan
Beth Grant Property (Site #3)

STH 27 - Hayward
AECOM Project No. 60553028
WisDOT ID 8140-00-00

PROJECT NO: 8140-00-00	HWY: STH 27	COUNTY: SAWYER	STORM SEWER DETAILS: STH 27	SHEET	E

FILE NAME : V:\TRANS-EC\410696\C3D\SHEETSPLAN\022500_SS.DWG
LAYOUT NAME - 022504_SS

PLOT DATE : 8/7/2017 10:36 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : PLOT SCALE : 1 IN:40 FT

Photograph Log

Appendix A

AECOM

PHOTOGRAPHIC LOG

Client Name: Wisconsin Department of Transportation	**Site Location:** Beth Grant Property, City of Hayward, Sawyer County, WI.	**Project No.** 60553028

Photo No.	**Date:**
1	11/8/2017

Direction Photo Taken:

Southeast

Description:

Boings B3-1 and B3-2



Soil Boring Logs

Appendix B

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
STH 27 - Beth Grant Property		B3-1

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Darrin Prentice Geiss	11/8/2017	11/8/2017	Direct Push

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

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
NW 1/4 of NW 1/4 of Section 27, T 41 N,R 9 W
Lat 46 ° 0 ' 39.8 "
Long 91 ° 28 ' 59.8 "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Sawyer	58	Hayward

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0.5	Crushed road surface										
			1.0	Dark brown sand, medium with trace pebbles (fill)	GP			0.2						
			3.0	Dark brown to black, medium to fine sand (fill)	SW									
			4.0	Light brown, medium grained sand	SP			0.3						
			5.0	Dark brown to gray, medium grained sand	SP									
			6.0	Gray to light brown, medium sand with some fines	SM			1.7						
			8.0	End of Boring at 8.0 feet										

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

Signature Paul Barta Firm AECOM
200 Indiana Avenue, Stevens Point, Wisconsin 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 be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
STH 27 - Beth Grant Property		B3-2

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Darrin Prentice Geiss	11/8/2017	11/8/2017	Direct Push

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

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
NW 1/4 of NW 1/4 of Section 27, T 41 N,R 9 W

Lat 46 ° 0 ' 39.8 "
Long 91 ° 28 ' 59.8 "

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

Facility ID	County	County Code	Civil Town/City/ or Village
	Sawyer	58	Hayward

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0.5	Crushed road surface										
			1.0	Brown to darkbrown, medium grained sand with some fines and trace pebbles (fill)	SP			0.5						
			4.0	Light brown, fine sand with trace pebbles (fill)	GM			0.7						
			5.0	Light brown, medium grained sand with fines and some pebbles (fill) Saturated at 5.0 feet	GM									
			6.0	Brown to gray, coarse grained sand with pebbles and some gravel	GW			0.4						
			8.0	End of Boring at 8.0 feet										

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

Signature [signature] Firm AECOM
200 Indiana Avenue, Stevens Point, Wisconsin 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 be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

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

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

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, 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 DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment
☐ Waste Management ☑ Other: N/A

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Sawyer		

Latitude / Longitude (see instructions) ____ N ____ W | Format Code: ☐ DD ☐ DDM | Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: 10453 – 10463 STH 27

Well City, Village or Town	Well ZIP Code
Hayward	54843

Subdivision Name	Lot #
N/A	

Reason for Removal from Service	WI Unique Well # of Replacement Well
Sampling Complete	

2. Facility / Owner Information

Facility Name: Beth Grant Property (Site No. 3)

Facility ID (FID or PWS):

License/Permit/Monitoring #:

Original Well Owner: WisDOT

Present Well Owner: WisDOT

Mailing Address of Present Owner:

City of Present Owner	State	ZIP Code

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 11/08/2017

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug ☒ Other (specify): Direct Push

Formation Type:
☐ Unconsolidated Formation ☐ Bedrock

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

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
N/A	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
Liner(s) perforated?	☐ 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 ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ 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
Hole Plug			
Surface	8'		

6. Comments

Boring B3-1

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Geiss Soil & Sampling LLC		11/08/17

Street or Route	Telephone Number
W4490 Pope Road	(715) 539-3928

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Merrill	WI	54452	Paul Bartko	11/17/2017

DNR Use Only

Date Received	Noted By

Comments:

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

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, 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 DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment
☐ Waste Management ☑ Other: N/A

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Sawyer		

Latitude / Longitude (see instructions)	Format Code	Method Code
N	☐ DD	☐ GPS008
W	☐ DDM	☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: 10453 – 10463 STH 27

Well City, Village or Town	Well ZIP Code
Hayward	54843

Subdivision Name	Lot #
N/A	

Reason for Removal from Service	WI Unique Well # of Replacement Well
Sampling Complete	

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Facility Name: Beth Grant Property (Site No. 3)

Facility ID (FID or PWS):

License/Permit/Monitoring #:

Original Well Owner: WisDOT

Present Well Owner: WisDOT

Mailing Address of Present Owner:

City of Present Owner	State	ZIP Code

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 11/08/2017

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): Direct Push

Formation Type:
☐ Unconsolidated Formation ☐ Bedrock

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

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
N/A	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
Liner(s) perforated?	☐ 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 ☐ Concrete
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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
Hole Plug	Surface	8'		

6. Comments

Boring B3-2

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Geiss Soil & Sampling LLC		11/08/17

Street or Route	Telephone Number
W4490 Pope Road	(715) 539-3929

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Merrill	WI	54452	Daniel Geiss	11/17/2017

DNR Use Only

Date Received	Noted By

Comments:

Waste Disposal Request Documentation

Appendix F

From:	Barton, Daniel
To:	"John.mueller@veolia.com"
Cc:	"Greg Holtzen"; "Kenneth Gruennert"; "DOT Hazmat Unit e-Mailbox (dothazmatunit@dot.wi.gov)"; Wagoner, Kyle; "Amy.Adrihan@dot.wi.gov"
Subject:	Non-Haz pick-up request - WIS 27 Phase 2.5 Sawyer County, WI (WisDOT ID 8140-00-00)
Date:	Friday, December 08, 2017 11:46:00 AM
Attachments:	Waste Characterization (Pace).pdf Location Map.pdf bucket location.pdf 20171108_152940.jpg 20171108_152933.jpg dt1229 (non-haz June 2016).pdf

---

Hello John-

Please process the attached IDW pickup request and let me know if you need anything else. Many thanks.

Regards,

Dan Barton

Dan Barton, EIT
Environmental Engineer, Environment
D +1-715-342-3025
M +1-248-385-7046
daniel.barton@aecom.com

AECOM
200 Indiana Avenue
Stevens Point, Wisconsin 54481, U.S.A.
T +1-715-341-8110
aecom.com

NON-HAZARDOUS WASTE INVENTORY RECORD

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

DTSD Region and Office Northwest - Superior		
WisDOT Project ID 8140-00-00	County Sawyer	Highway and Termini STH 27
Site Name Beth Grant Property, Former Phillips 66, Subway		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 60553028		
Generation Date (m/d/yyyy) 11/8/2017		
Comments, special instructions for pickup or site access 5 plastic five gallon buckets containing soil cuttings and purge water are temporarily stored next to the Hayward City municipal garage located at 10395 S. Vermont Avenue (see location map and photo). Local contact is John McCue, (#715-634-4612). The cuttings were analyzed for Protocol T1 parameters (see Pace lab report).		

Waste Description – describe containers of similar size and contents in one row. Insert additional rows as needed.
Number and Label Each Container.

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
1-4	5 gallon plastic pail	20 gallons	Soil borings	Purge/wash water
5	5 gallon plastic pail	5 gallons	Soil borings	Soil cuttings

Total Number of Containers to be picked up: 5

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.


Johnson St
5th St
W 4th St
Vermont Ave
Northern Lakes Co-op Pharmacy
McDonald's
Walgreens
US Hwy 63
Michigan Ave
Forest Ave
W 4th St
Spruce Ave
W 2nd St
Florida Ave
Railroad St
Wheeler St
Bay Ave
Hayward Amusement Center
Dyno Dr
W 3rd St
Hayward Feed & Seed
Donnellan Dr
Arclin
Fresh Water Fishing Hall of Fame
Hall of Fame
Location of Hayward City Garage
Nursery Rd
Hanson Tire & Custom Exhaust
Bradley Branch
Hayward Flowage 94
S 2nd St
Google


Railroad St
Cabaret Cabinetry
Location of five 5-gal buckets containing soil (1) and water (4) from WIS 27 Phase 2.5
Sawyer County Dog Pound
Google


240/120
EMPLOYEE
PARKING
Falls

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

ANALYTICAL RESULTS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Sample: WC SITE 3 **Lab ID: 40160619023** Collected: 11/08/17 13:00 Received: 11/10/17 10:05 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	**<1.1**	mg/kg	3.7	1.1	1	11/15/17 12:51	11/16/17 15:52		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<0.025**	mg/kg	0.060	0.025	1	11/16/17 07:30	11/16/17 15:12	71-43-2	W
Gasoline Range Organics	**<2.6**	mg/kg	5.2	2.6	1	11/16/17 07:30	11/16/17 15:12		
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	11/16/17 07:30	11/16/17 15:12	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	**2.8**	mg/kg	1.3	0.44	1	11/15/17 12:16	11/16/17 23:30	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**4.6**	%	0.10	0.10	1		11/16/17 16:26		
1010 Flashpoint,Closed Cup	Analytical Method: EPA 1010								
Flashpoint	**>210**	deg F			1		11/16/17 11:26		
9095 Paint Filter Liquid Test	Analytical Method: EPA 9095								
Free Liquids	**Pass**	no units			1		11/14/17 10:55		

REPORT OF LABORATORY ANALYSIS

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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

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

November 27, 2017

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

RE: Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Dear Kyle Wagoner:
Enclosed are the analytical results for sample(s) received by the laboratory on November 10, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC 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
christopher.hyska@pacelabs.com
(920)469-2436
Project Manager

Enclosures

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

CERTIFICATIONS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

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

SAMPLE SUMMARY

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40160619001	TRIP BLANK	Water	11/08/17 13:50	11/10/17 10:05
40160619002	TRIP BLANK	Solid	11/08/17 13:50	11/10/17 10:05
40160619003	B5-1	Water	11/08/17 11:00	11/10/17 10:05
40160619004	B5-2	Water	11/08/17 11:25	11/10/17 10:05
40160619005	B5-3	Water	11/08/17 12:00	11/10/17 10:05
40160619006	B3-1	Water	11/08/17 12:20	11/10/17 10:05
40160619007	B3-2	Water	11/08/17 13:00	11/10/17 10:05
40160619008	B4-5	Water	11/08/17 13:20	11/10/17 10:05
40160619009	B4-4	Water	11/08/17 13:45	11/10/17 10:05
40160619010	B4-3	Water	11/08/17 14:10	11/10/17 10:05
40160619011	B4-2	Water	11/08/17 14:30	11/10/17 10:05
40160619012	B4-1	Water	11/08/17 14:55	11/10/17 10:05
40160619013	B3-1 (3-4')	Solid	11/08/17 12:10	11/10/17 10:05
40160619014	B3-1 (7-8')	Solid	11/08/17 12:15	11/10/17 10:05
40160619015	B3-2 (1-2')	Solid	11/08/17 12:45	11/10/17 10:05
40160619016	B3-2 (7-8')	Solid	11/08/17 12:45	11/10/17 10:05
40160619017	B4-5 (3-4)	Solid	11/08/17 13:10	11/10/17 10:05
40160619018	B4-5 (7-8)	Solid	11/08/17 13:15	11/10/17 10:05
40160619019	B4-4 (2-3')	Solid	11/08/17 13:25	11/10/17 10:05
40160619020	B4-4 (7-8')	Solid	11/08/17 13:40	11/10/17 10:05
40160619021	WC SITE 5	Solid	11/08/17 11:30	11/10/17 10:05
40160619022	WC SITE 4	Solid	11/08/17 14:10	11/10/17 10:05
40160619023	WC SITE 3	Solid	11/08/17 13:00	11/10/17 10:05
40160619024	B5-1 (2-3')	Solid	11/08/17 10:45	11/10/17 10:05
40160619025	B5-1 (7-8')	Solid	11/08/17 10:55	11/10/17 10:05
40160619026	B5-2 (1-2')	Solid	11/08/17 11:10	11/10/17 10:05
40160619027	B5-2 (7-8')	Solid	11/08/17 11:15	11/10/17 10:05
40160619028	B5-2 (3-4')	Solid	11/08/17 11:10	11/10/17 10:05
40160619029	B5-3 (2-3')	Solid	11/08/17 11:40	11/10/17 10:05
40160619030	B5-3 (1-2')	Solid	11/08/17 11:50	11/10/17 10:05
40160619031	B5-3 (7-8')	Solid	11/08/17 11:55	11/10/17 10:05
40160619032	B4-3 (1-2')	Solid	11/08/17 13:55	11/10/17 10:05
40160619033	B4-3 (7-8')	Solid	11/08/17 14:00	11/10/17 10:05
40160619034	B4-2 (1-2')	Solid	11/08/17 14:25	11/10/17 10:05
40160619035	B4-2 (6-7')	Solid	11/08/17 14:25	11/10/17 10:05
40160619036	B4-2 (7-8')	Solid	11/08/17 14:30	11/10/17 10:05
40160619037	B4-1 (3-4')	Solid	11/08/17 14:45	11/10/17 10:05

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

SAMPLE SUMMARY

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40160619038	**B4-1 (7-8')**	Solid	11/08/17 14:50	11/10/17 10:05

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SAMPLE ANALYTE COUNT

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40160619001	**TRIP BLANK**	EPA 8260	LAP	64	PASI-G
40160619002	**TRIP BLANK**	EPA 8260	LAP	64	PASI-G
40160619003	**B5-1**	EPA 8260	LAP	64	PASI-G
40160619004	**B5-2**	EPA 8260	LAP	64	PASI-G
40160619005	**B5-3**	EPA 8260	LAP	64	PASI-G
40160619006	**B3-1**	EPA 8260	LAP	64	PASI-G
40160619007	**B3-2**	EPA 8260	LAP	64	PASI-G
40160619008	**B4-5**	EPA 8260	LAP	64	PASI-G
40160619009	**B4-4**	EPA 8260	LAP	64	PASI-G
40160619010	**B4-3**	EPA 8260	LAP	64	PASI-G
40160619011	**B4-2**	EPA 8260	LAP	64	PASI-G
40160619012	**B4-1**	EPA 8260	LAP	64	PASI-G
40160619013	**B3-1 (3-4')**	EPA 6010	JLD	1	PASI-G
		EPA 8260	LAP	64	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
40160619014	**B3-1 (7-8')**	EPA 8260	LAP	64	PASI-G
40160619015	**B3-2 (1-2')**	EPA 6010	JLD	1	PASI-G
		EPA 8260	LAP	64	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
40160619016	**B3-2 (7-8')**	EPA 8260	LAP	64	PASI-G
40160619017	**B4-5 (3-4)**	EPA 6010	JLD	1	PASI-G
		EPA 8260	LAP	64	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
40160619018	**B4-5 (7-8)**	EPA 8260	LAP	64	PASI-G
40160619019	**B4-4 (2-3')**	EPA 6010	JLD	1	PASI-G
		EPA 8260	LAP	64	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
40160619020	**B4-4 (7-8')**	EPA 8260	LAP	64	PASI-G
40160619021	**WC SITE 5**	WI MOD DRO	ABF	1	PASI-G
		WI MOD GRO	ALD	3	PASI-G
		EPA 6010	JLD	1	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
		EPA 1010	DEY	1	PASI-G
		EPA 9095	DEY	1	PASI-G
40160619022	**WC SITE 4**	WI MOD DRO	ABF	1	PASI-G
		WI MOD GRO	ALD	3	PASI-G
		EPA 6010	JLD	1	PASI-G

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Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		ASTM D2974-87	KTS	1	PASI-G
		EPA 1010	DEY	1	PASI-G
		EPA 9095	DEY	1	PASI-G
40160619023	**WC SITE 3**	WI MOD DRO	ABF	1	PASI-G
		WI MOD GRO	ALD	3	PASI-G
		EPA 6010	JLD	1	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
		EPA 1010	DEY	1	PASI-G
		EPA 9095	DEY	1	PASI-G
40160619024	**B5-1 (2-3')**	EPA 6010	JLD	1	PASI-G
		EPA 8260	LAP	64	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
40160619025	**B5-1 (7-8')**	EPA 8260	LAP	64	PASI-G
40160619026	**B5-2 (1-2')**	EPA 8260	LAP	64	PASI-G
40160619027	**B5-2 (7-8')**	EPA 8260	LAP	64	PASI-G
40160619028	**B5-2 (3-4')**	EPA 6010	JLD	1	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
40160619029	**B5-3 (2-3')**	EPA 6010	JLD	1	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40160619030	**B5-3 (1-2')**	EPA 8260	LAP	64	PASI-G
40160619031	**B5-3 (7-8')**	EPA 8260	LAP	64	PASI-G
40160619032	**B4-3 (1-2')**	EPA 8260	LAP	64	PASI-G
40160619033	**B4-3 (7-8')**	EPA 6010	JLD	1	PASI-G
		EPA 8260	LAP	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40160619034	**B4-2 (1-2')**	EPA 8260	LAP	64	PASI-G
40160619035	**B4-2 (6-7')**	EPA 6010	JLD	1	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40160619036	**B4-2 (7-8')**	EPA 8260	LAP	64	PASI-G
40160619037	**B4-1 (3-4')**	EPA 8260	LAP	64	PASI-G
40160619038	**B4-1 (7-8')**	EPA 6010	JLD	1	PASI-G
		EPA 8260	LAP	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G

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SUMMARY OF DETECTION

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40160619005	**B5-3**					
EPA 8260	n-Butylbenzene	1.2	ug/L	1.0	11/15/17 22:44	
EPA 8260	Ethylbenzene	71.5	ug/L	1.0	11/15/17 22:44	
EPA 8260	Isopropylbenzene (Cumene)	6.3	ug/L	1.0	11/15/17 22:44	
EPA 8260	Naphthalene	41.7	ug/L	5.0	11/15/17 22:44	
EPA 8260	n-Propylbenzene	8.8	ug/L	1.0	11/15/17 22:44	
EPA 8260	Toluene	3.9	ug/L	1.0	11/15/17 22:44	
EPA 8260	1,2,4-Trimethylbenzene	94.7	ug/L	1.0	11/15/17 22:44	
EPA 8260	1,3,5-Trimethylbenzene	12.6	ug/L	1.0	11/15/17 22:44	
EPA 8260	m&p-Xylene	136	ug/L	2.0	11/15/17 22:44	
EPA 8260	o-Xylene	34.8	ug/L	1.0	11/15/17 22:44	
40160619009	**B4-4**					
EPA 8260	Trichloroethene	0.82J	ug/L	1.0	11/15/17 23:29	
40160619010	**B4-3**					
EPA 8260	Ethylbenzene	699	ug/L	25.0	11/16/17 09:40	
EPA 8260	Isopropylbenzene (Cumene)	25.3	ug/L	25.0	11/16/17 09:40	
EPA 8260	Naphthalene	243	ug/L	125	11/16/17 09:40	
EPA 8260	n-Propylbenzene	76.0	ug/L	25.0	11/16/17 09:40	
EPA 8260	1,2,4-Trimethylbenzene	1030	ug/L	25.0	11/16/17 09:40	
EPA 8260	1,3,5-Trimethylbenzene	299	ug/L	25.0	11/16/17 09:40	
EPA 8260	m&p-Xylene	4060	ug/L	50.0	11/16/17 09:40	
EPA 8260	o-Xylene	1560	ug/L	25.0	11/16/17 09:40	
40160619011	**B4-2**					
EPA 8260	Ethylbenzene	138	ug/L	5.0	11/16/17 10:02	
EPA 8260	Isopropylbenzene (Cumene)	6.5	ug/L	5.0	11/16/17 10:02	
EPA 8260	p-Isopropyltoluene	19.4	ug/L	5.0	11/16/17 10:02	
EPA 8260	Naphthalene	95.9	ug/L	25.0	11/16/17 10:02	
EPA 8260	n-Propylbenzene	24.6	ug/L	5.0	11/16/17 10:02	
EPA 8260	Toluene	11.8	ug/L	5.0	11/16/17 10:02	
EPA 8260	1,2,4-Trimethylbenzene	509	ug/L	5.0	11/16/17 10:02	
EPA 8260	1,3,5-Trimethylbenzene	244	ug/L	5.0	11/16/17 10:02	
EPA 8260	m&p-Xylene	926	ug/L	10.0	11/16/17 10:02	
EPA 8260	o-Xylene	249	ug/L	5.0	11/16/17 10:02	
40160619013	**B3-1 (3-4')**					
EPA 6010	Lead	3.3	mg/kg	1.3	11/16/17 23:11	
ASTM D2974-87	Percent Moisture	6.1	%	0.10	11/16/17 15:35	
40160619015	**B3-2 (1-2')**					
EPA 6010	Lead	1.6	mg/kg	1.3	11/16/17 23:14	
ASTM D2974-87	Percent Moisture	3.6	%	0.10	11/16/17 15:35	
40160619017	**B4-5 (3-4)**					
EPA 6010	Lead	23.4	mg/kg	1.3	11/16/17 23:16	
ASTM D2974-87	Percent Moisture	5.3	%	0.10	11/16/17 15:35	
40160619019	**B4-4 (2-3')**					
EPA 6010	Lead	0.79J	mg/kg	1.3	11/16/17 23:18	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40160619019	**B4-4 (2-3')**					
ASTM D2974-87	Percent Moisture	3.3	%	0.10	11/16/17 16:26	
40160619021	**WC SITE 5**					
WI MOD DRO	Diesel Range Organics	21.6	mg/kg	3.5	11/16/17 15:33	DC
WI MOD GRO	Gasoline Range Organics	3.5J	mg/kg	5.3	11/16/17 13:55	G-
EPA 6010	Lead	5.1	mg/kg	1.3	11/16/17 23:26	
ASTM D2974-87	Percent Moisture	5.6	%	0.10	11/16/17 16:26	
EPA 1010	Flashpoint	>210	deg F		11/13/17 16:39	
EPA 9095	Free Liquids	Pass	no units		11/14/17 10:50	
40160619022	**WC SITE 4**					
WI MOD DRO	Diesel Range Organics	37.2	mg/kg	3.6	11/16/17 15:42	DC
WI MOD GRO	Gasoline Range Organics	24.4	mg/kg	5.3	11/16/17 15:38	G+
EPA 6010	Lead	12.9	mg/kg	1.3	11/16/17 23:28	
ASTM D2974-87	Percent Moisture	6.0	%	0.10	11/16/17 16:26	
EPA 1010	Flashpoint	>210	deg F		11/16/17 10:26	
EPA 9095	Free Liquids	Pass	no units		11/14/17 10:53	
40160619023	**WC SITE 3**					
EPA 6010	Lead	2.8	mg/kg	1.3	11/16/17 23:30	
ASTM D2974-87	Percent Moisture	4.6	%	0.10	11/16/17 16:26	
EPA 1010	Flashpoint	>210	deg F		11/16/17 11:26	
EPA 9095	Free Liquids	Pass	no units		11/14/17 10:55	
40160619024	**B5-1 (2-3')**					
EPA 6010	Lead	2.3	mg/kg	1.3	11/16/17 23:33	
ASTM D2974-87	Percent Moisture	4.6	%	0.10	11/16/17 16:26	
40160619028	**B5-2 (3-4')**					
EPA 6010	Lead	1.7	mg/kg	1.2	11/16/17 23:35	
ASTM D2974-87	Percent Moisture	4.0	%	0.10	11/20/17 15:14	
40160619029	**B5-3 (2-3')**					
EPA 6010	Lead	1.3	mg/kg	1.3	11/16/17 23:37	
ASTM D2974-87	Percent Moisture	2.8	%	0.10	11/11/17 07:39	
40160619033	**B4-3 (7-8')**					
EPA 6010	Lead	5.1	mg/kg	1.3	11/16/17 23:40	
EPA 8260	1,2,4-Trimethylbenzene	42.9J	ug/kg	64.1	11/21/17 01:42	
ASTM D2974-87	Percent Moisture	6.4	%	0.10	11/11/17 07:39	
40160619035	**B4-2 (6-7')**					
EPA 6010	Lead	3.5	mg/kg	1.4	11/16/17 23:42	
ASTM D2974-87	Percent Moisture	6.4	%	0.10	11/11/17 07:39	
40160619036	**B4-2 (7-8')**					
EPA 8260	sec-Butylbenzene	57.2J	ug/kg	60.0	11/21/17 03:14	
EPA 8260	n-Propylbenzene	69.4	ug/kg	60.0	11/21/17 03:14	
EPA 8260	1,2,4-Trimethylbenzene	966	ug/kg	60.0	11/21/17 03:14	
EPA 8260	1,3,5-Trimethylbenzene	249	ug/kg	60.0	11/21/17 03:14	
EPA 8260	m&p-Xylene	57.2J	ug/kg	120	11/21/17 03:14	

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SUMMARY OF DETECTION

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40160619038	**B4-1 (7-8')**					
EPA 6010	Lead	0.73J	mg/kg	1.3	11/16/17 23:44	
ASTM D2974-87	Percent Moisture	5.7	%	0.10	11/11/17 07:39	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Method: **WI MOD DRO**
Description: WIDRO GCS
Client: AECOM, Inc. - Stevens Point
Date: November 27, 2017

General Information:
3 samples were 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.

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: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Method: **WI MOD GRO**
Description: WIGRO GCV
Client: AECOM, Inc. - Stevens Point
Date: November 27, 2017

General Information:
3 samples were 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: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Method: **EPA 6010**
Description: 6010 MET ICP
Client: AECOM, Inc. - Stevens Point
Date: November 27, 2017

General Information:
13 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: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Method: **EPA 8260**
Description: 8260 MSV Med Level Normal List
Client: AECOM, Inc. - Stevens Point
Date: November 27, 2017

General Information:
21 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.

QC Batch: 274296

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40160619017

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1613995)
  - cis-1,3-Dichloropropene
- MSD (Lab ID: 1613996)
  - cis-1,3-Dichloropropene

Additional Comments:

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PROJECT NARRATIVE

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Method: **EPA 8260**
Description: 8260 MSV
Client: AECOM, Inc. - Stevens Point
Date: November 27, 2017

General Information:
11 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.

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: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Method: **EPA 1010**
Description: 1010 Flashpoint,Closed Cup
Client: AECOM, Inc. - Stevens Point
Date: November 27, 2017

General Information:
3 samples were 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: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Method: **EPA 9095**
Description: 9095 Paint Filter Liquid Test
Client: AECOM, Inc. - Stevens Point
Date: November 27, 2017

General Information:
3 samples were 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.

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ANALYTICAL RESULTS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Sample: TRIP BLANK **Lab ID: 40160619001** Collected: 11/08/17 13:50 Received: 11/10/17 10:05 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		11/15/17 21:36	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		11/15/17 21:36	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		11/15/17 21:36	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		11/15/17 21:36	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		11/15/17 21:36	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		11/15/17 21:36	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		11/15/17 21:36	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		11/15/17 21:36	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		11/15/17 21:36	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		11/15/17 21:36	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	124-48-1	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		11/15/17 21:36	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		11/15/17 21:36	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		11/15/17 21:36	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/15/17 21:36	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		11/15/17 21:36	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		11/15/17 21:36	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/15/17 21:36	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/15/17 21:36	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		11/15/17 21:36	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		11/15/17 21:36	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		11/15/17 21:36	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		11/15/17 21:36	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		11/15/17 21:36	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		11/15/17 21:36	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		11/15/17 21:36	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		11/15/17 21:36	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		11/15/17 21:36	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		11/15/17 21:36	630-20-6	

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(920)469-2436

ANALYTICAL RESULTS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Sample: TRIP BLANK **Lab ID: 40160619001** Collected: 11/08/17 13:50 Received: 11/10/17 10:05 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		11/15/17 21:36	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		11/15/17 21:36	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		11/15/17 21:36	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		11/15/17 21:36	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		11/15/17 21:36	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		11/15/17 21:36	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		11/15/17 21:36	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		11/15/17 21:36	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		11/15/17 21:36	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97	%	61-130		1		11/15/17 21:36	460-00-4	
Dibromofluoromethane (S)	97	%	67-130		1		11/15/17 21:36	1868-53-7	
Toluene-d8 (S)	100	%	70-130		1		11/15/17 21:36	2037-26-5	

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ANALYTICAL RESULTS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Sample: TRIP BLANK **Lab ID: 40160619002** Collected: 11/08/17 13:50 Received: 11/10/17 10:05 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	11/16/17 10:45	11/20/17 20:17	74-83-9	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	104-51-8	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	98-06-6	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	11/16/17 10:45	11/20/17 20:17	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	11/16/17 10:45	11/20/17 20:17	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	74-87-3	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	106-43-4	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	11/16/17 10:45	11/20/17 20:17	96-12-8	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	124-48-1	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	106-93-4	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	74-95-3	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	95-50-1	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	541-73-1	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	106-46-7	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	75-71-8	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	75-34-3	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	107-06-2	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	75-35-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	156-59-2	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	156-60-5	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	78-87-5	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	142-28-9	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	594-20-7	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	563-58-6	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	10061-01-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	10061-02-6	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	98-82-8	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	99-87-6	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	75-09-2	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	1634-04-4	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	11/16/17 10:45	11/20/17 20:17	91-20-3	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	103-65-1	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	100-42-5	W

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ANALYTICAL RESULTS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Sample: TRIP BLANK **Lab ID: 40160619002** Collected: 11/08/17 13:50 Received: 11/10/17 10:05 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	630-20-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	79-34-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	108-88-3	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	87-61-6	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	11/16/17 10:45	11/20/17 20:17	120-82-1	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	71-55-6	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	79-00-5	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	75-69-4	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	96-18-4	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	108-67-8	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	75-01-4	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	11/16/17 10:45	11/20/17 20:17	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	11/16/17 10:45	11/20/17 20:17	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	99	%	68-130		1	11/16/17 10:45	11/20/17 20:17	1868-53-7	
Toluene-d8 (S)	110	%	68-149		1	11/16/17 10:45	11/20/17 20:17	2037-26-5	
4-Bromofluorobenzene (S)	102	%	58-141		1	11/16/17 10:45	11/20/17 20:17	460-00-4	

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ANALYTICAL RESULTS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Sample: B3-1 **Lab ID: 40160619006** Collected: 11/08/17 12:20 Received: 11/10/17 10:05 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		11/16/17 07:46	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		11/16/17 07:46	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		11/16/17 07:46	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		11/16/17 07:46	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		11/16/17 07:46	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		11/16/17 07:46	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		11/16/17 07:46	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		11/16/17 07:46	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		11/16/17 07:46	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		11/16/17 07:46	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	124-48-1	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		11/16/17 07:46	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		11/16/17 07:46	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		11/16/17 07:46	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/16/17 07:46	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		11/16/17 07:46	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		11/16/17 07:46	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/16/17 07:46	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/16/17 07:46	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		11/16/17 07:46	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		11/16/17 07:46	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		11/16/17 07:46	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		11/16/17 07:46	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		11/16/17 07:46	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		11/16/17 07:46	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		11/16/17 07:46	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		11/16/17 07:46	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		11/16/17 07:46	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		11/16/17 07:46	630-20-6	

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ANALYTICAL RESULTS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Sample: B3-1 **Lab ID: 40160619006** Collected: 11/08/17 12:20 Received: 11/10/17 10:05 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		11/16/17 07:46	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		11/16/17 07:46	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		11/16/17 07:46	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		11/16/17 07:46	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		11/16/17 07:46	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		11/16/17 07:46	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		11/16/17 07:46	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		11/16/17 07:46	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 07:46	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	61-130		1		11/16/17 07:46	460-00-4	
Dibromofluoromethane (S)	88	%	67-130		1		11/16/17 07:46	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		11/16/17 07:46	2037-26-5	

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ANALYTICAL RESULTS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Sample: B3-2 **Lab ID: 40160619007** Collected: 11/08/17 13:00 Received: 11/10/17 10:05 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		11/16/17 08:54	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		11/16/17 08:54	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		11/16/17 08:54	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		11/16/17 08:54	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		11/16/17 08:54	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		11/16/17 08:54	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		11/16/17 08:54	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		11/16/17 08:54	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		11/16/17 08:54	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		11/16/17 08:54	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	124-48-1	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		11/16/17 08:54	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		11/16/17 08:54	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		11/16/17 08:54	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/16/17 08:54	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		11/16/17 08:54	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		11/16/17 08:54	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/16/17 08:54	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/16/17 08:54	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		11/16/17 08:54	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		11/16/17 08:54	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		11/16/17 08:54	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		11/16/17 08:54	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		11/16/17 08:54	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		11/16/17 08:54	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		11/16/17 08:54	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		11/16/17 08:54	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		11/16/17 08:54	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		11/16/17 08:54	630-20-6	

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ANALYTICAL RESULTS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Sample: B3-2 **Lab ID: 40160619007** Collected: 11/08/17 13:00 Received: 11/10/17 10:05 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		11/16/17 08:54	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		11/16/17 08:54	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		11/16/17 08:54	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		11/16/17 08:54	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		11/16/17 08:54	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		11/16/17 08:54	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		11/16/17 08:54	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		11/16/17 08:54	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		11/16/17 08:54	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	87	%	61-130		1		11/16/17 08:54	460-00-4	
Dibromofluoromethane (S)	101	%	67-130		1		11/16/17 08:54	1868-53-7	
Toluene-d8 (S)	95	%	70-130		1		11/16/17 08:54	2037-26-5	

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ANALYTICAL RESULTS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Sample: B3-1 (3-4') **Lab ID: 40160619013** Collected: 11/08/17 12:10 Received: 11/10/17 10:05 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	**3.3**	mg/kg	1.3	0.42	1	11/15/17 12:16	11/16/17 23:11	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	11/14/17 10:00	11/15/17 19:53	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	11/14/17 10:00	11/15/17 19:53	74-83-9	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	104-51-8	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	98-06-6	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	11/14/17 10:00	11/15/17 19:53	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	11/14/17 10:00	11/15/17 19:53	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	74-87-3	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	106-43-4	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	11/14/17 10:00	11/15/17 19:53	96-12-8	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	124-48-1	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	106-93-4	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	74-95-3	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	95-50-1	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	541-73-1	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	106-46-7	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	75-71-8	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	75-34-3	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	107-06-2	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	75-35-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	156-59-2	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	156-60-5	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	78-87-5	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	142-28-9	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	594-20-7	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	563-58-6	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	10061-01-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	10061-02-6	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	98-82-8	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	99-87-6	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	75-09-2	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	1634-04-4	W

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ANALYTICAL RESULTS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Sample: B3-1 (3-4') **Lab ID: 40160619013** Collected: 11/08/17 12:10 Received: 11/10/17 10:05 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	11/14/17 10:00	11/15/17 19:53	91-20-3	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	103-65-1	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	100-42-5	W
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	630-20-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	79-34-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	108-88-3	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	87-61-6	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	11/14/17 10:00	11/15/17 19:53	120-82-1	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	71-55-6	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	79-00-5	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	75-69-4	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	96-18-4	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	108-67-8	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	75-01-4	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	11/14/17 10:00	11/15/17 19:53	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 19:53	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	95	%	68-130		1	11/14/17 10:00	11/15/17 19:53	1868-53-7	
Toluene-d8 (S)	101	%	68-149		1	11/14/17 10:00	11/15/17 19:53	2037-26-5	
4-Bromofluorobenzene (S)	90	%	58-141		1	11/14/17 10:00	11/15/17 19:53	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**6.1**	%	0.10	0.10	1		11/16/17 15:35		

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

ANALYTICAL RESULTS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Sample: B3-1 (7-8') **Lab ID: 40160619014** Collected: 11/08/17 12:15 Received: 11/10/17 10:05 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	11/14/17 10:00	11/15/17 20:16	74-83-9	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	104-51-8	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	98-06-6	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	11/14/17 10:00	11/15/17 20:16	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	11/14/17 10:00	11/15/17 20:16	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	74-87-3	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	106-43-4	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	11/14/17 10:00	11/15/17 20:16	96-12-8	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	124-48-1	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	106-93-4	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	74-95-3	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	95-50-1	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	541-73-1	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	106-46-7	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	75-71-8	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	75-34-3	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	107-06-2	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	75-35-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	156-59-2	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	156-60-5	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	78-87-5	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	142-28-9	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	594-20-7	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	563-58-6	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	10061-01-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	10061-02-6	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	98-82-8	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	99-87-6	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	75-09-2	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	1634-04-4	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	11/14/17 10:00	11/15/17 20:16	91-20-3	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	103-65-1	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	100-42-5	W

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(920)469-2436

ANALYTICAL RESULTS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Sample: B3-1 (7-8') **Lab ID: 40160619014** Collected: 11/08/17 12:15 Received: 11/10/17 10:05 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	630-20-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	79-34-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	108-88-3	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	87-61-6	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	11/14/17 10:00	11/15/17 20:16	120-82-1	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	71-55-6	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	79-00-5	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	75-69-4	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	96-18-4	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	108-67-8	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	75-01-4	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	11/14/17 10:00	11/15/17 20:16	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:16	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	94	%	68-130		1	11/14/17 10:00	11/15/17 20:16	1868-53-7	
Toluene-d8 (S)	96	%	68-149		1	11/14/17 10:00	11/15/17 20:16	2037-26-5	
4-Bromofluorobenzene (S)	86	%	58-141		1	11/14/17 10:00	11/15/17 20:16	460-00-4	

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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Sample: B3-2 (1-2') **Lab ID: 40160619015** Collected: 11/08/17 12:45 Received: 11/10/17 10:05 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	**1.6**	mg/kg	1.3	0.45	1	11/15/17 12:16	11/16/17 23:14	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	11/14/17 10:00	11/15/17 20:39	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	11/14/17 10:00	11/15/17 20:39	74-83-9	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	104-51-8	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	98-06-6	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	11/14/17 10:00	11/15/17 20:39	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	11/14/17 10:00	11/15/17 20:39	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	74-87-3	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	106-43-4	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	11/14/17 10:00	11/15/17 20:39	96-12-8	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	124-48-1	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	106-93-4	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	74-95-3	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	95-50-1	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	541-73-1	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	106-46-7	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	75-71-8	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	75-34-3	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	107-06-2	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	75-35-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	156-59-2	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	156-60-5	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	78-87-5	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	142-28-9	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	594-20-7	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	563-58-6	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	10061-01-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	10061-02-6	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	98-82-8	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	99-87-6	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	75-09-2	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	1634-04-4	W

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ANALYTICAL RESULTS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Sample: B3-2 (1-2') **Lab ID: 40160619015** Collected: 11/08/17 12:45 Received: 11/10/17 10:05 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	11/14/17 10:00	11/15/17 20:39	91-20-3	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	103-65-1	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	100-42-5	W
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	630-20-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	79-34-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	108-88-3	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	87-61-6	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	11/14/17 10:00	11/15/17 20:39	120-82-1	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	71-55-6	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	79-00-5	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	75-69-4	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	96-18-4	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	108-67-8	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	75-01-4	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	11/14/17 10:00	11/15/17 20:39	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	11/14/17 10:00	11/15/17 20:39	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	90	%	68-130		1	11/14/17 10:00	11/15/17 20:39	1868-53-7	
Toluene-d8 (S)	94	%	68-149		1	11/14/17 10:00	11/15/17 20:39	2037-26-5	
4-Bromofluorobenzene (S)	84	%	58-141		1	11/14/17 10:00	11/15/17 20:39	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**3.6**	%	0.10	0.10	1		11/16/17 15:35		

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ANALYTICAL RESULTS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Sample: B3-2 (7-8') **Lab ID: 40160619016** Collected: 11/08/17 12:45 Received: 11/10/17 10:05 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	11/15/17 07:45	11/16/17 23:18	74-83-9	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	104-51-8	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	98-06-6	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	11/15/17 07:45	11/16/17 23:18	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	11/15/17 07:45	11/16/17 23:18	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	74-87-3	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	106-43-4	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	11/15/17 07:45	11/16/17 23:18	96-12-8	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	124-48-1	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	106-93-4	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	74-95-3	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	95-50-1	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	541-73-1	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	106-46-7	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	75-71-8	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	75-34-3	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	107-06-2	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	75-35-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	156-59-2	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	156-60-5	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	78-87-5	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	142-28-9	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	594-20-7	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	563-58-6	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	10061-01-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	10061-02-6	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	98-82-8	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	99-87-6	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	75-09-2	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	1634-04-4	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	11/15/17 07:45	11/16/17 23:18	91-20-3	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	103-65-1	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	100-42-5	W

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ANALYTICAL RESULTS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Sample: B3-2 (7-8') **Lab ID: 40160619016** Collected: 11/08/17 12:45 Received: 11/10/17 10:05 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	630-20-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	79-34-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	108-88-3	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	87-61-6	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	11/15/17 07:45	11/16/17 23:18	120-82-1	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	71-55-6	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	79-00-5	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	75-69-4	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	96-18-4	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	108-67-8	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	75-01-4	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	11/15/17 07:45	11/16/17 23:18	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	11/15/17 07:45	11/16/17 23:18	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	99	%	68-130		1	11/15/17 07:45	11/16/17 23:18	1868-53-7	
Toluene-d8 (S)	109	%	68-149		1	11/15/17 07:45	11/16/17 23:18	2037-26-5	
4-Bromofluorobenzene (S)	95	%	58-141		1	11/15/17 07:45	11/16/17 23:18	460-00-4	

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

QC Batch: 274378 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 40160619021, 40160619022, 40160619023

METHOD BLANK: 1614498 Matrix: Solid
Associated Lab Samples: 40160619021, 40160619022, 40160619023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	mg/kg	<0.025	0.050	11/16/17 08:48	
Gasoline Range Organics	mg/kg	<1.6	5.0	11/16/17 08:48	
a,a,a-Trifluorotoluene (S)	%	100	80-120	11/16/17 08:48	

LABORATORY CONTROL SAMPLE & LCSD: 1614499 1614500

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	mg/kg	1	0.98	0.99	98	99	80-120	1	20	
Gasoline Range Organics	mg/kg	10	10.7	11.2	107	112	80-120	5	20	
a,a,a-Trifluorotoluene (S)	%				102	101	80-120			

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

QC Batch: 274279 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 40160619013, 40160619015, 40160619017, 40160619019, 40160619021, 40160619022, 40160619023, 40160619024, 40160619028, 40160619029, 40160619033, 40160619035, 40160619038

METHOD BLANK: 1613904 Matrix: Solid
Associated Lab Samples: 40160619013, 40160619015, 40160619017, 40160619019, 40160619021, 40160619022, 40160619023, 40160619024, 40160619028, 40160619029, 40160619033, 40160619035, 40160619038

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	<0.43	1.3	11/16/17 22:50	

LABORATORY CONTROL SAMPLE: 1613905

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	50	46.7	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1613906 1613907

Parameter	Units	40160533004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/kg	9.7	57.7	57.9	59.7	62.8	87	92	75-125	5	20	

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

QC Batch: 274145 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40160619013, 40160619014, 40160619015

METHOD BLANK: 1613221 Matrix: Solid
Associated Lab Samples: 40160619013, 40160619014, 40160619015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	11/14/17 19:20	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	11/14/17 19:20	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	11/14/17 19:20	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	11/14/17 19:20	
1,1-Dichloroethane	ug/kg	<17.6	50.0	11/14/17 19:20	
1,1-Dichloroethene	ug/kg	<17.6	50.0	11/14/17 19:20	
1,1-Dichloropropene	ug/kg	<14.0	50.0	11/14/17 19:20	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	11/14/17 19:20	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	11/14/17 19:20	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	11/14/17 19:20	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	11/14/17 19:20	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	11/14/17 19:20	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	11/14/17 19:20	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	11/14/17 19:20	
1,2-Dichloroethane	ug/kg	<15.0	50.0	11/14/17 19:20	
1,2-Dichloropropane	ug/kg	<16.8	50.0	11/14/17 19:20	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	11/14/17 19:20	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	11/14/17 19:20	
1,3-Dichloropropane	ug/kg	<12.0	50.0	11/14/17 19:20	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	11/14/17 19:20	
2,2-Dichloropropane	ug/kg	<12.6	50.0	11/14/17 19:20	
2-Chlorotoluene	ug/kg	<15.8	50.0	11/14/17 19:20	
4-Chlorotoluene	ug/kg	<13.0	50.0	11/14/17 19:20	
Benzene	ug/kg	<9.2	20.0	11/14/17 19:20	
Bromobenzene	ug/kg	<20.6	50.0	11/14/17 19:20	
Bromochloromethane	ug/kg	<21.4	50.0	11/14/17 19:20	
Bromodichloromethane	ug/kg	<9.8	50.0	11/14/17 19:20	
Bromoform	ug/kg	<19.8	50.0	11/14/17 19:20	
Bromomethane	ug/kg	<69.9	250	11/14/17 19:20	
Carbon tetrachloride	ug/kg	<12.1	50.0	11/14/17 19:20	
Chlorobenzene	ug/kg	<14.8	50.0	11/14/17 19:20	
Chloroethane	ug/kg	<67.0	250	11/14/17 19:20	
Chloroform	ug/kg	<46.4	250	11/14/17 19:20	
Chloromethane	ug/kg	<20.4	50.0	11/14/17 19:20	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	11/14/17 19:20	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	11/14/17 19:20	
Dibromochloromethane	ug/kg	<17.9	50.0	11/14/17 19:20	
Dibromomethane	ug/kg	<19.3	50.0	11/14/17 19:20	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	11/14/17 19:20	
Diisopropyl ether	ug/kg	<17.7	50.0	11/14/17 19:20	
Ethylbenzene	ug/kg	<12.4	50.0	11/14/17 19:20	

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

METHOD BLANK: 1613221 Matrix: Solid
Associated Lab Samples: 40160619013, 40160619014, 40160619015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	11/14/17 19:20	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	11/14/17 19:20	
m&p-Xylene	ug/kg	<34.4	100	11/14/17 19:20	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	11/14/17 19:20	
Methylene Chloride	ug/kg	17.9J	50.0	11/14/17 19:20	
n-Butylbenzene	ug/kg	<10.5	50.0	11/14/17 19:20	
n-Propylbenzene	ug/kg	<11.6	50.0	11/14/17 19:20	
Naphthalene	ug/kg	<40.0	250	11/14/17 19:20	
o-Xylene	ug/kg	<14.0	50.0	11/14/17 19:20	
p-Isopropyltoluene	ug/kg	<12.0	50.0	11/14/17 19:20	
sec-Butylbenzene	ug/kg	<11.9	50.0	11/14/17 19:20	
Styrene	ug/kg	<9.0	50.0	11/14/17 19:20	
tert-Butylbenzene	ug/kg	<9.5	50.0	11/14/17 19:20	
Tetrachloroethene	ug/kg	<12.9	50.0	11/14/17 19:20	
Toluene	ug/kg	<11.2	50.0	11/14/17 19:20	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	11/14/17 19:20	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	11/14/17 19:20	
Trichloroethene	ug/kg	<23.6	50.0	11/14/17 19:20	
Trichlorofluoromethane	ug/kg	<24.7	50.0	11/14/17 19:20	
Vinyl chloride	ug/kg	<21.1	50.0	11/14/17 19:20	
4-Bromofluorobenzene (S)	%	98	58-141	11/14/17 19:20	
Dibromofluoromethane (S)	%	102	68-130	11/14/17 19:20	
Toluene-d8 (S)	%	108	68-149	11/14/17 19:20	

LABORATORY CONTROL SAMPLE: 1613222

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2590	104	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2650	106	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2860	114	70-130	
1,1-Dichloroethane	ug/kg	2500	3050	122	63-124	
1,1-Dichloroethene	ug/kg	2500	2590	104	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	2260	91	78-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2040	82	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2580	103	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2500	100	70-130	
1,2-Dichloroethane	ug/kg	2500	2910	117	56-135	
1,2-Dichloropropane	ug/kg	2500	2720	109	77-122	
1,3-Dichlorobenzene	ug/kg	2500	2410	96	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2500	100	70-130	
Benzene	ug/kg	2500	2720	109	66-130	
Bromodichloromethane	ug/kg	2500	2500	100	62-135	
Bromoform	ug/kg	2500	1830	73	68-130	
Bromomethane	ug/kg	2500	2430	97	29-137	

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(920)469-2436

QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

LABORATORY CONTROL SAMPLE: 1613222

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/kg	2500	2500	100	57-130	
Chlorobenzene	ug/kg	2500	2660	107	70-130	
Chloroethane	ug/kg	2500	3030	121	36-144	
Chloroform	ug/kg	2500	2840	114	69-115	
Chloromethane	ug/kg	2500	1460	58	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2790	112	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	2330	93	70-130	
Dibromochloromethane	ug/kg	2500	2530	101	70-130	
Dichlorodifluoromethane	ug/kg	2500	888	36	10-99	
Ethylbenzene	ug/kg	2500	2740	110	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2640	105	70-130	
m&p-Xylene	ug/kg	5000	5340	107	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2510	101	63-134	
Methylene Chloride	ug/kg	2500	2760	110	56-123	
o-Xylene	ug/kg	2500	2660	107	70-130	
Styrene	ug/kg	2500	2760	110	70-130	
Tetrachloroethene	ug/kg	2500	2580	103	70-131	
Toluene	ug/kg	2500	2730	109	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2870	115	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	2480	99	68-130	
Trichloroethene	ug/kg	2500	2600	104	70-130	
Trichlorofluoromethane	ug/kg	2500	2500	100	37-149	
Vinyl chloride	ug/kg	2500	1740	70	43-128	
4-Bromofluorobenzene (S)	%			103	58-141	
Dibromofluoromethane (S)	%			106	68-130	
Toluene-d8 (S)	%			103	68-149	

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

QC Batch: 274296 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40160619016, 40160619017, 40160619018, 40160619019, 40160619020, 40160619024, 40160619025, 40160619026, 40160619027, 40160619030, 40160619031, 40160619032

METHOD BLANK: 1613993 Matrix: Solid
Associated Lab Samples: 40160619016, 40160619017, 40160619018, 40160619019, 40160619020, 40160619024, 40160619025, 40160619026, 40160619027, 40160619030, 40160619031, 40160619032

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	11/15/17 11:04	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	11/15/17 11:04	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	11/15/17 11:04	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	11/15/17 11:04	
1,1-Dichloroethane	ug/kg	<17.6	50.0	11/15/17 11:04	
1,1-Dichloroethene	ug/kg	<17.6	50.0	11/15/17 11:04	
1,1-Dichloropropene	ug/kg	<14.0	50.0	11/15/17 11:04	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	11/15/17 11:04	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	11/15/17 11:04	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	11/15/17 11:04	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	11/15/17 11:04	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	11/15/17 11:04	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	11/15/17 11:04	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	11/15/17 11:04	
1,2-Dichloroethane	ug/kg	16.8J	50.0	11/15/17 11:04	
1,2-Dichloropropane	ug/kg	<16.8	50.0	11/15/17 11:04	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	11/15/17 11:04	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	11/15/17 11:04	
1,3-Dichloropropane	ug/kg	<12.0	50.0	11/15/17 11:04	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	11/15/17 11:04	
2,2-Dichloropropane	ug/kg	<12.6	50.0	11/15/17 11:04	
2-Chlorotoluene	ug/kg	<15.8	50.0	11/15/17 11:04	
4-Chlorotoluene	ug/kg	<13.0	50.0	11/15/17 11:04	
Benzene	ug/kg	<9.2	20.0	11/15/17 11:04	
Bromobenzene	ug/kg	<20.6	50.0	11/15/17 11:04	
Bromochloromethane	ug/kg	<21.4	50.0	11/15/17 11:04	
Bromodichloromethane	ug/kg	<9.8	50.0	11/15/17 11:04	
Bromoform	ug/kg	<19.8	50.0	11/15/17 11:04	
Bromomethane	ug/kg	<69.9	250	11/15/17 11:04	
Carbon tetrachloride	ug/kg	<12.1	50.0	11/15/17 11:04	
Chlorobenzene	ug/kg	<14.8	50.0	11/15/17 11:04	
Chloroethane	ug/kg	<67.0	250	11/15/17 11:04	
Chloroform	ug/kg	<46.4	250	11/15/17 11:04	
Chloromethane	ug/kg	<20.4	50.0	11/15/17 11:04	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	11/15/17 11:04	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	11/15/17 11:04	
Dibromochloromethane	ug/kg	<17.9	50.0	11/15/17 11:04	
Dibromomethane	ug/kg	<19.3	50.0	11/15/17 11:04	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	11/15/17 11:04	
Diisopropyl ether	ug/kg	<17.7	50.0	11/15/17 11:04	

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

METHOD BLANK: 1613993 Matrix: Solid

Associated Lab Samples: 40160619016, 40160619017, 40160619018, 40160619019, 40160619020, 40160619024, 40160619025, 40160619026, 40160619027, 40160619030, 40160619031, 40160619032

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/kg	<12.4	50.0	11/15/17 11:04	
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	11/15/17 11:04	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	11/15/17 11:04	
m&p-Xylene	ug/kg	<34.4	100	11/15/17 11:04	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	11/15/17 11:04	
Methylene Chloride	ug/kg	<16.2	50.0	11/15/17 11:04	
n-Butylbenzene	ug/kg	<10.5	50.0	11/15/17 11:04	
n-Propylbenzene	ug/kg	<11.6	50.0	11/15/17 11:04	
Naphthalene	ug/kg	<40.0	250	11/15/17 11:04	
o-Xylene	ug/kg	<14.0	50.0	11/15/17 11:04	
p-Isopropyltoluene	ug/kg	<12.0	50.0	11/15/17 11:04	
sec-Butylbenzene	ug/kg	<11.9	50.0	11/15/17 11:04	
Styrene	ug/kg	<9.0	50.0	11/15/17 11:04	
tert-Butylbenzene	ug/kg	<9.5	50.0	11/15/17 11:04	
Tetrachloroethene	ug/kg	<12.9	50.0	11/15/17 11:04	
Toluene	ug/kg	<11.2	50.0	11/15/17 11:04	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	11/15/17 11:04	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	11/15/17 11:04	
Trichloroethene	ug/kg	<23.6	50.0	11/15/17 11:04	
Trichlorofluoromethane	ug/kg	<24.7	50.0	11/15/17 11:04	
Vinyl chloride	ug/kg	<21.1	50.0	11/15/17 11:04	
4-Bromofluorobenzene (S)	%	100	58-141	11/15/17 11:04	
Dibromofluoromethane (S)	%	107	68-130	11/15/17 11:04	
Toluene-d8 (S)	%	112	68-149	11/15/17 11:04	

LABORATORY CONTROL SAMPLE: 1613994

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2630	105	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2750	110	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2890	116	70-130	
1,1-Dichloroethane	ug/kg	2500	2980	119	63-124	
1,1-Dichloroethene	ug/kg	2500	2420	97	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	2440	98	78-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	1890	76	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2650	106	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2570	103	70-130	
1,2-Dichloroethane	ug/kg	2500	2880	115	56-135	
1,2-Dichloropropane	ug/kg	2500	2680	107	77-122	
1,3-Dichlorobenzene	ug/kg	2500	2570	103	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2710	109	70-130	
Benzene	ug/kg	2500	2700	108	66-130	
Bromodichloromethane	ug/kg	2500	2400	96	62-135	

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

LABORATORY CONTROL SAMPLE: 1613994

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/kg	2500	2000	80	68-130	
Bromomethane	ug/kg	2500	2230	89	29-137	
Carbon tetrachloride	ug/kg	2500	2520	101	57-130	
Chlorobenzene	ug/kg	2500	2820	113	70-130	
Chloroethane	ug/kg	2500	2770	111	36-144	
Chloroform	ug/kg	2500	2830	113	69-115	
Chloromethane	ug/kg	2500	1510	60	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2690	108	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	2240	90	70-130	
Dibromochloromethane	ug/kg	2500	2720	109	70-130	
Dichlorodifluoromethane	ug/kg	2500	1290	52	10-99	
Ethylbenzene	ug/kg	2500	2950	118	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2930	117	70-130	
m&p-Xylene	ug/kg	5000	5930	119	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2380	95	63-134	
Methylene Chloride	ug/kg	2500	2850	114	56-123	
o-Xylene	ug/kg	2500	2780	111	70-130	
Styrene	ug/kg	2500	2950	118	70-130	
Tetrachloroethene	ug/kg	2500	2870	115	70-131	
Toluene	ug/kg	2500	2850	114	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2860	114	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	2660	107	68-130	
Trichloroethene	ug/kg	2500	2740	110	70-130	
Trichlorofluoromethane	ug/kg	2500	2420	97	37-149	
Vinyl chloride	ug/kg	2500	1730	69	43-128	
4-Bromofluorobenzene (S)	%			111	58-141	
Dibromofluoromethane (S)	%			111	68-130	
Toluene-d8 (S)	%			110	68-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1613995 1613996

Parameter	Units	40160619017 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/kg	<25.0	1310	1310	1120	1190	85	91	57-123	7	20	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1310	1310	1420	1400	108	107	73-135	2	20	
1,1,2-Trichloroethane	ug/kg	<25.0	1310	1310	1520	1490	116	114	70-130	2	20	
1,1-Dichloroethane	ug/kg	<25.0	1310	1310	1490	1550	114	118	63-124	4	20	
1,1-Dichloroethene	ug/kg	<25.0	1310	1310	1050	1060	80	81	48-117	2	23	
1,2,4-Trichlorobenzene	ug/kg	<47.6	1310	1310	1100	1180	84	90	78-145	7	20	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	1310	1310	1070	1120	82	86	38-168	5	22	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	1310	1310	1360	1290	104	98	70-130	5	20	
1,2-Dichlorobenzene	ug/kg	<25.0	1310	1310	1210	1310	93	100	70-130	7	20	
1,2-Dichloroethane	ug/kg	<25.0	1310	1310	1470	1480	113	113	56-145	0	20	
1,2-Dichloropropane	ug/kg	<25.0	1310	1310	1350	1390	103	106	77-123	3	20	

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1613995 1613996

Parameter	Units	40160619017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,3-Dichlorobenzene	ug/kg	<25.0	1310	1310	1130	1200	86	92	70-130	6	20	
1,4-Dichlorobenzene	ug/kg	<25.0	1310	1310	1190	1350	91	103	70-130	13	20	
Benzene	ug/kg	<25.0	1310	1310	1300	1330	100	102	65-130	2	20	
Bromodichloromethane	ug/kg	<25.0	1310	1310	1070	1140	82	87	59-141	7	20	
Bromoform	ug/kg	<25.0	1310	1310	976	999	75	76	59-141	2	20	
Bromomethane	ug/kg	<69.9	1320	1320	1070	1210	81	92	28-139	12	20	
Carbon tetrachloride	ug/kg	<25.0	1310	1310	987	1090	75	83	50-130	10	20	
Chlorobenzene	ug/kg	<25.0	1310	1310	1350	1360	103	104	70-130	1	20	
Chloroethane	ug/kg	<67.0	1320	1320	1380	1380	104	104	36-144	0	20	
Chloroform	ug/kg	<46.4	1310	1310	1390	1390	107	106	68-122	0	20	
Chloromethane	ug/kg	<25.0	1320	1320	746	758	57	57	30-126	2	20	
cis-1,2-Dichloroethene	ug/kg	<25.0	1310	1310	1310	1360	100	104	63-130	4	20	
cis-1,3-Dichloropropene	ug/kg	<25.0	1310	1310	858	901	66	69	70-130	5	20	M1
Dibromochloromethane	ug/kg	<25.0	1310	1310	1140	1150	87	88	66-136	1	20	
Dichlorodifluoromethane	ug/kg	<25.0	1320	1320	423	449	32	34	10-99	6	33	
Ethylbenzene	ug/kg	<25.0	1310	1310	1290	1310	98	100	80-122	2	20	
Isopropylbenzene (Cumene)	ug/kg	<25.0	1310	1310	1200	1240	92	94	70-130	3	20	
m&p-Xylene	ug/kg	<50.0	2620	2620	2560	2620	98	100	70-130	2	20	
Methyl-tert-butyl ether	ug/kg	<25.0	1310	1310	1270	1290	97	98	63-134	1	20	
Methylene Chloride	ug/kg	<25.0	1310	1310	1420	1490	108	114	56-127	5	20	
o-Xylene	ug/kg	<25.0	1310	1310	1220	1280	93	98	70-130	4	20	
Styrene	ug/kg	<25.0	1310	1310	1380	1380	106	105	70-130	0	20	
Tetrachloroethene	ug/kg	<25.0	1310	1310	1200	1230	92	94	70-131	2	20	
Toluene	ug/kg	<25.0	1310	1310	1360	1340	104	102	80-120	2	20	
trans-1,2-Dichloroethene	ug/kg	<25.0	1310	1310	1210	1310	92	100	60-130	9	20	
trans-1,3-Dichloropropene	ug/kg	<25.0	1310	1310	1060	1070	81	82	68-130	1	20	
Trichloroethene	ug/kg	<25.0	1310	1310	1280	1310	98	100	70-130	3	20	
Trichlorofluoromethane	ug/kg	<25.0	1320	1320	1060	1120	81	85	37-149	5	24	
Vinyl chloride	ug/kg	<25.0	1320	1320	797	842	60	64	39-128	5	20	
4-Bromofluorobenzene (S)	%						106	106	58-141			
Dibromofluoromethane (S)	%						100	106	68-130			
Toluene-d8 (S)	%						106	107	68-149			

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

QC Batch: 274490 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40160619002, 40160619033, 40160619034, 40160619036, 40160619037, 40160619038

METHOD BLANK: 1615037 Matrix: Solid
Associated Lab Samples: 40160619002, 40160619033, 40160619034, 40160619036, 40160619037, 40160619038

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	11/20/17 19:31	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	11/20/17 19:31	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	11/20/17 19:31	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	11/20/17 19:31	
1,1-Dichloroethane	ug/kg	<17.6	50.0	11/20/17 19:31	
1,1-Dichloroethene	ug/kg	<17.6	50.0	11/20/17 19:31	
1,1-Dichloropropene	ug/kg	<14.0	50.0	11/20/17 19:31	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	11/20/17 19:31	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	11/20/17 19:31	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	11/20/17 19:31	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	11/20/17 19:31	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	11/20/17 19:31	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	11/20/17 19:31	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	11/20/17 19:31	
1,2-Dichloroethane	ug/kg	<15.0	50.0	11/20/17 19:31	
1,2-Dichloropropane	ug/kg	<16.8	50.0	11/20/17 19:31	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	11/20/17 19:31	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	11/20/17 19:31	
1,3-Dichloropropane	ug/kg	<12.0	50.0	11/20/17 19:31	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	11/20/17 19:31	
2,2-Dichloropropane	ug/kg	<12.6	50.0	11/20/17 19:31	
2-Chlorotoluene	ug/kg	<15.8	50.0	11/20/17 19:31	
4-Chlorotoluene	ug/kg	<13.0	50.0	11/20/17 19:31	
Benzene	ug/kg	<9.2	20.0	11/20/17 19:31	
Bromobenzene	ug/kg	<20.6	50.0	11/20/17 19:31	
Bromochloromethane	ug/kg	<21.4	50.0	11/20/17 19:31	
Bromodichloromethane	ug/kg	<9.8	50.0	11/20/17 19:31	
Bromoform	ug/kg	<19.8	50.0	11/20/17 19:31	
Bromomethane	ug/kg	<69.9	250	11/20/17 19:31	
Carbon tetrachloride	ug/kg	<12.1	50.0	11/20/17 19:31	
Chlorobenzene	ug/kg	<14.8	50.0	11/20/17 19:31	
Chloroethane	ug/kg	<67.0	250	11/20/17 19:31	
Chloroform	ug/kg	<46.4	250	11/20/17 19:31	
Chloromethane	ug/kg	<20.4	50.0	11/20/17 19:31	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	11/20/17 19:31	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	11/20/17 19:31	
Dibromochloromethane	ug/kg	<17.9	50.0	11/20/17 19:31	
Dibromomethane	ug/kg	<19.3	50.0	11/20/17 19:31	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	11/20/17 19:31	
Diisopropyl ether	ug/kg	<17.7	50.0	11/20/17 19:31	
Ethylbenzene	ug/kg	<12.4	50.0	11/20/17 19:31	

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

METHOD BLANK: 1615037 Matrix: Solid
Associated Lab Samples: 40160619002, 40160619033, 40160619034, 40160619036, 40160619037, 40160619038

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	11/20/17 19:31	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	11/20/17 19:31	
m&p-Xylene	ug/kg	<34.4	100	11/20/17 19:31	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	11/20/17 19:31	
Methylene Chloride	ug/kg	26.9J	50.0	11/20/17 19:31	
n-Butylbenzene	ug/kg	12.8J	50.0	11/20/17 19:31	
n-Propylbenzene	ug/kg	<11.6	50.0	11/20/17 19:31	
Naphthalene	ug/kg	<40.0	250	11/20/17 19:31	
o-Xylene	ug/kg	<14.0	50.0	11/20/17 19:31	
p-Isopropyltoluene	ug/kg	<12.0	50.0	11/20/17 19:31	
sec-Butylbenzene	ug/kg	<11.9	50.0	11/20/17 19:31	
Styrene	ug/kg	<9.0	50.0	11/20/17 19:31	
tert-Butylbenzene	ug/kg	<9.5	50.0	11/20/17 19:31	
Tetrachloroethene	ug/kg	<12.9	50.0	11/20/17 19:31	
Toluene	ug/kg	<11.2	50.0	11/20/17 19:31	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	11/20/17 19:31	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	11/20/17 19:31	
Trichloroethene	ug/kg	<23.6	50.0	11/20/17 19:31	
Trichlorofluoromethane	ug/kg	<24.7	50.0	11/20/17 19:31	
Vinyl chloride	ug/kg	<21.1	50.0	11/20/17 19:31	
4-Bromofluorobenzene (S)	%	105	58-141	11/20/17 19:31	
Dibromofluoromethane (S)	%	109	68-130	11/20/17 19:31	
Toluene-d8 (S)	%	118	68-149	11/20/17 19:31	

LABORATORY CONTROL SAMPLE: 1615038

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2380	95	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2720	109	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2760	110	70-130	
1,1-Dichloroethane	ug/kg	2500	2900	116	63-124	
1,1-Dichloroethene	ug/kg	2500	1970	79	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	2210	88	78-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2090	84	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2580	103	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2400	96	70-130	
1,2-Dichloroethane	ug/kg	2500	2770	111	56-135	
1,2-Dichloropropane	ug/kg	2500	2630	105	77-122	
1,3-Dichlorobenzene	ug/kg	2500	2330	93	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2280	91	70-130	
Benzene	ug/kg	2500	2530	101	66-130	
Bromodichloromethane	ug/kg	2500	2440	98	62-135	
Bromoform	ug/kg	2500	1710	68	68-130	
Bromomethane	ug/kg	2500	1590	64	29-137	

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

LABORATORY CONTROL SAMPLE: 1615038

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/kg	2500	2160	86	57-130	
Chlorobenzene	ug/kg	2500	2490	99	70-130	
Chloroethane	ug/kg	2500	2020	81	36-144	
Chloroform	ug/kg	2500	2600	104	69-115	
Chloromethane	ug/kg	2500	1320	53	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2510	100	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	2160	86	70-130	
Dibromochloromethane	ug/kg	2500	2390	96	70-130	
Dichlorodifluoromethane	ug/kg	2500	902	36	10-99	
Ethylbenzene	ug/kg	2500	2550	102	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2330	93	70-130	
m&p-Xylene	ug/kg	5000	4780	96	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2650	106	63-134	
Methylene Chloride	ug/kg	2500	2680	107	56-123	
o-Xylene	ug/kg	2500	2390	96	70-130	
Styrene	ug/kg	2500	2450	98	70-130	
Tetrachloroethene	ug/kg	2500	2190	88	70-131	
Toluene	ug/kg	2500	2580	103	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2460	98	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	2490	99	68-130	
Trichloroethene	ug/kg	2500	2520	101	70-130	
Trichlorofluoromethane	ug/kg	2500	1660	67	37-149	
Vinyl chloride	ug/kg	2500	1510	60	43-128	
4-Bromofluorobenzene (S)	%			102	58-141	
Dibromofluoromethane (S)	%			102	68-130	
Toluene-d8 (S)	%			105	68-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1615039 1615040

Parameter	Units	40160661002 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/kg	<25.0	1490	1490	1270	1410	85	95	57-123	10	20	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1490	1490	1540	1560	103	104	73-135	1	20	
1,1,2-Trichloroethane	ug/kg	<25.0	1490	1490	1480	1590	100	107	70-130	7	20	
1,1-Dichloroethane	ug/kg	<25.0	1490	1490	1540	1680	104	113	63-124	8	20	
1,1-Dichloroethene	ug/kg	<25.0	1490	1490	1100	1230	74	82	48-117	11	23	
1,2,4-Trichlorobenzene	ug/kg	<47.6	1490	1490	1290	1350	87	91	78-145	5	20	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	1490	1490	1340	1270	90	86	38-168	5	22	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	1490	1490	1360	1510	91	102	70-130	11	20	
1,2-Dichlorobenzene	ug/kg	<25.0	1490	1490	1350	1460	91	98	70-130	8	20	
1,2-Dichloroethane	ug/kg	<25.0	1490	1490	1460	1560	98	105	56-145	7	20	
1,2-Dichloropropane	ug/kg	<25.0	1490	1490	1410	1640	95	110	77-123	15	20	
1,3-Dichlorobenzene	ug/kg	<25.0	1490	1490	1290	1410	87	95	70-130	9	20	
1,4-Dichlorobenzene	ug/kg	<25.0	1490	1490	1310	1440	88	97	70-130	9	20	

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1615039 1615040

Parameter	Units	40160661002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/kg	<25.0	1490	1490	1360	1490	91	100	65-130	9	20	
Bromodichloromethane	ug/kg	<25.0	1490	1490	1220	1340	82	90	59-141	9	20	
Bromoform	ug/kg	<25.0	1490	1490	1010	1100	68	74	59-141	9	20	
Bromomethane	ug/kg	<69.9	1500	1500	1040	1190	69	79	28-139	13	20	
Carbon tetrachloride	ug/kg	<25.0	1490	1490	1140	1340	76	90	50-130	16	20	
Chlorobenzene	ug/kg	<25.0	1490	1490	1350	1470	91	99	70-130	8	20	
Chloroethane	ug/kg	<67.0	1500	1500	1180	1360	79	90	36-144	14	20	
Chloroform	ug/kg	<46.4	1490	1490	1400	1500	94	101	68-122	7	20	
Chloromethane	ug/kg	<25.0	1500	1500	773	844	52	56	30-126	9	20	
cis-1,2-Dichloroethene	ug/kg	<25.0	1490	1490	1390	1480	93	100	63-130	7	20	
cis-1,3-Dichloropropene	ug/kg	<25.0	1490	1490	1050	1180	71	79	70-130	11	20	
Dibromochloromethane	ug/kg	<25.0	1490	1490	1160	1350	78	90	66-136	15	20	
Dichlorodifluoromethane	ug/kg	<25.0	1500	1500	451	478	30	32	10-99	6	33	
Ethylbenzene	ug/kg	<25.0	1490	1490	1350	1510	90	101	80-122	11	20	
Isopropylbenzene (Cumene)	ug/kg	<25.0	1490	1490	1250	1400	84	94	70-130	11	20	
m&p-Xylene	ug/kg	<50.0	2980	2980	2620	2940	88	99	70-130	12	20	
Methyl-tert-butyl ether	ug/kg	<25.0	1490	1490	1420	1510	95	102	63-134	6	20	
Methylene Chloride	ug/kg	<25.0	1490	1490	1410	1510	95	101	56-127	7	20	
o-Xylene	ug/kg	<25.0	1490	1490	1270	1420	85	96	70-130	12	20	
Styrene	ug/kg	<25.0	1490	1490	1300	1460	87	98	70-130	12	20	
Tetrachloroethene	ug/kg	<25.0	1490	1490	1210	1420	82	95	70-131	16	20	
Toluene	ug/kg	<25.0	1490	1490	1410	1540	95	104	80-120	9	20	
trans-1,2-Dichloroethene	ug/kg	<25.0	1490	1490	1320	1490	89	100	60-130	12	20	
trans-1,3-Dichloropropene	ug/kg	<25.0	1490	1490	1290	1410	86	94	68-130	9	20	
Trichloroethene	ug/kg	<25.0	1490	1490	1400	1470	94	99	70-130	5	20	
Trichlorofluoromethane	ug/kg	<25.0	1500	1500	1030	1170	69	78	37-149	12	24	
Vinyl chloride	ug/kg	<25.0	1500	1500	918	976	61	65	39-128	6	20	
4-Bromofluorobenzene (S)	%						108	111	58-141			
Dibromofluoromethane (S)	%						108	104	68-130			
Toluene-d8 (S)	%						111	115	68-149			

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

QC Batch: 274052 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40160619001, 40160619003, 40160619004, 40160619005, 40160619006, 40160619007, 40160619008, 40160619009, 40160619010, 40160619011, 40160619012

METHOD BLANK: 1612835 Matrix: Water
Associated Lab Samples: 40160619001, 40160619003, 40160619004, 40160619005, 40160619006, 40160619007, 40160619008, 40160619009, 40160619010, 40160619011, 40160619012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	11/15/17 18:12	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	11/15/17 18:12	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	11/15/17 18:12	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	11/15/17 18:12	
1,1-Dichloroethane	ug/L	<0.24	1.0	11/15/17 18:12	
1,1-Dichloroethene	ug/L	<0.41	1.0	11/15/17 18:12	
1,1-Dichloropropene	ug/L	<0.44	1.0	11/15/17 18:12	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	11/15/17 18:12	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	11/15/17 18:12	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	11/15/17 18:12	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	11/15/17 18:12	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	11/15/17 18:12	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	11/15/17 18:12	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	11/15/17 18:12	
1,2-Dichloroethane	ug/L	<0.17	1.0	11/15/17 18:12	
1,2-Dichloropropane	ug/L	<0.23	1.0	11/15/17 18:12	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	11/15/17 18:12	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	11/15/17 18:12	
1,3-Dichloropropane	ug/L	<0.50	1.0	11/15/17 18:12	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	11/15/17 18:12	
2,2-Dichloropropane	ug/L	<0.48	1.0	11/15/17 18:12	
2-Chlorotoluene	ug/L	<0.50	1.0	11/15/17 18:12	
4-Chlorotoluene	ug/L	<0.21	1.0	11/15/17 18:12	
Benzene	ug/L	<0.50	1.0	11/15/17 18:12	
Bromobenzene	ug/L	<0.23	1.0	11/15/17 18:12	
Bromochloromethane	ug/L	<0.34	1.0	11/15/17 18:12	
Bromodichloromethane	ug/L	<0.50	1.0	11/15/17 18:12	
Bromoform	ug/L	<0.50	1.0	11/15/17 18:12	
Bromomethane	ug/L	<2.4	5.0	11/15/17 18:12	
Carbon tetrachloride	ug/L	<0.50	1.0	11/15/17 18:12	
Chlorobenzene	ug/L	<0.50	1.0	11/15/17 18:12	
Chloroethane	ug/L	<0.37	1.0	11/15/17 18:12	
Chloroform	ug/L	<2.5	5.0	11/15/17 18:12	
Chloromethane	ug/L	<0.50	1.0	11/15/17 18:12	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	11/15/17 18:12	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	11/15/17 18:12	
Dibromochloromethane	ug/L	<0.50	1.0	11/15/17 18:12	
Dibromomethane	ug/L	<0.43	1.0	11/15/17 18:12	
Dichlorodifluoromethane	ug/L	<0.22	1.0	11/15/17 18:12	
Diisopropyl ether	ug/L	<0.50	1.0	11/15/17 18:12	

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

METHOD BLANK: 1612835 Matrix: Water

Associated Lab Samples: 40160619001, 40160619003, 40160619004, 40160619005, 40160619006, 40160619007, 40160619008, 40160619009, 40160619010, 40160619011, 40160619012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	<0.50	1.0	11/15/17 18:12	
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	11/15/17 18:12	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	11/15/17 18:12	
m&p-Xylene	ug/L	<1.0	2.0	11/15/17 18:12	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	11/15/17 18:12	
Methylene Chloride	ug/L	<0.23	1.0	11/15/17 18:12	
n-Butylbenzene	ug/L	<0.50	1.0	11/15/17 18:12	
n-Propylbenzene	ug/L	<0.50	1.0	11/15/17 18:12	
Naphthalene	ug/L	<2.5	5.0	11/15/17 18:12	
o-Xylene	ug/L	<0.50	1.0	11/15/17 18:12	
p-Isopropyltoluene	ug/L	<0.50	1.0	11/15/17 18:12	
sec-Butylbenzene	ug/L	<2.2	5.0	11/15/17 18:12	
Styrene	ug/L	<0.50	1.0	11/15/17 18:12	
tert-Butylbenzene	ug/L	<0.18	1.0	11/15/17 18:12	
Tetrachloroethene	ug/L	<0.50	1.0	11/15/17 18:12	
Toluene	ug/L	<0.50	1.0	11/15/17 18:12	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	11/15/17 18:12	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	11/15/17 18:12	
Trichloroethene	ug/L	<0.33	1.0	11/15/17 18:12	
Trichlorofluoromethane	ug/L	<0.18	1.0	11/15/17 18:12	
Vinyl chloride	ug/L	<0.18	1.0	11/15/17 18:12	
4-Bromofluorobenzene (S)	%	90	61-130	11/15/17 18:12	
Dibromofluoromethane (S)	%	90	67-130	11/15/17 18:12	
Toluene-d8 (S)	%	97	70-130	11/15/17 18:12	

LABORATORY CONTROL SAMPLE: 1612836

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	49.6	47.9	97	70-130	
1,1,2,2-Tetrachloroethane	ug/L	49.6	40.9	82	70-130	
1,1,2-Trichloroethane	ug/L	49.6	47.7	96	70-130	
1,1-Dichloroethane	ug/L	49.6	47.7	96	71-132	
1,1-Dichloroethene	ug/L	49.6	42.2	85	75-130	
1,2,4-Trichlorobenzene	ug/L	49.6	41.1	83	70-130	
1,2-Dibromo-3-chloropropane	ug/L	49.6	39.0	79	63-123	
1,2-Dibromoethane (EDB)	ug/L	49.6	45.3	91	70-130	
1,2-Dichlorobenzene	ug/L	49.6	48.5	98	70-130	
1,2-Dichloroethane	ug/L	49.6	45.2	91	70-131	
1,2-Dichloropropane	ug/L	49.6	53.4	108	80-120	
1,3-Dichlorobenzene	ug/L	49.6	47.8	96	70-130	
1,4-Dichlorobenzene	ug/L	49.6	48.1	97	70-130	
Benzene	ug/L	49.6	47.4	96	73-145	
Bromodichloromethane	ug/L	49.6	49.2	99	70-130	

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(920)469-2436

QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

LABORATORY CONTROL SAMPLE: 1612836

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	49.6	41.4	84	67-130	
Bromomethane	ug/L	50	37.2	74	26-128	
Carbon tetrachloride	ug/L	49.6	48.2	97	70-133	
Chlorobenzene	ug/L	49.6	56.0	113	70-130	
Chloroethane	ug/L	50	44.0	88	58-120	
Chloroform	ug/L	49.6	48.2	97	80-121	
Chloromethane	ug/L	50	28.3	57	40-127	
cis-1,2-Dichloroethene	ug/L	49.6	42.5	86	70-130	
cis-1,3-Dichloropropene	ug/L	49.6	45.8	92	70-130	
Dibromochloromethane	ug/L	49.6	46.0	93	70-130	
Dichlorodifluoromethane	ug/L	50	23.6	47	20-135	
Ethylbenzene	ug/L	49.6	53.4	108	87-129	
Isopropylbenzene (Cumene)	ug/L	49.6	57.3	116	70-130	
m&p-Xylene	ug/L	99.2	110	110	70-130	
Methyl-tert-butyl ether	ug/L	49.6	40.2	81	66-143	
Methylene Chloride	ug/L	49.6	43.6	88	70-130	
o-Xylene	ug/L	49.6	52.5	106	70-130	
Styrene	ug/L	49.6	54.3	110	70-130	
Tetrachloroethene	ug/L	49.6	50.6	102	70-130	
Toluene	ug/L	49.6	52.3	105	82-130	
trans-1,2-Dichloroethene	ug/L	49.6	42.4	86	75-132	
trans-1,3-Dichloropropene	ug/L	49.6	47.6	96	70-130	
Trichloroethene	ug/L	49.6	51.3	104	70-130	
Trichlorofluoromethane	ug/L	50	44.7	89	76-133	
Vinyl chloride	ug/L	50	36.6	73	57-136	
4-Bromofluorobenzene (S)	%			103	61-130	
Dibromofluoromethane (S)	%			89	67-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1614647 1614648

Parameter	Units	40160619006 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	49.6	49.6	48.5	47.4	98	96	70-134	2	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	49.6	49.6	43.2	41.9	87	84	70-130	3	20	
1,1,2-Trichloroethane	ug/L	<0.20	49.6	49.6	46.5	43.4	94	88	70-130	7	20	
1,1-Dichloroethane	ug/L	<0.24	49.6	49.6	48.4	48.6	98	98	71-133	0	20	
1,1-Dichloroethene	ug/L	<0.41	49.6	49.6	42.1	44.0	85	89	75-136	5	20	
1,2,4-Trichlorobenzene	ug/L	<2.2	49.6	49.6	43.2	42.6	87	86	70-130	1	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	49.6	49.6	37.4	38.6	75	78	63-123	3	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	49.6	49.6	44.9	42.3	91	85	70-130	6	20	
1,2-Dichlorobenzene	ug/L	<0.50	49.6	49.6	49.2	47.3	99	95	70-130	4	20	
1,2-Dichloroethane	ug/L	<0.17	49.6	49.6	45.7	46.5	92	94	70-131	2	20	
1,2-Dichloropropane	ug/L	<0.23	49.6	49.6	49.0	49.9	99	101	80-120	2	20	

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(920)469-2436

QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1614647 1614648

Parameter	Units	40160619006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,3-Dichlorobenzene	ug/L	<0.50	49.6	49.6	49.2	46.6	99	94	70-130	5	20	
1,4-Dichlorobenzene	ug/L	<0.50	49.6	49.6	48.2	47.4	97	96	70-130	2	20	
Benzene	ug/L	<0.50	49.6	49.6	49.4	50.4	100	102	73-145	2	20	
Bromodichloromethane	ug/L	<0.50	49.6	49.6	47.1	46.7	95	94	70-130	1	20	
Bromoform	ug/L	<0.50	49.6	49.6	40.6	36.9	82	74	67-130	10	20	
Bromomethane	ug/L	<2.4	50	50	40.7	43.2	81	86	26-129	6	20	
Carbon tetrachloride	ug/L	<0.50	49.6	49.6	51.3	51.3	103	103	70-134	0	20	
Chlorobenzene	ug/L	<0.50	49.6	49.6	52.8	51.2	106	103	70-130	3	20	
Chloroethane	ug/L	<0.37	50	50	43.4	45.0	87	90	58-120	4	20	
Chloroform	ug/L	<2.5	49.6	49.6	48.3	50.6	97	102	80-121	5	20	
Chloromethane	ug/L	<0.50	50	50	28.6	28.1	57	56	40-128	2	20	
cis-1,2-Dichloroethene	ug/L	<0.26	49.6	49.6	47.2	44.6	95	90	70-130	6	20	
cis-1,3-Dichloropropene	ug/L	<0.50	49.6	49.6	44.4	43.9	90	89	70-130	1	20	
Dibromochloromethane	ug/L	<0.50	49.6	49.6	43.2	44.6	87	90	70-130	3	20	
Dichlorodifluoromethane	ug/L	<0.22	50	50	24.3	24.4	49	49	20-146	0	20	
Ethylbenzene	ug/L	<0.50	49.6	49.6	51.8	49.7	104	100	87-129	4	20	
Isopropylbenzene (Cumene)	ug/L	<0.14	49.6	49.6	54.5	52.8	110	106	70-130	3	20	
m&p-Xylene	ug/L	<1.0	99.2	99.2	107	103	108	104	70-130	4	20	
Methyl-tert-butyl ether	ug/L	<0.17	49.6	49.6	40.5	41.8	82	84	66-143	3	20	
Methylene Chloride	ug/L	<0.23	49.6	49.6	47.1	43.8	95	88	70-130	7	20	
o-Xylene	ug/L	<0.50	49.6	49.6	52.0	47.9	105	97	70-130	8	20	
Styrene	ug/L	<0.50	49.6	49.6	51.4	50.3	104	102	70-130	2	20	
Tetrachloroethene	ug/L	<0.50	49.6	49.6	49.9	46.7	101	94	70-130	6	20	
Toluene	ug/L	<0.50	49.6	49.6	50.8	49.1	102	99	82-131	3	20	
trans-1,2-Dichloroethene	ug/L	<0.26	49.6	49.6	45.5	46.9	92	94	75-135	3	20	
trans-1,3-Dichloropropene	ug/L	<0.23	49.6	49.6	44.6	43.7	90	88	70-130	2	20	
Trichloroethene	ug/L	<0.33	49.6	49.6	48.6	49.5	98	100	70-130	2	20	
Trichlorofluoromethane	ug/L	<0.18	50	50	46.4	46.4	93	93	76-150	0	20	
Vinyl chloride	ug/L	<0.18	50	50	38.6	37.1	77	74	56-143	4	20	
4-Bromofluorobenzene (S)	%						99	100	61-130			
Dibromofluoromethane (S)	%						99	98	67-130			
Toluene-d8 (S)	%						99	98	70-130			

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

QC Batch: 274221 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 40160619021, 40160619022, 40160619023

METHOD BLANK: 1613631 Matrix: Solid
Associated Lab Samples: 40160619021, 40160619022, 40160619023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<1.3	4.4	11/16/17 12:20	

LABORATORY CONTROL SAMPLE & LCSD: 1613632 1613633

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40	38.0	34.5	95	86	70-120	10	20	

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

QC Batch: 273835 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40160619029, 40160619033, 40160619035, 40160619038

SAMPLE DUPLICATE: 1611724

Parameter	Units	40160096013 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.2	15.4	5	10	

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

QC Batch: 274546 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40160619013, 40160619015, 40160619017

SAMPLE DUPLICATE: 1615327

Parameter	Units	40160176006 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	12.6	12.6	0	10	

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

QC Batch: 274552 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40160619019, 40160619021, 40160619022, 40160619023, 40160619024

SAMPLE DUPLICATE: 1615403

Parameter	Units	40160137001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	12.4	12.7	2	10	

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

QC Batch: 274884
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40160619028

SAMPLE DUPLICATE: 1617260

Parameter	Units	40161094002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	15.1	15.0	1	10	

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

QC Batch: 273905
QC Batch Method: EPA 1010
Analysis Method: EPA 1010
Analysis Description: 1010 Flash Point, Closed Cup
Associated Lab Samples: 40160619021

LABORATORY CONTROL SAMPLE: 1612292

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Flashpoint	deg F		80.8			

LABORATORY CONTROL SAMPLE: 1612293

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Flashpoint	deg F		81.6			

SAMPLE DUPLICATE: 1612572

Parameter	Units	40160628002 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	>210	>210			

SAMPLE DUPLICATE: 1612573

Parameter	Units	40160550011 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	>210	>210			

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

QC Batch: 274421 Analysis Method: EPA 1010
QC Batch Method: EPA 1010 Analysis Description: 1010 Flash Point, Closed Cup
Associated Lab Samples: 40160619022, 40160619023

LABORATORY CONTROL SAMPLE: 1614756

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Flashpoint	deg F		82.0			

SAMPLE DUPLICATE: 1615282

Parameter	Units	40160753003 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	>210	>210			C4

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QUALITY CONTROL DATA

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

QC Batch: 274064 Analysis Method: EPA 9095
QC Batch Method: EPA 9095 Analysis Description: 9095 PAINT FILTER LIQUID TEST
Associated Lab Samples: 40160619021, 40160619022, 40160619023

METHOD BLANK: 1612892 Matrix: Solid
Associated Lab Samples: 40160619021, 40160619022, 40160619023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Free Liquids	no units	Fail		11/14/17 10:37	

LABORATORY CONTROL SAMPLE: 1612893

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Free Liquids	no units		Pass			

SAMPLE DUPLICATE: 1612894

Parameter	Units	40160547012 Result	Dup Result	RPD	Max RPD	Qualifiers
Free Liquids	no units	Pass	Pass			

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QUALIFIERS

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

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.

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TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

C4	Sample container did not meet EPA or method requirements.
DC	Chromatographic pattern inconsistent with typical Diesel Fuel.
G+	Late peaks present outside the GRO window.
G-	Early peaks present outside the GRO window.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
W	Non-detect results are reported on a wet weight basis.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40160619021	WC SITE 5	WI MOD DRO	274221	WI MOD DRO	274351
40160619022	WC SITE 4	WI MOD DRO	274221	WI MOD DRO	274351
40160619023	WC SITE 3	WI MOD DRO	274221	WI MOD DRO	274351
40160619021	WC SITE 5	TPH GRO/PVOC WI ext.	274378	WI MOD GRO	274501
40160619022	WC SITE 4	TPH GRO/PVOC WI ext.	274378	WI MOD GRO	274501
40160619023	WC SITE 3	TPH GRO/PVOC WI ext.	274378	WI MOD GRO	274501
40160619013	B3-1 (3-4')	EPA 3050	274279	EPA 6010	274549
40160619015	B3-2 (1-2')	EPA 3050	274279	EPA 6010	274549
40160619017	B4-5 (3-4)	EPA 3050	274279	EPA 6010	274549
40160619019	B4-4 (2-3')	EPA 3050	274279	EPA 6010	274549
40160619021	WC SITE 5	EPA 3050	274279	EPA 6010	274549
40160619022	WC SITE 4	EPA 3050	274279	EPA 6010	274549
40160619023	WC SITE 3	EPA 3050	274279	EPA 6010	274549
40160619024	B5-1 (2-3')	EPA 3050	274279	EPA 6010	274549
40160619028	B5-2 (3-4')	EPA 3050	274279	EPA 6010	274549
40160619029	B5-3 (2-3')	EPA 3050	274279	EPA 6010	274549
40160619033	B4-3 (7-8')	EPA 3050	274279	EPA 6010	274549
40160619035	B4-2 (6-7')	EPA 3050	274279	EPA 6010	274549
40160619038	B4-1 (7-8')	EPA 3050	274279	EPA 6010	274549
40160619002	TRIP BLANK	EPA 5035/5030B	274490	EPA 8260	274491
40160619013	B3-1 (3-4')	EPA 5035/5030B	274145	EPA 8260	274153
40160619014	B3-1 (7-8')	EPA 5035/5030B	274145	EPA 8260	274153
40160619015	B3-2 (1-2')	EPA 5035/5030B	274145	EPA 8260	274153
40160619016	B3-2 (7-8')	EPA 5035/5030B	274296	EPA 8260	274299
40160619017	B4-5 (3-4)	EPA 5035/5030B	274296	EPA 8260	274299
40160619018	B4-5 (7-8)	EPA 5035/5030B	274296	EPA 8260	274299
40160619019	B4-4 (2-3')	EPA 5035/5030B	274296	EPA 8260	274299
40160619020	B4-4 (7-8')	EPA 5035/5030B	274296	EPA 8260	274299
40160619024	B5-1 (2-3')	EPA 5035/5030B	274296	EPA 8260	274299
40160619025	B5-1 (7-8')	EPA 5035/5030B	274296	EPA 8260	274299
40160619026	B5-2 (1-2')	EPA 5035/5030B	274296	EPA 8260	274299
40160619027	B5-2 (7-8')	EPA 5035/5030B	274296	EPA 8260	274299
40160619030	B5-3 (1-2')	EPA 5035/5030B	274296	EPA 8260	274299
40160619031	B5-3 (7-8')	EPA 5035/5030B	274296	EPA 8260	274299
40160619032	B4-3 (1-2')	EPA 5035/5030B	274296	EPA 8260	274299
40160619033	B4-3 (7-8')	EPA 5035/5030B	274490	EPA 8260	274491
40160619034	B4-2 (1-2')	EPA 5035/5030B	274490	EPA 8260	274491
40160619036	B4-2 (7-8')	EPA 5035/5030B	274490	EPA 8260	274491
40160619037	B4-1 (3-4')	EPA 5035/5030B	274490	EPA 8260	274491
40160619038	B4-1 (7-8')	EPA 5035/5030B	274490	EPA 8260	274491
40160619001	TRIP BLANK	EPA 8260	274052		
40160619003	B5-1	EPA 8260	274052		
40160619004	B5-2	EPA 8260	274052		
40160619005	B5-3	EPA 8260	274052		
40160619006	B3-1	EPA 8260	274052		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60553028 HAYWARD STH 27 PH 2.5
Pace Project No.: 40160619

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40160619007	**B3-2**	EPA 8260	274052		
40160619008	**B4-5**	EPA 8260	274052		
40160619009	**B4-4**	EPA 8260	274052		
40160619010	**B4-3**	EPA 8260	274052		
40160619011	**B4-2**	EPA 8260	274052		
40160619012	**B4-1**	EPA 8260	274052		
40160619013	**B3-1 (3-4')**	ASTM D2974-87	274546		
40160619015	**B3-2 (1-2')**	ASTM D2974-87	274546		
40160619017	**B4-5 (3-4)**	ASTM D2974-87	274546		
40160619019	**B4-4 (2-3')**	ASTM D2974-87	274552		
40160619021	**WC SITE 5**	ASTM D2974-87	274552		
40160619022	**WC SITE 4**	ASTM D2974-87	274552		
40160619023	**WC SITE 3**	ASTM D2974-87	274552		
40160619024	**B5-1 (2-3')**	ASTM D2974-87	274552		
40160619028	**B5-2 (3-4')**	ASTM D2974-87	274884		
40160619029	**B5-3 (2-3')**	ASTM D2974-87	273835		
40160619033	**B4-3 (7-8')**	ASTM D2974-87	273835		
40160619035	**B4-2 (6-7')**	ASTM D2974-87	273835		
40160619038	**B4-1 (7-8')**	ASTM D2974-87	273835		
40160619021	**WC SITE 5**	EPA 1010	273905		
40160619022	**WC SITE 4**	EPA 1010	274421		
40160619023	**WC SITE 3**	EPA 1010	274421		
40160619021	**WC SITE 5**	EPA 9095	274064		
40160619022	**WC SITE 4**	EPA 9095	274064		
40160619023	**WC SITE 3**	EPA 9095	274064		

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

40160619

CHAIN OF CUSTODY

(Please Print Clearly)	
Company Name:	AECOM
Branch/Location:	Stevens Point
Project Contact:	Kyle Wagner
Phone:	715-342-3038
Project Number:	Hayward STH 27 Phase 2S
Project Name:	60553028
Project State:	WI
Sampled By (Print):	Daniel Barton
Sampled By (Sign):	Daniel Barton
PO #:	Regulatory Program:

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

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

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: VOC by 8260	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	Trip blank	11/8/17	13:50	W	N	B			2-40mlV B	
002	Trip blank	11/8/17	13:50	W					1-40mlV F	
003	BS-1	11/8/17	11:00	W			✓		3-40mlV B	
004	BS-2	11/8/17	11:25	W			✓			
005	BS-3	11/8/17	12:00	W			✓			
006	B3-1	11/8/17	12:20	W			✓			
007	B3-2	11/8/17	13:00	W			✓			
008	B4-5	11/8/17	13:20	W			✓			
009	B4-4	11/8/17	13:45	W			✓			
010	B4-3	11/8/17	14:10	W			✓			
011	B4-2	11/8/17	14:30	W			✓			
012	B4-1	11/8/17	14:55	W			✓			

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
Dan Barton	11/9/17 10:45		
UPS	11/10 1005	Pace	11/10 1005

PACE Project No.: 40160619
Receipt Temp = RoI °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal Present / Not Present
Intact / Not Intact

C019a(27Jun2006)

Version 6.0 06/14/08

ORIGINAL

40160619

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

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CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	AECom
Branch/Location:	Stevens Point
Project Contact:	Kyle Wagner
Phone:	715-342-3038
Project Number:	60553028
Project Name:	Hayward STH 27 Phase 2S
Project State:	WI
Sampled By (Print):	Daniel Barton
Sampled By (Sign):	
PO #:	Regulatory Program:

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

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

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

Matrix Codes

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Analyses Requested: Lead/Moisture	Analyses Requested: VOC by 8260	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
013	B3-1 (3-4')	11/8/17	1210	S	✓			1-4oz P^A	
	B3-1 (3-4')	11/8/17	1210	S		✓		1-40ml V^F	
014	B3-1 (7-8')	11/8/17	1215	S		✓		1-4oz P^A	
015	B3-2 (1-2')	11/8/17	1245	S	✓			1-40ml V^F	
~~016~~	B3-2 (1-2')	11/8/17	1240	S		✓		1-4oz P^A	
~~017~~ 016	B3-2 (7-8')	11/8/17	1245	S		✓		1-40ml V^F	
~~018~~ 017	B4-5 (3-4')	11/8/17	1310	S	✓			1-4oz P^A	
019	B4-5 (3-4')	11/8/17	1310	S		✓		1-40ml V^F	
~~019~~ 020	B4-5 (7-8')	11/8/17	1315	S		✓		1-4oz P^A	
021 ~~020~~ 019	B4-4 (2-3')	11/8/17	1325	S	✓			1-40ml V^F	
~~020~~ 021	B4-4 (2-3')	11/8/17	1335	S		✓		1-4oz P^A	
~~021~~ 020	B4-4 (7-8')	11/8/17	1340	S		✓		1-40ml V^F	

GW 11/13/17

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

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
Dan Barton	11/9/17 10:45		
UPS	11/10 1005	Dsams Pace	11/10 1005

PACE Project No.: 40160619

Receipt Temp = 1.0 °C

Sample Receipt pH OK / Adjusted

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

C019a(27Jun2006)

Version 6.0 06/14/06

ORIGINAL

40160619

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

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CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	AECOM
Branch/Location:	Stevens Point
Project Contact:	Kyle Wagner
Phone:	715-342-3038
Project Number:	60553028
Project Name:	Hayward STH27 Phase 2.5
Project State:	WI
Sampled By (Print):	Daniel Barton
Sampled By (Sign):	Daniel Barton
PO #:	Regulatory Program:

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

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

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

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

DUS 11/10/17

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: Lead/Moisture	Analyses Requested: VOC by 8260	Analyses Requested: WC Protocol T1	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					N	A		N	F			
022	20 WC SB Site 5	11/8/17	1130	S					✓	DS 11/10 ~~25~~ 2-40ml V F	2-4ozag A	1-4ozag A
023	22 WC Site 4	11/8/17	1410	S					✓			
024	23 WC Site 3	11/8/17	1300	S					✓			
025	24 BS-1 (2-3')	11/8/17	10:45	S	✓						1-4ozP A	
	BS-1 (2-3')	11/8/17	10:45	S				✓			1-40ml V F	
026	25 BS-1 (7-8')	11/8/17	10:55	S				✓				
027	26 BS-2 (1-2')	11/8/17	11:10	S				✓				
028	27 BS-2 (7-8')	11/8/17	11:15	S				✓				
029	29 BS-2 (3-4')	11/8/17	11:10	S	✓						1-4ozP A	
030	28 BS-3 (2-3')	11/8/17	1140	S	✓							
031	30 BS-3 (1-2')	11/8/17	1150	S				✓			1-40ml V F	
032	30 BS-3 (7-8')	11/8/17	1155	S				✓				

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

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
Dan Barton	11/9/17 10:45		
UPS	11/10 1005	DSOMS Pace	11/10 1005

PACE Project No.: 40160619

Receipt Temp = 2.0 °C

Sample Receipt pH OK / Adjusted

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

C019a(27Jun2006)

Version 6.0 06/14/06

ORIGINAL

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

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www.pacelabs.com

CHAIN OF CUSTODY

(Please Print Clearly)	
Company Name:	AECOM
Branch/Location:	Stevens Point
Project Contact:	Kyle Wagener
Phone:	715-342-3038
Project Number:	60553028
Project Name:	Hayward STH 27 Phase 2S
Project State:	WI
Sampled By (Print):	Daniel Barton
Sampled By (Sign):	Daniel Barton
PO #:	Regulatory Program:

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

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

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

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

Matrix Codes

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: Lead/Arsenic	Analyses Requested: VOCs by 8260
03332	B4-3 (1-2')	11/8/17	1355	S				✓
03433	B4-3 (7-8')	11/8/17	1400	S		D	✓	✓
	B4-3 (7-8')	11/8/17	1400	S			✓	
03534	B4-2 (1-2')	11/8/17	1425	S				✓
03635	B4-2 (6-7')	11/8/17	1425	S			✓	
03736	B4-2 (7-8')	11/8/17	1430	S				✓
03837	B4-1 (3-4')	11/8/17	1445	S				✓
03938	B4-1 (7-8')	11/8/17	1445	S			✓	
04039	B4-1 (7-8')	11/8/17	1450	S				✓

CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
	1-40mlVF	
	↓	
	1-4ozP^A	
	1-40mlVF	
	1-4ozP^A	
	1-40mlVF	
	↓	
	1-4ozP^A	
	1-40mlVKF^DS	
	11/10	

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

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
Dan Barton	11/9/17 10:45		
UPS	11/10 1005	Dsolms Pace	11/10 1005

PACE Project No.: 40/60619
Receipt Temp = 2.0 °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal: Present / Not Present
Intact / Not Intact

C019a(27Jun2006)
Version 6.0 05/24/06
ORIGINAL

Sample Condition Upon Receipt

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

Pace Analytical™

Project **WO#: 40160619**

40160619

Client Name: Aecom

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

Tracking #: 12 A47 8E9 03 9114 1695

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

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

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

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

Cooler Temperature Uncorr: ROI /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents:
Date: 11/10
Initials: DS

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 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. NO MS/MSD DS 11/10
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: 11-10-17 KR	~~☐Yes~~ ☑No ☐N/A	12. 015 1-40mL vf time 1240, 021 client covered tare weight and 022 11-10-17 KR
-Includes date/time/ID/Analysis Matrix: SW		
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): 3716101W3		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Kyle Wagoner Date/Time: 11/13/17

Comments/ Resolution: For Samples Collected without a dry weight cap; report on wet wt basis. 11/13/17 DSL

Project Manager Review: [signature] **Date:** 11/13/17

F-GB-C-031-Rev.04 (12Dec2016) SCUR.xls
Pace Analytical Services LLC. - Green Bay WI

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.

Contact
Kyle Wagoner
Project Manager
T 715-342-3038
E kyle.wagoner@aecom.com