

Mr. Trevor Nobile
Wisconsin Department of Natural Resources
2300 North Dr. Martin Luther King, Jr. Drive
Milwaukee, WI 53212

**NR 718.12 EXEMPTION REQUEST AND SOIL MANAGEMENT PLAN
MARQUETTE UNIVERSITY ATHLETIC AND HUMAN PERFORMANCE
RESEARCH CENTER (AHPRC) SITE
1201-1221 W. WELLS STREET, MILWAUKEE, WISCONSIN
BRRTS NO. 02-41-580746, FID NO. 341293920**

Dear Mr. Nobile:

On behalf of Marquette University, Ramboll US Corporation (Ramboll) is submitting the attached Wisconsin Administrative Code (WAC) Chapter NR 718.12 Exemption Request and Soil Management Plan (SMP) for the above referenced site. The planned Athletic and Human Performance Research Center (AHPRC) construction includes a slab-on-grade two-story space on the northern portion and a full basement on the southern portion of the building. Parking areas will be constructed immediately adjacent to the AHPRC building and in the green space area to the west.

An estimated 12,500 cubic yards (cy) of soil will be excavated to facilitate construction of the AHPRC building. Most of the soil will be removed during construction of the basement portion of the building and associated footings for the slab-on-grade portion of the building. Although most of the impacted soil will be excavated and disposed of off site at a licensed solid waste facility, a small portion of the soil (less than 2,500 cy) removed during excavation benching will be managed in accordance with WAC NR 718.

The soil removed during excavation benching will be temporarily stored off site on the nearby Former One-Hour Valet Cleaners site (1214-1222 West Wells Street, BRRTS No. 02-41-152248), which is also owned by Marquette University. Following construction of the basement walls for the AHPRC building, the previously removed soils will be returned to the Site, and all efforts will be made to replace the soils to the same areas from which they were originally excavated in order to backfill the excavation benching area. The temporary off-site storage will take place on the existing paved surfaces of the Former One-Hour Valet Cleaners site and will comply with the requirements specified in WAC NR 718.05.

As part of this submittal, an exemption to the following NR 718.12 requirements is also being requested:

- NR 718.12(1)(c)1 – Placement of soil within 3 feet of the high-water table
- NR 718.12(1)(e)1 – Number of samples

March 1, 2018

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Ref. 1690005255-001

The exemption request was prepared utilizing the RR-072 exemption request form and the supporting documentation is attached.

The SMP was prepared to address how impacted soil will be handled during the AHPRC construction activities. The SMP presents the measures for appropriate soil handling practices during intrusive activities proposed for the site involving contaminated soil excavation, management, and off-site disposal. In addition, the SMP includes the specific elements required under WAC NR 718 for the temporary off-site storage and replacement of low-level impacted soil removed during the excavation benching activities. The contact information for the Responsible Party, Contractors and Consultant involved in this project is provided in Table 1 of the SMP.

A check for \$700 is attached for the required review fees. Please note that any residual soils that remain at the site, including those soils managed under WAC NR 718 during the construction activities, will be incorporated as continuing obligations as part of the eventual WAC NR 726 Case Closure. As previously discussed, construction is scheduled to begin during the first week of March 2018, so we appreciate your timely review of these materials.

If you have any questions or require additional information, please feel free to contact us.

Yours sincerely,



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cc: Joel Smullen, Marquette University (electronic copy)

Attachment: RR-072 NR 718.12 Exemption Request
Review Fee Check (\$700)
NR 718 Soil Management Plan



Remediation and Redevelopment Program

April 2017

Recommended Format for Exemption Request Wis. Admin. Code § NR 718.12 or § NR 718.15

Purpose

The purpose of this document is to provide a consistent format for consultants and responsible parties to demonstrate that the proposed management of solid waste material qualifies for a Wis. Admin. Code §§ NR 718.12 or NR 718.15 exemption and to request written approval of the exemption request. This document may be included as part of a Remedial Action Plan or Post Closure Modification Request, or can be submitted by itself depending on the activities conducted at the site. Using this recommended format will likely result in a faster DNR review. At a minimum, all exemption requests must satisfy the requirements of a soil management plan as outlined in Wis. Admin. Code § 718.12(2)(b).

Introduction

Soil and other solid waste generated from a response action site as part of an interim or remedial action may be managed at a site or facility that is not an operating licensed landfill if a Wis. Admin. Code §§ NR 718.12 or NR 718.15 exemption is obtained from the Department of Natural Resources (DNR). The site or facility where material will be managed (the receiving property) would be exempted from the Waste and Materials Management Program requirements established in Wis. Stat. § 289 and Wis. Admin. Code ch. NR 500 to NR 538. The “receiving property” may be the same site or facility where the solid waste was generated from, or it may be a different site or facility. An exemption through Wis. Admin. Code § NR 718.12 can be granted when soil is being managed as part of an interim action under Wis. Admin. Code § NR 708 or a remedial action under Wis. Admin. Code § NR 722. An exemption through Wis. Admin. Code § NR 718.15 can be granted when other solid waste material is managed as part of an interim or remedial action on the site from which it was generated. Managing solid waste material with either exemption requires prior written approval from the DNR.

If this exemption request involves contaminated material impacted by a discharge that has not been reported to the DNR, a ‘Notification for Hazardous Substance Discharge (non-emergency)’ form must be completed and submitted immediately as required by Wis. Admin. Code

§ NR 706. This form is located at <http://dnr.wi.gov/files/pdf/forms/4400/4400-225.pdf>.

This form is not intended to be used for immediate actions under Wis. Admin. Code § NR 708 as prior DNR approval is typically not required. Immediate actions do not require prior DNR approval if the requirements of Wis. Admin. Code § NR 718.12(1) are met, contaminant concentrations do not exceed Wis. Admin. Code § NR 720 soil residual contaminant levels, and the quantity of material managed is less than 100 cubic yards total.

Exemptions for projects involving large-scale disposal or requiring items such as a liner system, leachate treatment and an engineered cap, or projects proposing to place the material below the groundwater table, should not be requested using this format. Check with DNR staff before submitting such a proposal.

Document Instructions

Complete all sections of this document as instructed. Some portions of the document may be filled in directly as indicated, other responses will need to be completed separately and attached. Fully explain why any uncompleted section is not relevant. Submit one hardcopy and one electronic copy of the completed document and all required attachments and fees to the DNR project manager responsible for the site where the waste will be excavated. The request may be submitted to the regional environmental program associate (EPA) if a project manager has not been assigned to this case. A list of EPAs can be found here: <http://dnr.wi.gov/topic/Brownfields/Contact.html>.

Section 1 – General Information and Fees

Identify the purpose of the exemption by checking each box that applies:

- Manage contaminated soil on the same response action site from which it was generated (§ NR 718.12).
- Manage contaminated soil at a site or facility that is different from the response action site from which it was generated (§ NR 718.12).
- Manage other solid waste at the same site from which it was generated (§ NR 718.15).

If none of the above boxes are checked, the proposed waste management activity cannot be exempted through Wis. Admin. Code § NR 718. Management of waste material from a site other than a response action site may be allowed after obtaining a “low hazard exemption” from the DNR Waste and Material Management Program. Guidance on a ‘low hazard exemption’ request is located: <http://dnr.wi.gov/files/PDF/pubs/wa/wa1645.pdf>.

Identify the applicable Wis. Admin. Code § NR 749 DNR review fees for this submittal by checking the applicable “On-Site Management Fee.” If material will be managed at a site or facility other than where it was generated, also select the appropriate “Off-Site Management Fee.” Record the combined fee sums in the space provided below.

NR 749 Fees for Requesting Wis. Admin. Code §§ NR 718.12 Soil or NR 718.15 Exemption			
Soil or Waste Managed on the Generating Property			
Action	Action Fee	WRRD Fee	On-Site MGMT Fee
Interim Actions per NR 708.11, with SMP and CO applied at other site/facility	\$700	No fee	<input type="checkbox"/> \$700
Remedial Action Plan approval, with SMP, without residual soil CO	\$1050	No fee	<input type="checkbox"/> \$1050
Remedial Action Plan approval, with SMP, with residual soil CO	\$1050	\$300	<input type="checkbox"/> \$1350
SMP submitted separately from a RAP or CO modification, without residual soil CO (Residual soil CO at time of closure)	\$700	No fee	<input checked="" type="checkbox"/> \$700
SMP submitted separately from a RAP or CO modification, with residual soil CO	\$700	\$300	<input type="checkbox"/> \$1000
Closed Sites: CO modification action, with SMP, without residual soil CO	\$1050	No fee	<input type="checkbox"/> \$1050
Closed Sites: CP modification action, with SMP, with residual soil CO	\$1050	\$300	<input type="checkbox"/> \$1350
Soil Managed on a Site or Facility other than the Generating Property			
Action	Action Fee	WRRD Fee	Off-Site MGMT Fee
Interim Actions per NR 708.11, with SMP and CO applied at other site/facility	\$700	\$350	<input type="checkbox"/> \$1050
Interim Actions per NR 708.11, with SMP and no CO applied at other site/facility	\$700	No fee	<input type="checkbox"/> \$700
All other Actions (Remedial actions, modifications to CO, etc.) with residual soil CO	\$700	\$300	<input type="checkbox"/> \$1000
All other Actions (Remedial actions, post closure modifications, etc.) with no residual soil CO	\$700	No fee	<input type="checkbox"/> \$700
Total of On-Site Management Fee and Off-Site Management Fee			\$ 700

Other: If the request does not conform to one of the options above, summarize the request below and the fee that is being paid:

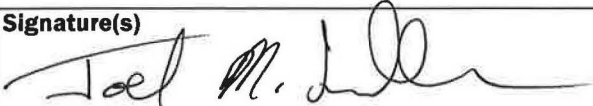
- 1) **SMP** – A Soil Management Plan submitted in accordance with NR 718.12 (1) and (2) or NR 718.15.
- 2) **“With residual soil CO”** - site will have a residual soil continuing obligation (e.g. engineering control, cap, or cover) applied at the source property at the end of the applicable action; remedial action approval, or approval by an addendum to the closure letter.
- 3) **“Without residual soil CO”** - site that will not have a residual soil continuing obligation applied at the source property at the end of the applicable action.
- 4) **WRRD** – Wisconsin Remediation and Redevelopment Database

Section 2 –Property and Contact Information

Fill in all applicable portions of this section.

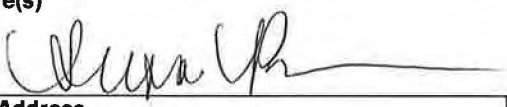
A. Information About the Site or Facility From Which Material is Proposed to be Excavated – Complete all applicable boxes							
BRRTS No. 02-41-580746			BRRTS Activity (Site) Name AHPRC				
Response Action Site Address 1201 - 1221 West Wells Street			VPLE No. NA				
City Milwaukee			Parcel ID No. 3910011110				
State Wisconsin			FID No. 341293920				
County Milwaukee			Zip Code 53204				
WTM Coordinates			WTM Coordinates Represent				
X: 688812		Y: 287325		Source Area <input checked="" type="checkbox"/>		Parcel Center <input type="checkbox"/>	
SW	¼	NW	¼	Sec: 29	T: 07N	R: 22	E/W: E
Latitude:			Longitude:				
Current Zoning: TL (Institutional District)			Current Land Use: Parking lot and green space.				

The Wis. Admin. Code §§ NR 718.12 and/or NR 718.15 exemption(s) will be issued to the Wis. Admin. Code § NR 700 responsible party identified below and to the owner of the receiving site or facility, if different than the generating site. If there is more than one responsible party or property owner, include the information requested below for each as a separate document and attach to this document. If the responsible party is not the owner of the site or facility, provide that information below.

B. Responsible Party Information			
Responsible Party (RP) Name(s) Marquette University		Company Name RP Contact: Joel Smullen	
Signature(s) 		Date 3/2/2018	
Mailing Address 517 North 14th Street		City Milwaukee	State WI
		ZIP Code 53233	
Phone # (include area code) 414-288-4620		Email joel.smullen@marquette.edu	

C. Owner Information for Site or Facility From Which Material is Proposed to be Excavated from, if Different than Responsible Party			
Responsible Party (RP) Name(s) NA (same as above)		Company Name	
Signature(s)		Date	
Mailing Address		City	State
		ZIP Code	
Phone No. (Include area code)		Email	

Fill in this next section if someone other than the responsible party and/or facility owner is preparing this submittal.

D. Requestor Information				
Last Name Petrofske	First Susan	Organization/Business Name Ramboll		
Signature(s) 				Date 3/1/18
Mailing Address 175 N Corporate Drive, Ste 160		City Brookfield	State WI	ZIP Code 53045
Phone No. (include area code) (262) 901-3501		Email spetrofske@ramboll.com		
Check the box that describes the requestor's relationship to the generating property: <input checked="" type="checkbox"/> Is the property owner's agent or consultant <input type="checkbox"/> Is renting or leasing the property <input type="checkbox"/> Is developing the property <input type="checkbox"/> Other, describe relationship: _____				

E. Contact Information For Questions About this Request		
Last Name	First	Organization/Business Name Same as above
Mailing Address		Email
City		Phone No. (include area code)
State	Zip Code	Relationship to Requestor (Same, Consultant, Developer, Etc.):

F. Information About the Site or Facility Where Contaminated Soil Will Be Disposed, if at a Different Location Than The Site or Facility From Which it Was Generated

Select if Same as Generating Property (and skip remainder of section)

BRRTS No.			BRRTS Activity (Site) Name		
Receiving Site or Facility Address			VPLE No.		
City			Parcel ID No.		
State			FID No.		
County			Zip Code		
WTM Coordinates			WTM Coordinates Represent		
X:		Y:		Source Area <input type="checkbox"/> Parcel Center <input type="checkbox"/>	
$\frac{1}{4}$	$\frac{1}{4}$	Sec:	T:	R:	E/W:
Latitude:			Longitude:		
Current Zoning:			Current Land Use:		

G. Receiving Site or Facility (Source Property or Off-Site Property) Owner Information

Provide the following information for the owner of the receiving site or facility. If there is more than one property owner include the information requested below for each as a separate document and attach to this form.

Property Owner Name(s) Marquette University	Company Name Owner Contact - Joel Smullen		
Mailing Address 517 North 14th Street	City Milwaukee	State WI	ZIP Code 53233
Phone No. (include area code) 414-288-4620	Email joel.smullen@marquette.edu		

Section 3 – Waste Characterization

Address the following items to describe the contaminated soil and/or other solid waste material that will be managed under this plan and demonstrate that it has been adequately characterized. Attach your responses to these items at the end of this document. See attachment for Section 3 responses.

- A. Describe the material proposed to be managed, including its general makeup, physical characteristics, the homogeneity of the material, the proportion of soil to other solid waste, and any other pertinent descriptors.
- B. Describe the historic and current land use of the site or facility where the contaminated soil or other solid waste originates. State how this site or facility is zoned.
- C. Total volume of contaminated soil and/or other solid waste to be managed (cubic yards):
- D. Describe identified contaminants and the source(s). Indicate whether contaminant concentrations exceed Wis. Admin. Code § NR 720 Residual Contaminant Levels. Include a summary table, map with sample locations, and relevant laboratory data.
- E. Describe the sampling activities conducted to characterize the material including where the samples were collected from, how sample locations were chosen, the sampling methods used, and when sampling activities were conducted.
- F. Explain how the sampling activities adequately characterized the contaminated soil or other solid waste proposed to be managed. Indicate whether the samples were analyzed for all contaminants previously identified at the site or facility where the material will be generated and analyzed for all contaminants potentially present at the site or facility considering current and historic land use. Discuss how samples were collected from areas most likely to be contaminated and from material that will actually be managed under this exemption.
- G. Total number of samples collected from this material and analyzed for contaminants of concern.

- H. Rate of sample collection per volume (samples/cubic yard).
- I. Wis. Admin. Code § NR 718.12(1)(e) requires that samples collected to characterize soil be collected at a rate of one sample per 100 yards (for the first 600 yards) and one sample for each additional 300 yards of material, with a minimum of 2 samples. If the DNR pre-approved an alternative sampling plan, describe how the sampling that was conducted complied with a pre-approved plan. Provide the date the sampling plan was pre-approved and the name of the DNR person who approved the plan.

Section 4 – Project Description/Material Management Plan

Address the following items to describe the material management activities proposed to take place. Attach your responses to these items at the end of this document. See attachment for Section 4 responses.

- A. Describe the waste management activities that will require a Wis. Admin. Codes §§ NR 718.12 or NR 718.15 exemption. Provide details on how and where waste material will be generated, transported and placed. Describe the depth of the proposed excavation of contaminated soil or other solid waste, and the depth that it will be placed at the receiving site. Describe any response actions proposed for the receiving site or facility to address the relocated contaminated material (such as the construction of a cap). Confirm the proposed material management will comply with Wis. Admin. Code § NR 726.13(1)(b) 1 through 5. Discuss how material management activities will fit in with the overall property remediation and/or development plans.
- B. Summarize the proposed schedule for implementation of the material management plan including anticipated start and end dates.
- C. Describe any procedures that have been established, or methods that will be used, to identify previously undocumented contamination during the completion of this project (such as instrument field screening, visual inspections, etc.). Also describe any contingency procedures that have been established to address unexpected contamination. The discovery of a previously unknown contaminant release on a property must be immediately reported to the DNR using the ‘Notification for Hazardous Substance Discharge (non-emergency)’ form.
- D. Summarize how the proposed management activities will prevent or minimize adverse environmental impacts and potential threats to human health and welfare, including worker safety, by assessing how all potential exposure and migration pathways of concern, including direct contact exposure, vapor intrusion, ground water, surface water, sediment and any other relevant pathway will be addressed by the proposed management.

Section 5 - Receiving Site or Facility Information

Describe the site or facility receiving the waste material by addressing the following items. Where applicable, attach your responses to these items at the end of this document. See attachment for Section 5 responses.

- A. Is the receiving site or facility the same as the generating site? Yes No
- B. Describe the historic, current and proposed land use of the site(s) or facility(s) where the contaminated soil or other solid waste will be managed. How are these site(s) or facility(s) zoned?

C. Identify current uses of all properties adjacent to the site or facility. Check all that apply.

Agricultural	<input type="checkbox"/> N	<input type="checkbox"/> S	<input type="checkbox"/> E	<input type="checkbox"/> W	<input type="checkbox"/> NE	<input type="checkbox"/> NW	<input type="checkbox"/> SE	<input type="checkbox"/> SW
Industrial	<input type="checkbox"/> N	<input type="checkbox"/> S	<input type="checkbox"/> E	<input type="checkbox"/> W	<input type="checkbox"/> NE	<input type="checkbox"/> NW	<input type="checkbox"/> SE	<input type="checkbox"/> SW
Recreational	<input type="checkbox"/> N	<input type="checkbox"/> S	<input type="checkbox"/> E	<input type="checkbox"/> W	<input type="checkbox"/> NE	<input type="checkbox"/> NW	<input type="checkbox"/> SE	<input type="checkbox"/> SW
Residential	<input type="checkbox"/> N	<input type="checkbox"/> S	<input type="checkbox"/> E	<input type="checkbox"/> W	<input type="checkbox"/> NE	<input type="checkbox"/> NW	<input type="checkbox"/> SE	<input type="checkbox"/> SW
Undeveloped	<input type="checkbox"/> N	<input type="checkbox"/> S	<input type="checkbox"/> E	<input type="checkbox"/> W	<input type="checkbox"/> NE	<input type="checkbox"/> NW	<input type="checkbox"/> SE	<input type="checkbox"/> SW
Commercial	<input type="checkbox"/> N	<input type="checkbox"/> S	<input type="checkbox"/> E	<input type="checkbox"/> W	<input type="checkbox"/> NE	<input type="checkbox"/> NW	<input type="checkbox"/> SE	<input type="checkbox"/> SW
Other	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> S	<input checked="" type="checkbox"/> E	<input checked="" type="checkbox"/> W	<input checked="" type="checkbox"/> NE	<input checked="" type="checkbox"/> NW	<input checked="" type="checkbox"/> SE	<input checked="" type="checkbox"/> SW

Describe 'Other' property use below:

The site is located on the Marquette campus and is bordered to the north by West Wells Street, to the east by North 12th Street, to the south by Zilber Hall, and to the west by green space and Abbotsford Hall

- D. Briefly describe any previous environmental site investigations or remedial actions conducted at the site or facility. Describe the environmental condition of the portion of the receiving site or facility where waste will be placed including what contaminants are present, the environmental sampling conducted in that area, and whether identified contaminant concentrations exceed applicable standards.
- E. Describe any environmentally sensitive areas at or near the site or facility where the contaminated soil will be managed.
- F. Describe any other features of this property not addressed above that influence its suitability for the disposal of the contaminated soil or other solid waste.
- G. Briefly discuss the geology and hydrogeology of the receiving site or facility, including information from any previous remedial investigations and well logs or well construction records from nearby wells. Also, provide the information requested below indicating whether the response is based on regional or site specific information:

Depth to Bedrock (ft. below ground surface): > 100 feet Regional Site Specific

Bedrock Type: Sandstone Limestone/Dolomite Metamorphic/Igneous

High Groundwater Level (ft. below ground surface): 8 ft bgs (temp well) Regional Site Specific
15 ft bgs (perm well)

Groundwater Flow Direction: southeast Regional Site Specific

Section 6 – Locational Criteria

Indicate if excavated waste material will be placed in any of the following locations:

- Within a floodplain.
- Within 100 feet of any wetland or critical habitat area.
- Within 300 feet of any navigable river, stream, lake, pond, or flowage.
- Within 100 feet of any on-site water supply well or 300 feet of any off-site water supply well.
- Within 3 feet of the high groundwater level.
- At a depth greater than the depth of the original excavation from which the contaminated soil was removed.

If any of the above boxes are checked, an exemption from the indicated criteria must be requested as described below. If none of the above boxes are checked, and the proposed placement of waste material will not otherwise pose a threat to the public health, safety, or welfare of the environment, the proposed management activities will comply with the location criteria of Wis. Admin. Code § NR 718.12(1)(c) and you may skip ahead to Section 7.

Include an explanation of why granting an exemption to the Wis. Admin. Code § NR 718.12(1)(c) locational criteria will not cause a threat to public health, safety, welfare and the environment by assessing how all potential exposure and migration pathways of concern, including direct contact exposure, vapor intrusion, ground water, surface water, sediment and any other relevant pathway will be addressed by the proposed management. Consider the quantity and characteristics of the waste being managed, the geologic and hydrogeological characteristics of the receiving site, the unavailability of other environmentally suitable alternatives, and whether the activities will comply with other state and federal regulations including other portions of Wis. Admin. Code §§ NR 700 to NR 754. Attach your response to the end of this document.

See attachment for Section 6 responses.

Section 7 – Additional Information Required for Non-Metallic Mine Receiving Sites or Facilities

Complete this section if the proposed disposal facility is a non-metallic mine. NA

A. Current depth to groundwater at facility (feet below ground surface): _____

B. Has the facility been dewatered to allow mining? Yes No

If yes, indicate the expected natural groundwater level when dewatering is terminated (feet below ground surface): _____

C. Is waste proposed to be placed within 10 feet of the natural water table? Yes* No

** If yes, placement of the waste will not comply with Wis. Admin. Code §§ NR 503.08(1)(e) and NR 503.08(2)(d) .*

D. Include a copy of the reclamation plan indicating the placement of low level contaminated material is acceptable.

E. Describe any design criteria established for the disposal site, include restrictions on material placement, engineered barrier requirements, etc. Attach your response to this item at the end of this document.

Section 8 – Continuing Obligations at Receiving Site or Facility

Check the applicable boxes to indicate which continuing obligations will be specifically required to address the waste material being managed on the receiving property:

No Continuing Obligations

Note: Continuing Obligations will be addressed during site closure activities.

Residual Soil Contamination:

If contaminated soil managed under this soil management plan is excavated in the future, the property owner at the time of excavation will be responsible for the following:

- determine if contamination is present,
- determine whether the material would be considered solid or hazardous waste,
- ensure that any storage, treatment or disposal is in compliance with applicable statutes and rules.

Contaminated soil may be managed in accordance with Wis. Admin. Code § NR 718, with prior DNR approval. In addition, all current and future property owners and occupants of the property and right-of-way holders need to be aware that excavation of the contaminated soil may pose a hazard and as a result special precautions may need to be taken during excavation activities to prevent a health threat to humans. A historic fill exemption is required prior to construction of any structures over fill materials.

Depending on site-specific conditions, construction over contaminated soils or groundwater may also result in vapor migration of contaminants into enclosed structures or migration along underground utility lines. The potential for vapor intrusion and means of mitigation should be evaluated when planning any future redevelopment, and measures should be taken to ensure the continued protection of public health, safety, welfare and the environment at the site.

Maintenance of a cover:

A soil cover/engineered cover/other has been placed over remaining contamination and this cover must be maintained. Inspections will be required, and submittal of inspection reports may be required. Certain activities which would disturb the cover or barrier will be prohibited. If the cover is approved for industrial land use, notification of the DNR is required before changing to a non-industrial use, to determine if the cover will be protective for that use. A maintenance plan is attached, which describes the maintenance activities to be required. If the DNR requires changes to the maintenance plan, an updated maintenance plan must be provided at the completion of the soil disposal action. A map is attached which shows the location of the extent of contaminated materials and the extent of the cover.

Use of Industrial Land Use Soil Standards:

Industrial soil standards have been applied for the site receiving the contaminated materials. The DNR must be notified if the property land use will change from industrial use to a non-industrial land use. Additional investigation and remediation may be required prior to the change in land use to ensure the site conditions are protective for the planned land use.

Vapor: Future Actions to Address Vapor Intrusion:

While vapor intrusion does not currently exist, if a building is constructed on this property, or reconstructed, or if use of a building is changed to a non-industrial use, vapor intrusion may be a concern. The DNR must be notified before construction of a building or changing the use of an existing building to non-industrial use. The use of vapor control technologies or an assessment of the potential for vapor intrusion will be required at that time.

Site specific condition:

Describe the site specific condition:

Section 9 – Figures

Attach to this form figures that clearly depict the items listed below. All maps should be drawn to scale not larger than 1 inch equal to 100 feet and labeled with the site or facility name and address. The location of the property and the specific disposal area must be provided in sufficient detail to allow DNR personnel to inspect these areas in the future. Providing a ‘cut/fill’ map that clearly depicts how much material will be removed or added to different areas of the involved property(ies) and depicting how material will be moved across the site is highly recommended. Providing cross sections that depict site conditions before and after soil management activities is also recommended.

The boundaries of each property involved in the project as well as named and unnamed roads or access points, buildings and other surface features, underground utilities, land uses on adjacent properties, and known and potential sources of hazardous substances. Figure 1 and Figure 2

The location of wetlands, critical habitat areas, floodplains, surface water bodies, water supply wells, NA or other possible receptors located near or within the area where material will be managed.

- The lateral extent and depth of planned excavation, grading, or otherwise disturbed areas. Figure 3
- The lateral extent and thickness of excavated material placement locations. Figure 3
- Soil sample locations at the generating and receiving sites. Depict applicable soil contaminant concentration data and sample depths. Indicate the extent of contamination exceeding a RCL. Figure 2
- NA Depth to groundwater. (Permanent groundwater monitoring wells will be installed post-construction)
- NA The extent of any performance standards (such as a barrier or cap) that will be required at the completion of management activities. (Will be provided at time of case closure.)

Section 10 - Additional Attachments

The following documents are recommended for inclusion with a Wis. Admin. Code § NR 718.12 or a Wis. Admin. Code § 718.15 exemption request. Indicate which of these documents are applicable to this request by checking the boxes below. Submit copies of the indicated documents with this document.

- A table summarizing the analytical results of all soil/waste samples collected at the generating site or facility that meets the requirements of Wis. Admin. Code § 716.15(4)(e). Clearly indicate which of these samples were collected from material that is proposed to be managed. Table 1
- The analytical package for all samples listed on the above table. The package should include the sample results, chain of custody, sampling methods, and QA/QC data. Appendix A of SMP
- NA A maintenance plan for any performance standard needed to address the material proposed to be managed. The plan should follow the format found in [DNR Form 4400-202, Attachment D](#).
- NA A copy of the reclamation plan for the receiving site or facility if it is a nonmetallic mine. Confirm the plan allows for acceptance of contaminated soil by marking relevant plan sections.
- NA Power of Attorney (if applicable, see Section 12).
- NA Deed for the property receiving the contaminated soil and or waste. If a certified survey map or plat map is referenced by this deed then also include those documents. If a map is not referenced in the deed, provide a copy of a parcel map depicting the property boundaries. Will be provided as part of final case closure request.

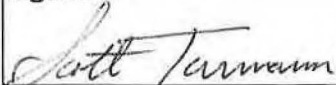
Section 11 - Certification Statements

All exemption requests submitted to manage contaminated soil or other solid waste as an interim action or remedial action under Wis. Admin. Code §§ NR 708 or NR 722 must be prepared by, or prepared under, the supervision of a professional engineer. The professional engineer who prepared or supervised this exemption request should complete the following section.

Environmental Consultant Information	
Firm Name Ramboll	
Mailing Address 175 North Corporate Drive, Ste 160	State WI
City Brookfield	ZIP Code 53045

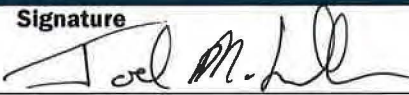
Wis. Admin. Code § NR 712, entitled "Personnel Qualifications for Conducting Environmental Response Actions," establishes minimum standards for experience and professional qualifications for persons who perform certain environmental services. This law applies to work conducted under Wis. Admin. Code § NR 718, unless specifically exempted.

Note: The following certification must be attached to confirm the Wis. Admin. Code § NR 718 exemption request was prepared by or under the supervision of a professional engineer under Wis. Admin. Code § NR 712.07.

Professional Engineer Information			
Last Name Tarmann		First Name Scott	
Mailing Address 175 North Corporate Drive, Ste 160		City Brookfield	State WI
Phone No. (include area code) 262-901-0093		ZIP Code 53045	
Email starmann@ramboll.com			
<p>"I hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.</p> <p>It is my professional opinion that the proposed soil management activity will not cause environmental pollution nor cause any other significant risk to public health, safety or welfare."</p>			
Signature 	Date 3/1/2018	Wisconsin Registration Number 33530-006	

Section 12 - Signatures

Each receiving site or facility property owner's signature must be included as part of this request. Attach additional copies of the signature page, if needed. If one of the owners of the receiving site or facility is acting on behalf of other owners, a power of attorney form or statement must be signed and attached to this agreement clearly granting the agent the authority to accept the contaminated soils on behalf of all other owners of the receiving site or facility whose signatures are not included on this agreement.

Owner(s) of Property Where Material is Placed		
Print Name	Signature	Date
Joel Smullen (Marquette University)		3/2/2018
Print Name	Signature	Date
Print Name	Signature	Date
Print Name	Signature	Date

I understand that by signing this application I certify that I will follow the conditions and limitations required by law and specified in the exemption issued to me as owner of the site or facility that will receive the contaminated soil. Further, I certify that the contaminated soil proposed to be managed under this exemption will be at a property that meets the definition of "site" or "facility" under Wis. Stats. Chapter 292 and Wis. Admin. Code Chapters §§ NR 700 – 754, and I understand that the material must be managed any time in the future as a solid waste with the department's approval. I understand that this exemption will be tracked in the Wisconsin Remediation and Redevelopment Database, and if required, will include maintenance and inspection by me of any continuing obligations, such as maintaining an engineering control or barrier over the contaminated material, and will also be subject to inspection by the department. I understand that the conditions on my site or facility may be subject to Wis. Stats. Chapter 709, Disclosures by Owners of Real Estate. I believe that the legal description for all properties where material will be managed is included with this submittal.

RR Program Contacts

General questions regarding Wis. Admin. Code §§ NR 718.12 and 718.15 exemptions should be made to:

- Statewide: Paul Grittner, Paul.Grittner@wisconsin.gov, (608) 266-0941
- Northeast Region: Kristin DuFresne, Kristin.Dufresne@wisconsin.gov, (920) 662-5443
- Northern Region: Chris Saari, Chris.Saari@wisconsin.gov, (715) 685-2920
- South Central Region: Mike Schmoller, Michael.Schmoller@wisconsin.gov, (608) 275-3303
- Southeast Region:
 - Nancy Ryan, Nancy.Ryan@wisconsin.gov, (414) 263-8533
 - Linda Michalets, Linda.Michalets@wisconsin.gov, (414) 263-8757
- West Central Region: Matt Thompson, Matthew.Thompson@wisconsin.gov, (715) 839-3750

This document is intended solely as guidance and does not include any mandatory requirements except where requirements found in statute or administrative rule are referenced. This guidance does not establish or affect legal rights or obligations and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decisions made by the Department of Natural Resources in any manner addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Chief, Public Civil Rights, Office of Civil Rights, U.S. Department of the Interior, 1849 C. Street, NW, Washington, D.C. 20240.

This publication is available in alternative format (large print, Braille, etc.) upon request. Please call for more information. Note: If you need technical assistance or more information, call the Accessibility Coordinator at 608-267-7490 / TTY Access via relay - 711

RR-072 RESPONSES - NR 718.12 EXEMPTION REQUEST

ATHLETIC AND HUMAN PERFORMANCE RESEARCH CENTER (AHPRC) SITE
 1201-1221 WEST WELLS STREET, MILWAUKEE, WISCONSIN 53233
 BRRTS NO. 02-41-580746

The following provides responses to the items requested on Form RR-072, where applicable.

Section 3 – Waste Characterization

- A. Describe the material proposed to be managed, including its general makeup, physical characteristics, the homogeneity of the material, the proportion of soil to other solid waste, and any other pertinent descriptors.**

Response: The surface pavement in the area subject to the NR 718 exemption request is underlain by varying thicknesses of granular fill soil that generally ranged from 3 to 7 feet below ground surface (bgs). Existing fill soils are generally comprised of sand, sandy silt/silt, and lean clay/silty clay. A very limited amount of non-soil fill material (concrete, stone, brick) was only encountered in select geotechnical borings advanced at the site, however none of those borings are in areas identified for on-site soil management. Ramboll did not observe any non-exempt fill soils. The predominant unit immediately below the fill is generally silty clay with traces of sand and gravel. Additional details regarding soils at the site can be found in Section 1.3 of the Soil Management Plan (SMP).

- B. Describe the historic and current land use of the site or facility where the contaminated soil or other solid waste originates. State how this site or facility is zoned.**

Response: The site is located on the Marquette University campus and has been utilized as a parking lot since approximately 1970. Prior to 1970, historic operations at the site included gasoline service station/repair and dry cleaning. The site is zoned TL (Institutional District) and is intended to remain as such in the future. Refer to Figure 1 for the general site location and Figure 2 for the current site layout.

- C. Total volume of contaminated soil and/or other solid waste to be managed (cubic yards).**

Response: An estimated 2,400 cubic yards (cy) of impacted soil is proposed to be temporarily removed during excavation benching and staged off site prior to replacement on site to the same general location that it was originally removed from. The remaining impacted soil excavated during site redevelopment will be taken to a licensed solid waste landfill. Refer to Figure 3 for the location of the temporary excavation benching/replacement area and Figure 4 illustrates the proposed off-site temporary soil storage location on the nearby Former One Hour Valet site (1214-1222 West Wells Street, BRRTS No. 02-41-152248).

- D. Describe identified contaminants and the source(s). Indicate whether contaminant concentrations exceed Wis. Admin. Code § NR 720 Residual Contaminant Levels. Include a summary table, map with sample locations, and relevant laboratory data.**

Response: Based on the results of pre-construction investigation activities, soil and groundwater at the site has been impacted based on historic operations as a dry cleaner and gasoline service station. The only volatile organic compound (VOC) detected in soil samples collected from, or immediately adjacent to the area identified for on site management under this request is PCE. PCE was detected in three of the ten samples representative of the soil proposed for on site management. The highest concentration of PCE was in B-11 (3 ft sample) at a laboratory estimated concentration of 50.6 ug/kg. Arsenic was detected in all 10 soils samples at concentrations below the established background threshold value (BTV). Barium was detected at a concentration above the migration to groundwater residual contaminant levels (RCL) in the shallow fill soil samples collected from B-7 (3 ft) but below the established BTV. Lead and mercury were detected in the shallow fill soils at B-7 (3 ft) and B-11 (3 ft) at concentrations above the migration to groundwater RCLs and BTV for lead. The shallow fill sample

collected from B-7 (3 ft) also exceeded the non-industrial direct contact RCL for lead. Lead and mercury were not detected above laboratory detection limits in any of the temporary groundwater monitoring wells sampled at the site. Barium was detected the temporary wells at concentrations below the NR 140 preventative action limit (PAL). The soil samples collected from B-3 were also submitted for polycyclic aromatic hydrocarbons (PAHs) and no NR 720 RCLs exceedances were reported. Table 1 presents the soil sample analytical results for the data which represents the excavation benching area. Laboratory analytical reports and tabulated data for all of the pre-construction site investigation collected at the site.

E. Describe the sampling activities conducted to characterize the material including where the samples were collected from, how sample locations were chosen, the sampling methods used, and when sampling activities were conducted.

Response: Site investigation activities conducted to date by Ramboll include a Phase II ESA in October 2017 and additional pre-construction investigation in January 2018. Boring locations were selected both to delineate the extent of soil impacts and also to assess soils that would be encountered and/or removed during construction activities. Two soil samples were collected from each soil boring location, one from within the direct contact zone (i.e., 0 to 4 feet bgs) and one from above the apparent groundwater table. No elevated photoionization detector (PID) readings were encountered during the advancement of borings within, or immediately adjacent to, the excavation benching area identified for on-site management.

F. Explain how the sampling activities adequately characterized the contaminated soil or other solid waste proposed to be managed. Indicate whether the samples were analyzed for all contaminants previously identified at the site or facility where the material will be generated and analyzed for all contaminants potentially present at the site or facility considering current and historic land use. Discuss how samples were collected from areas most likely to be contaminated and from material that will actually be managed under this exemption.

Response: The sampling activities conducted within the benching excavation area covered by this request, along with the broader investigation performed at the site, adequately characterized the contaminated soil that will be temporarily staged off site and replaced on site following basement wall construction based on current and historic land use and operations. All soil samples were analyzed for VOCs and Resource Conservation and Recovery Act (RCRA) metals which are consistent with historic site operations. The Phase II sampling, which included boring B-3 located within the benching excavation area, also included analysis of all soil samples for PAHs. None of the PAH concentrations detected during the Phase II investigation exceeded their respective RCLs and as such were not considered a contaminant of concern for the subsequent pre-construction site investigation activities. In addition to discrete sampling, three composite soil samples were collected to characterize the soil that would be disposed off site. No additional sampling of the excavation benching material is expected to be performed unless unusual conditions (i.e., odors, staining, etc.) are encountered during excavation. However, select soil samples will be collected from the excavation walls, where appropriate to document the residual impacts that remain following construction.

G. Total number of samples collected from this material and analyzed for contaminants of concern.

Response: A total of ten discrete soil samples have been collected from, or immediately adjacent to, the excavation benching area. Samples were analyzed as follows:

- VOCs – ten samples
- RCRA Metals – ten samples
- PAHs – two samples

H. Rate of sample collection per volume (samples/cubic yard)

Response: one sample per 240 cy.

I. Wis. Admin. Code § NR 718.12(1)(e) requires that samples collected to characterize soil be collected at a rate of one sample per 100 yards (for the first 600 yards) and one sample for each additional 300 yards of material, with a minimum of two samples. If the WDNR pre-approved an alternative sampling plan, describe how the sampling that was conducted complied with a pre-approved plan. Provide the date the sampling plan was pre-approved and the name of the WDNR person who approved the plan.

Response: An exemption from the number of required samples is included as part of this request because the sampling conducted to date is considered representative of the soils that will be temporarily excavated and stored off site and then replaced on site. The frequency of sampling is considered adequate given the soil has relatively low impacts and is consistent in concentration and contaminant type with the soil that will remain in adjacent areas of the site. Based on the data collected site-wide, residual impacts will remain post construction beyond the excavation benching area.

Section 4 – Project Description/Material Management

A. Describe the waste management activities that will require a Wis. Admin. Codes §§ NR 718.12 or NR 718.15 exemption. Provide details on how and where waste material will be generated, transported and placed. Describe the depth of the proposed excavation of contaminated soil or other solid waste, and the depth that it will be placed at the receiving site. Describe any response actions proposed for the receiving site or facility to address the relocated contaminated material (such as the construction of a cap). Confirm the proposed material management will comply with Wis. Admin. Code § NR 726.13(1)(b) 1 through 5. Discuss how material management activities will fit in with the overall property remediation and/or development plans.

Response: Soil excavated during excavation benching will be temporarily stored off site at the nearby Former One Hour Valet site (1214-1222 West Wells Street, BRRS No. 02-41-152248) also owned by Marquette University, and managed in accordance with NR 718.05 as described in Section 2.1 of the SMP. The soil will be transported via truck to the temporary off-site storage site location located approximately 250 feet north of the AHPRC site. The excavation benching is expected to extend from the ground surface to a maximum depth of 16 feet bgs to comply with Occupational Safety and Health Administration (OSHA) excavation requirements. During removal, records will be maintained regarding the source of the removed material so it can be returned to the generally same location following construction of the basement walls. Depending on the timing of construction sequencing, a portion of these materials may also be utilized to backfill the void created during the removal of soil in the area of boring B-10. This location is within the area of documented higher pre-construction impacts and in an area where residual soil impacts are expected to remain after construction.

Following construction of the basement walls, the previously removed soil will be replaced to the same general location from which it was removed. Placement is proposed to begin at a depth of approximately 15 feet bgs following placement of the foundation drain system and surrounding gravel backfill. Although the impacted soil benched soils will not be placed at a depth greater than it was originally excavated portions of the soil will be placed within 3 feet of the water table. As such, an exemption from NR 718.12(1)(c)5 is being requested from the WDNR as part of this submittal. Groundwater was generally encountered at a depth ranging from 8 to 13 feet bgs in the temporary wells installed during the pre-construction site investigation activities which would indicate that a portion of the replaced benched soils may be within 3 feet or below the water table. Please note that depth to groundwater in a geotechnical groundwater monitoring well installed by PSI to the west in the grassed

area was reported to range from 15 to 18 feet bgs. The depth to groundwater in the area of soil replacement should become apparent when the full basement area is excavated.

In all locations along the excavation benching perimeter, except B-7 near the north wall of the basement, RCL and BTV exceedances are limited to the shallow fill soils. The deeper soil in remaining areas along the excavation benching perimeter that are proposed to be placed within 3 feet or below the water table do not exhibit RCL/BTV exceedances and therefore will not adversely impact groundwater at the site. Boring B-7, where PCE was reported (lab estimated at 29.5 ug/kg) at/near the water table, is located in an area with documented groundwater impacts. Replacement of this low level PCE impacted soil back to its original location/depth (at or below the water table) is also not anticipated to adversely impact groundwater.

Site investigation activities are being conducted in a phased approach with the groundwater portion of the investigation being completed following construction of the AHPRC. Excavation wall sampling results will be utilized to further evaluate the extent of soil impacts that will remain following building construction. Additional soil delineation work may be performed following building construction if warranted to complete the NR 716 site investigation. Although the soil management and disposal activities discussed herein are being driven by site development, the removal of impacted soil encountered during construction will reduce overall contaminant mass that may remain on site following completion. The extent of residual impacts that will remain will be documented in the NR 716 Site Investigation Report prepared following completion of the post-construction investigation activities. Any residual soils that remain at the site, including those soils managed under NR 718 as part of the site construction activities, will be incorporated into future geographic information system (GIS) registry listings as part of the eventual NR 726 case closure.

B. Summarize the proposed schedule for implementation of the material management plan including anticipated start and end dates.

Response: Excavation benching is anticipated to begin in mid-March 2018. It is anticipated that the excavated material will be temporarily staged off site in accordance with NR 718.05 until the basement walls are constructed. Replacement of the soil on site is expected to be completed by in mid-June 2018.

C. Describe any procedures that have been established, or methods that will be used, to identify previously undocumented contamination during the completion of this project (such as instrument field screening, visual inspections, etc.). Also describe any contingency procedures that have been established to address unexpected contamination. The discovery of a previously unknown contaminant release on a property must be immediately reported to the WDNR using the Notification for Hazardous Substance Discharge (Non-Emergency) Form.

Response: Ramboll staff is expected to be on site during key soil management related activities, including the temporary removal and replacement of soil covered under this request. The soil will be inspected using both visual and field screening instrumentation based on conditions encountered. If unusual conditions are encountered during removal or replacement, the soil may be sampled or if the soil appears consistent with material identified for off-site disposal at the landfill it may be directed to be handled under one of the waste profiles that will be established for the site. The SMP provides additional details regarding material management. If conditions or contaminants are encountered that are inconsistent with the pre-construction site investigation activities, then the WDNR will be contacted to determine if a new release should be reported.

D. Summarize how the proposed management activities will prevent or minimize adverse environmental impacts and potential threats to human health and welfare, including worker safety, by assessing how all potential exposure and migration pathways of concern, including direct contact exposure, vapor intrusion, ground water, surface water, sediment and any other relevant pathway will be addressed by the proposed management.

Response: Due to the relatively low concentrations of VOCs and metals within the soil being managed under this request, no adverse impacts to human health and the environment have been identified that would be different than the residual impacts expected to remain following building construction. The potential for vapor intrusion is being incorporated into the building design and the need to actively ventilate the sub-slab will be assessed during the post construction investigation activities.

Section 5 – Receiving Site or Facility Information

A. Is the receiving site or facility the same as the generating site? Yes No

B. Describe the historic, current and proposed land use of the site(s) or facility(s) where the contaminated soil or other solid waste will be managed. How are these site(s) or facility(s) zoned?

Response: The site is located on the Marquette University campus and has been utilized as a parking lot since approximately 1970. Prior to 1970, historic operations at the site included gasoline service station/repair and dry cleaning. The site is zoned TL (Institutional District) and is intended to remain as such in the future.

C. Identify current uses of all properties adjacent to the site or facility.

Response: The site is located on the Marquette campus and is bordered to the north by West Wells Street, to the east by North 12th Street, to the south by Zilber Hall, and to the west by green space and Abbotsford Hall.

D. Briefly describe any previous environmental site investigations or remedial actions conducted at the site or facility. Describe the environmental condition of the portion of the receiving site or facility where waste will be placed including what contaminants are present, the environmental sampling conducted in that area, and whether identified contaminant concentrations exceed applicable standards.

Response: As referenced previously, site investigation activities were performed at the site and in the area identified for excavation benching and subsequent replacement covered by this request. The soil will be placed in the same area of the site that it was originally removed from and at concentrations similar to or less than residual concentrations expected to remain post construction.

E. Describe any environmentally sensitive areas at or near the site or facility where the contaminated soil will be managed.

Response: There are no known environmentally sensitive areas at or near the site or facility where the contaminated soil will be managed.

F. Describe any other features of this property not addressed above that influence its suitability for the disposal of the contaminated soil or other solid waste.

Response: The post construction use of the site includes a building and paved area. The low level impacted soil will be located beneath or adjacent to paved areas. The anticipated site closure pathway is closure with soil source removal in areas with higher soil impacts and natural attenuation of groundwater with continuing obligations (engineered cap and groundwater use restriction) which will include the areas covered under this request.

Section 6 – Locational Criteria

Excavated material will not be placed:

- Within a floodplain.
- Within 100 feet of any wetland or critical habitat area.

- Within 300 feet of any navigable river, stream, lake, pond, or flowage within a floodplain.
- Within 100 feet of any on-site water supply well or 300 feet of any off-site water supply well.
- At a depth greater than the depth of the original excavation from which the contaminated soil was removed.

Because the basement excavation extends to a depth of approximately 16 feet bgs, the excavated and subsequently replaced benched soils will be located within 3 feet of the water table. As such, an exemption from NR 718.12(1)(c)5 is being requested from the WDNR as part of this submittal.

The impacted soil will not be placed at a depth greater than it was originally excavated from (approximately 16 feet bgs). However, because the basement excavation benching backfilling will take place from the ground surface to approximately 15 ft bgs and the groundwater table is generally encountered at 8 to 13 feet bgs in the temporary wells, a portion of the excavated and subsequently replaced benched soils is proposed to be replaced within 3 feet of and possibly below the water table. Please note that depth to groundwater in a geotechnical groundwater monitoring well installed to the west in the grassed area by PSI was reported to range from 15 to 18 feet bgs. The depth to groundwater in the area of soil replacement should become apparent when the full basement area is excavated.

In all locations along the excavation benching perimeter, except B-7 near the north wall of the basement, RCL and BTM exceedances are limited to the shallow fill soils. The deeper soil in remaining areas along the excavation benching perimeter that are proposed to be placed within 3 feet or below the water table do not exhibit RCL/BTM exceedances and therefore will not adversely impact groundwater at the site. Boring B-7, where PCE was reported (lab estimated at 29.5 ug/kg) at/near the water table, is located in an area with documented groundwater impacts. Replaced of this low level PCE impacted soil back to its original location/depth (at or below the water table) is also not anticipated to adversely impact groundwater.

Post construction groundwater investigation and monitoring activities will be used to document groundwater conditions at the site. Listing of the site on the GIS registry for residual soil and groundwater impacts will be included in the figure site closure strategy.

Section 7 – Additional Information Required for Non-Metallic Mine Receiving Sites or Facilities

Not Applicable.

Section 8 – Future Continuing Obligations

Response: As referenced previously, residual soils that remain at the site, including those soils managed under NR 718 as part of the site construction activities, will be incorporated as continuing obligations as part of the eventual NR 726 case closure.

Section 9 – Figures

The following figures from the SMP are attached:

- Figure 1: Site Location Map
- Figure 2: NR 720 Exceedances in Soil (All Data)
- Figure 3: Excavation Zones
- Figure 4: Site Logistics Plan

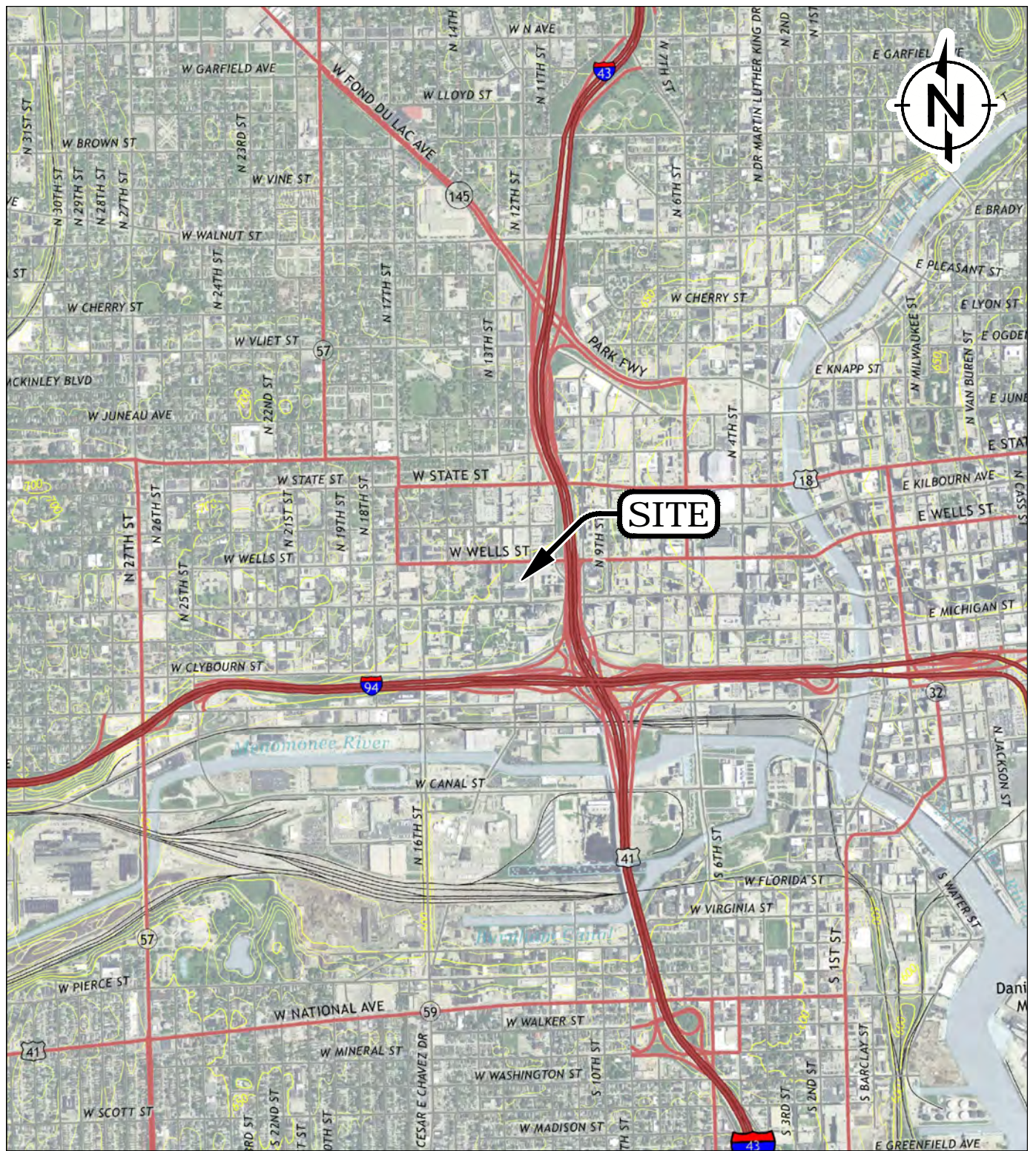
Section 10 – Additional Attachments

Table 1 presents the soil sample analytical results for the data which represents the excavation benching area only.

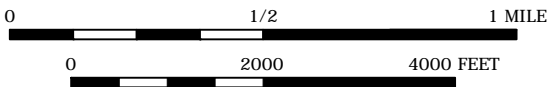
Laboratory analytical reports are included on the attached CD. Hard copies of the laboratory analytical reports are also included as Appendix A of the SMP. Please note that the lab reports provided represent all the pre-construction site investigation soil and groundwater samples, not just the excavation benching area soils which are the subject of this exemption request.

FIGURES

E:\00_CAD_FILES\21\2143145_MU Wells Street\PH2_Record Files\01_Site Location Map.dwg



CONTOUR INTERVAL 10 FEET



LEGEND:

 PROPERTY BOUNDARY (APPROXIMATE)

SOURCE:

2016 USGS 7.5 Minute Series Milwaukee, Wisconsin Topographic Quadrangle.
 Site Location: N: 43.039581° W: -87.927909° WGS84



QUADRANGLE LOCATION



DRAFTED BY: APR

DATE: 2/2/2018

SITE LOCATION MAP
 AHPRC SITE
 MARQUETTE UNIVERSITY
 1201 WEST WELLS STREET
 MILWAUKEE, WISCONSIN

FIGURE
 1

PROJECT: 1690005255-001



WELLS STREET

B-8 (3') (1/10/18)
NE
B-8 (8') (1/10/18)
Arsenic 10.4 mg/kg A,B,C,D

B-5 (12.5-13.5') (10/09/17)
Chloroform 151 J ug/kg C
B-5 (14-15') (10/09/17)
Chloroform 133 J ug/kg C

B-6 (3-4') (10/09/17)
PCE 109 ug/kg C
B-6 (11-12') (10/09/17)
PCE 39.1 J ug/kg C

B-10 (3') (1/10/18)
PCE 19,600 ug/kg C
TCE 350 ug/kg C
Arsenic 9.3 mg/kg A,B,C,D
Lead 166 mg/kg C,D
Mercury 0.32 mg/kg C
B-10 (8') (1/10/18)
PCE 340 ug/kg C

B-1 (3-4') (10/09/17)
PCE 44.8 J ug/kg C
B-1 (11.5-12.5') (10/09/17)
NE

B-9 (3') (1/10/18)
PCE 80.7 J ug/kg C
B-9 (8') (1/10/18)
PCE 3,650 ug/kg C

B-15 (3') (1/10/18)
NE
B-15 (8') (1/10/18)
NE

B-11 (3') (1/10/18)
PCE 50.6 J ug/kg C
Lead 96.3 mg/kg C,D
Mercury 0.38 mg/kg C
B-11 (8') (1/10/18)
NE

B-2 (3-4') (10/09/17)
Lead 214 mg/kg C,D
Mercury 0.59 mg/kg C
B-2 (12-13') (10/09/17)
NE

B-7 (3') (1/10/18)
Barium 335 mg/kg C
Lead 491 mg/kg A,C,D
Mercury 0.96 mg/kg C
B-7 (7.5') (1/10/18)
PCE 29.5 J ug/kg C

B-3 (3-4') (10/09/17)
PCE 44.6 J ug/kg C
B-3 (11-12') (10/09/17)
NE

B-16 (3') (1/10/18)
NE
B-16 (8') (1/10/18)
NE

B-12 (3') (1/10/18)
Selenium 1.4 J mg/kg C
B-12 (8') (1/10/18)
PCE 38.6 J ug/kg C

B-4 (2-3') (10/09/17)
PCE 371 ug/kg C
Cadmium 7.7 mg/kg C,D
Lead 135 mg/kg C,D
Selenium 1.5 J mg/kg C
B-4 (10-11') (10/09/17)
NE

B-13 (3') (1/10/18)
NE
B-13 (8') (1/10/18)
NE

B-14 (3') (1/10/18)
NE
B-14 (8') (1/10/18)
NE

Legend

- Soil Boring
- ⊕ Soil Boring/Temporary Well
- Previous Geotechnical Soil Boring
- ⊕ Soil Gas Probe
- Milwaukee County Parcel Boundary

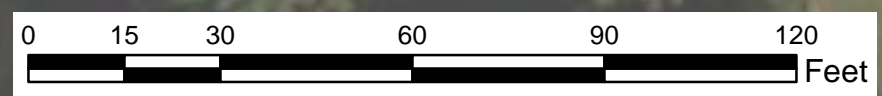
Notes

µg/kg - micrograms per kilogram
 mg/kg - milligrams per kilogram
 PCE - Tetrachloroethene
 NE - No exceedances

A Parameter exceeds NR 720 Residual Contaminant Level (RCL) for Non-Industrial Direct Contact.
B Parameter exceeds NR 720 RCL for Industrial Direct Contact.
C Parameter exceeds NR 720 RCL for Groundwater Pathway
D Parameter exceeds Surficial Background Threshold Value (BTV) for metals
J Estimated concentration at or above the LOD and below the LOQ

Refer to Table 1 for NR 720 RCL and BTV criteria.

Arsenic detections in surficial soil that are below the BTV are not shown as they are not considered exceedances of the NR 720 RCLs for the purposes of this evaluation.



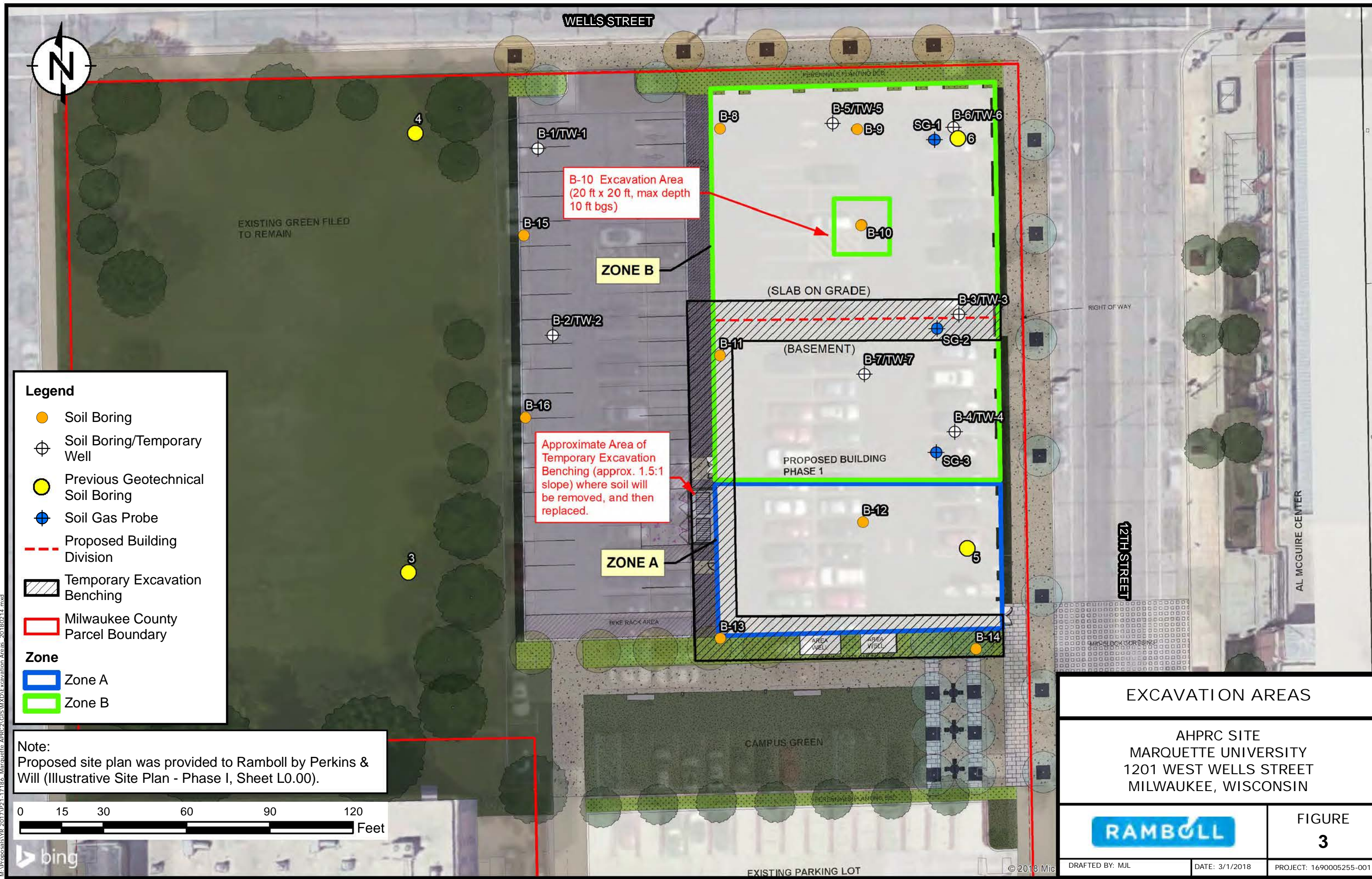
NR 720 RCL EXCEEDANCES IN SOIL

AHPRC SITE
MARQUETTE UNIVERSITY
1201 WEST WELLS STREET
MILWAUKEE, WISCONSIN



FIGURE
2

M:\Proposals\1717186_Marquette-APRC2\GIS\MXD\Fig3-APRC-Extent of NR720 Exceedances in Soil_20180205.mxd



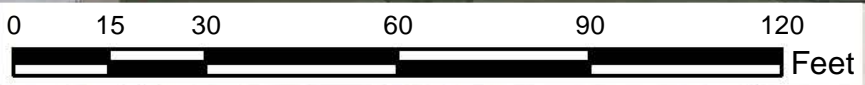
Legend

- Soil Boring
- ⊕ Soil Boring/Temporary Well
- Previous Geotechnical Soil Boring
- ⊕ Soil Gas Probe
- Proposed Building Division
- Temporary Excavation Benching
- Milwaukee County Parcel Boundary

Zone

- Zone A
- Zone B

Note:
Proposed site plan was provided to Ramboll by Perkins & Will (Illustrative Site Plan - Phase I, Sheet L0.00).



B-10 Excavation Area
(20 ft x 20 ft, max depth 10 ft bgs)

Approximate Area of Temporary Excavation Benching (approx. 1.5:1 slope) where soil will be removed, and then replaced.

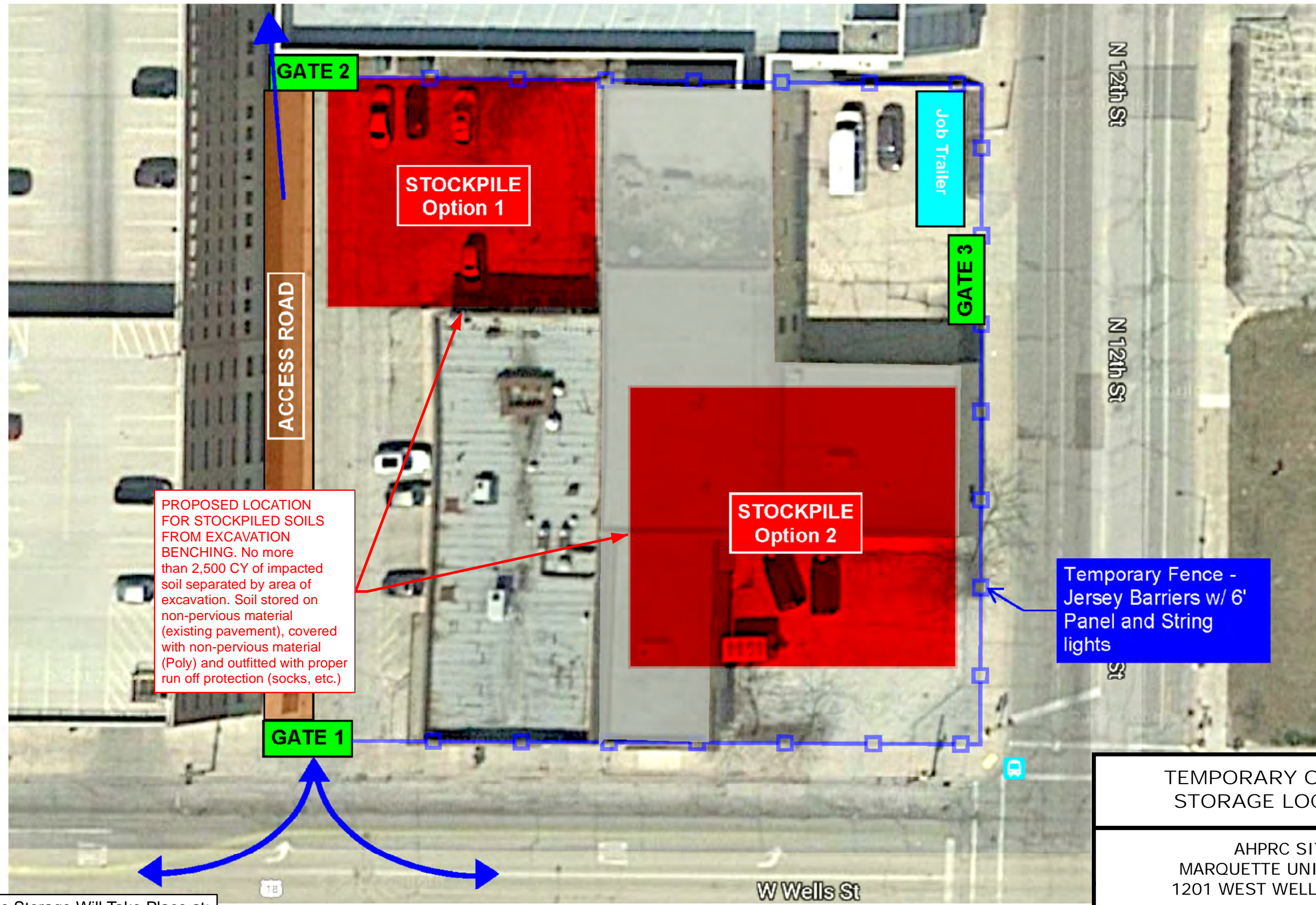
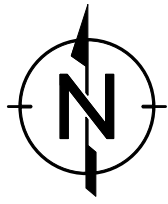
EXCAVATION AREAS

AHPRC SITE
MARQUETTE UNIVERSITY
1201 WEST WELLS STREET
MILWAUKEE, WISCONSIN

FIGURE 3

DRAFTED BY: MJL
DATE: 3/1/2018
PROJECT: 1690005255-001


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PROPOSED LOCATION FOR STOCKPILED SOILS FROM EXCAVATION BENCHING. No more than 2,500 CY of impacted soil separated by area of excavation. Soil stored on non-pervious material (existing pavement), covered with non-pervious material (Poly) and outfitted with proper run off protection (socks, etc.)

Temporary Fence - Jersey Barriers w/ 6' Panel and String lights

Temporary Off-Site Storage Will Take Place at:
 Former One Hour Valet Property
 1214-1222 West Wells Street
 Milwaukee, WI
 BRRTS No. 02-41-152248

TEMPORARY OFF-SITE STORAGE LOCATION		
AHPRC SITE MARQUETTE UNIVERSITY 1201 WEST WELLS STREET		
		FIGURE 4
DRAFTED BY: MJL	DATE: 3/1/2018	PROJECT: 1690005255-001

M:\Proposals\YR 2017\21-17186_Marquette_APRC2\GIS\MXD\Fig4_Site Logistics Plan_20180301.mxd

TABLE

**TABLE 1. SOIL ANALYTICAL RESULTS (EXCAVATION BENCHING)
AHPRC PRE-CONSTRUCTION SITE INVESTIGATION
1201 WEST WELLS STREET
MILWAUKEE, WISCONSIN
RAMBOLL PROJECT NO. 1690005255-001**

Parameters	Soil RCLs			BTV	B-3 (3-4')	B-3 (11-12')	B-7 (3')	B-7 (7.5')	B-11 (3')	B-11 (8')	B-13 (3')	B-13 (8')	B-14 (3')	B-14 (8')
	Non-Industrial Direct Contact	Industrial Direct Contact	Groundwater Pathway		10/09/17	10/09/17	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18
VOCs (µg/kg)														
sec-Butylbenzene	145,000	145,000	--	--	<25.0	<25.0	<28.1	<25.0	<40.3	<28.4	<27.2	<25.0	<32.5	<25.0
n-Butylbenzene	108,000	108,000	--	--	<25.0	<25.0	<28.1	<25.0	<40.3	<28.4	<27.2	<25.0	<32.5	<25.0
Chloroform	454	1,980	3.3	--	<46.4	<46.4	<52.2	<46.4	<74.9	<52.8	<50.5	<46.4	<60.3	<46.4
Ethylbenzene	8,020	35,400	1,570	--	<25.0	<25.0	<28.1	<25.0	<40.3	<28.4	<27.2	<25.0	<32.5	<25.0
Isopropylbenzene	268,000	268,000	--	--	<25.0	<25.0	<28.1	<25.0	<40.3	<28.4	<27.2	<25.0	<32.5	<25.0
n-Propylbenzene	264,000	264,000	--	--	<25.0	<25.0	<28.1	<25.0	<40.3	<28.4	<27.2	<25.0	<32.5	<25.0
Tetrachloroethene	33,000	145,000	4.54	--	44.6 J C	<25.0	<28.1	29.5 J C	50.6 J C	<28.4	<27.2	<25.0	<32.5	<25.0
Trichloroethene	1,300	8,410	3.6	--	<25.0	<25.0	<28.1	<25.0	<40.3	<28.4	<27.2	<25.0	<32.5	<25.0
1,2,4-Trimethylbenzene ¹	219,000	219,000	1,378.7	--	<25.0	<25.0	<28.1	<25.0	<40.3	<28.4	<27.2	<25.0	<32.5	<25.0
PAHs (µg/kg)														
Acenaphthene	3,590,000	45,200,000	--	--	9.3 J	<4.6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Acenaphthylene	--	--	--	--	<3.8	<3.9	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Anthracene	17,900,000	100,000,000	196,949.2	--	16.7 J	<6.8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Benzo(a)anthracene	1140	20,800	--	--	26.0	5.5 J	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Benzo(a)pyrene	115	2110	470	--	20.2	4.9 J	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Benzo(b)fluoranthene	1150	21,100	478.1	--	25.7	7.1 J	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Benzo(ghi)perylene	--	--	--	--	11.6	4.3 J	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Benzo(k)fluoranthene	11,500	211,000	--	--	10.9	<3.0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Chrysene	115,000	2,110,000	144.2	--	24.4	6.6 J	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Dibenzo(a,h)anthracene	115	2110	--	--	3.2 J	<2.6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Fluoranthene	2,390,000	30,100,000	88,877.8	--	66.1	15.2 J	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Fluorene	2,390,000	30,100,000	14,829.9	--	9.7 J	<4.9	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Indeno(1,2,3-cd)pyrene	1150	21,100	--	--	9.9	3.0 J	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
1-Methylnaphthalene	17,600	72,700	--	--	<4.7	<4.8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2-Methylnaphthalene	239,000	3,010,000	--	--	<5.8	<5.9	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Naphthalene	5,520	24,100	658.2	--	<9.8	<10	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Phenanthrene	--	--	--	--	79.8	<13.8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Pyrene	1,790,000	22,600,000	54,545.5	--	56.2	12.5 J	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Metals (mg/kg)														
Arsenic ³	0.677	3.00	0.58	8.3	6.9 A,B,C	3.3 J A,B,C	4.4 J A,B,C	3.0 J A,C	5.1 J A,B,C	6.9 A,B,C	4.0 J A,B,C	5.0 J A,B,C	5.5 J A,B,C	4.8 J A,B,C
Barium ¹	15,300	100,000	164.8	364	86.2	65.6	335 C	10.8	91.9	71.9	21.8	49.5	58.4	74.2
Cadmium ³	71	985	0.75	1.07	0.19 J	0.28 J	0.31 J	<0.13	0.17 J	0.24 J	0.28 J	0.23 J	0.22 J	0.24 J
Chromium	--	--	360,000	43.5	20.4	27.1	12.4	6.2	19.1	26.4	10.1	20.6	25.8	19.7
Lead ³	400	800	27	51.6	13.8	9.0	491 A,C,D	5.2	96.3 C,D	8.1	7.6	7.6	11.5	8.7
Mercury	3.13	3.13	0.21	--	<0.012	0.016 J	0.96 C	<0.012	0.38 C	0.019 J	0.029 J	0.013 J	0.020 J	0.014 J
Selenium	391	5,840	0.52	--	<1.2	<1.2	<1.3	<1.1	<1.2	<1.3	<1.3	<1.2	<1.3	<1.2

Notes:

Analytical results displayed are for detected parameters only.
VOCs = Volatile Organic Compounds
PAHs = Polynuclear Aromatic Hydrocarbons
RCL = Residual Contaminant Level
BTV = Background Threshold Value
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
¹ Groundwater Pathway RCL listed is for 1,2,4- and 1,3,5-Trimethylbenzenes combined.
² Direct Contact RCL listed is for the more stringent m-Xylene.
³ Parameter BTV is larger than one or more of the RCLs or is the only standard available.
A Parameter exceeds NR 720 Residual Contaminant Level (RCL) for Non-Industrial Direct Contact.
B Parameter exceeds NR 720 RCL for Industrial Direct Contact.
C Parameter exceeds NR 720 RCL for Groundwater Pathway.
D Parameter exceeds Surficial BTV for metals.
J Estimated concentration at or above the LOD and below the LOQ.
M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
#N/A = Not analyzed
Soil RCLs and surficial BTVs established by the WDNR RR program using the EPA's RSL web-calculator with WAC NR 720 default parameters (WDNR PUB-RR-890, June 2014 - updated RCL spreadsheet, December 2017).



**SOIL AND GROUNDWATER
LABORATORY ANALYTICAL REPORTS**

(ALL PRE-CONSTRUCTION SITE INVESTIGATION DATA)

**TABLE 1. SOIL ANALYTICAL RESULTS
 AHPRC PRE-CONSTRUCTION SITE INVESTIGATION
 1201 WEST WELLS STREET
 MILWAUKEE, WISCONSIN
 RAMBOLL PROJECT NO. 1690005255-001**

Parameters	Soil RCLs			BTV	B-1 (3-4')	B-1 (11.5-12.5')	B-2 (3-4')	B-2 (12-13')	B-3 (3-4')	B-3 (11-12')	B-4 (2-3')	B-4 (10-11')	B-5 (12.5-13.5')	B-5 (14-15')	B-6 (3-4')	B-6 (11-12')	B-7 (3')	B-7 (7.5')
	Non-Industrial Direct Contact	Industrial Direct Contact	Groundwater Pathway		10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	01/10/18
VOCs (µg/kg)																		
sec-Butylbenzene	145,000	145,000	--	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	159	46.5 J	<25.0	<25.0	<28.1	<25.0
n-Butylbenzene	108,000	108,000	--	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	324	152	<25.0	<25.0	<28.1	<25.0
Chloroform	454	1,980	3.3	--	<46.4	<46.4	<46.4	<46.4	<46.4	<46.4	<46.4	<46.4	151 J C	133 J C	<46.4	<46.4	<52.2	<46.4
Ethylbenzene	8,020	35,400	1,570	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	74.1	1,060	<25.0	61.8 J	<28.1	<25.0
Isopropylbenzene	268,000	268,000	--	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	112	211	<25.0	<25.0	<28.1	<25.0
n-Propylbenzene	264,000	264,000	--	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	545	778	<25.0	32.5 J	<28.1	<25.0
Tetrachloroethene	33,000	145,000	4.54	--	44.8 J C	<25.0	<25.0	<25.0	44.6 J C	<25.0	371 C	<25.0	<25.0	<25.0	109 C	39.1 J C	<28.1	29.5 J C
Trichloroethene	1,300	8,410	3.6	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<28.1	<25.0
1,2,4-Trimethylbenzene ¹	219,000	219,000	1,378.7	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	36.6 J	<25.0	<25.0	<28.1	<25.0
PAHs (µg/kg)																		
Acenaphthene	3,590,000	45,200,000	--	--	<4.3	7.1 J	13.3 J	<4.6	9.3 J	<4.6	<4.6	<4.4	<4.4	<4.8	<4.5	<4.3	#N/A	#N/A
Acenaphthylene	--	--	--	--	<3.7	<3.9	6.3 J	<3.9	<3.8	<3.9	<3.9	<3.8	<3.7	<4.1	<3.8	<3.7	#N/A	#N/A
Anthracene	17,900,000	100,000,000	196,949.2	--	<6.3	<6.8	25.3	<6.7	16.7 J	<6.8	10.6 J	<6.5	<6.4	<7.0	<6.6	<6.4	#N/A	#N/A
Benzo(a)anthracene	1140	20,800	--	--	11.7 J	17.3	64.3	<3.7	26.0	5.5 J	27.6	<3.6	<3.9	<3.9	5.9 J	<3.6	#N/A	#N/A
Benzo(a)pyrene	115	2110	470	--	12.1	15.3	65.7	<2.9	20.2	4.9 J	26.3	3.7 J	<2.8	<3.1	4.2 J	<2.8	#N/A	#N/A
Benzo(b)fluoranthene	1150	21,100	478.1	--	20.6	21.8	79.0	<3.3	25.7	7.1 J	39.9	4.7 J	3.5 J	<3.5	6.5 J	<3.2	#N/A	#N/A
Benzo(ghi)perylene	--	--	--	--	11.1	10.7	38.8	<2.4	11.6	4.3 J	20.9	5.1 J	<2.3	<2.5	3.2 J	<2.3	#N/A	#N/A
Benzo(k)fluoranthene	11,500	211,000	--	--	7.1 J	9.4 J	33.5	<2.9	10.9	<3.0	14.4	<2.9	<3.1	<2.9	<2.9	<2.8	#N/A	#N/A
Chrysene	115,000	2,110,000	144.2	--	15.2	21.5	67.2	<4.0	24.4	6.6 J	33.7	<3.8	<3.8	<4.1	6.5 J	<3.8	#N/A	#N/A
Dibenzo(a,h)anthracene	115	2110	--	--	<2.5	<2.7	9.0 J	<2.6	3.2 J	<2.6	4.4 J	<2.6	<2.5	<2.8	<2.6	<2.5	#N/A	#N/A
Fluoranthene	2,390,000	30,100,000	88,877.8	--	33.9	52.2	143	<6.1	66.1	15.2 J	77.5	6.5 J	<5.9	<6.4	10.7 J	<5.8	#N/A	#N/A
Fluorene	2,390,000	30,100,000	14,829.9	--	<4.6	6.2 J	15.0 J	<4.9	9.7 J	<4.9	<4.9	<4.7	<4.7	<5.1	<4.8	<4.6	#N/A	#N/A
Indeno(1,2,3-cd)pyrene	1150	21,100	--	--	8.3	9.2	34.6	<2.6	9.9	3.0 J	17.4	2.6 J	<2.5	<2.7	<2.5	<2.5	#N/A	#N/A
1-Methylnaphthalene	17,600	72,700	--	--	<4.5	<4.8	7.5 J	<4.7	<4.8	<4.8	<4.8	<4.6	12.1 J	47.0	<4.6	5.0 J	#N/A	#N/A
2-Methylnaphthalene	239,000	3,010,000	--	--	<5.6	<5.9	7.7 J	<5.9	<5.8	<5.9	<5.9	<5.7	<5.6	8.4 J	<5.8	<5.6	#N/A	#N/A
Naphthalene	5,520	24,100	658.2	--	<9.4	<10.0 C4	20.4 J	<9.9	<9.8	<10	<9.9	<9.6 C4	52.5	35.3	<9.7	10.0 J	#N/A	#N/A
Phenanthrene	--	--	--	--	15.6 J	53.0	128	<13.7	79.8	<13.8	57.0	<13.3	<13.1	<14.3	<13.5	<13.1	#N/A	#N/A
Pyrene	1,790,000	22,600,000	54,545.5	--	27.9	43.9	126	<5.3	56.2	12.5 J	61.1	5.4 J	<5.1	<5.5	12.1 J	<5.1	#N/A	#N/A
Metals (mg/kg)																		
Arsenic ³	0.677	3.00	0.58	8.3	3.7 J A,B,C	4.6 J C	8.2 A,B,C	3.9 J C	6.9 A,B,C	3.3 J A,B,C	6.1 A,B,C	4.1 J A,B,C	3.3 J A,B,C	3.5 J A,B,C	3.9 J A,B,C	3.7 J A,B,C	4.4 J A,B,C	3.0 J A,C
Barium ³	15,300	100,000	164.8	364	48.0	72.1	105	49.9	86.2	65.6	128	47.8	20.0	94.4	43.7	43.1	335 C	10.8
Cadmium ³	71	985	0.75	1.07	0.15 J	0.23 J	0.43 J	0.19 J	0.19 J	0.28 J	7.7 C,D	0.15 J	0.16 J	0.18 J	0.21 J	0.14 J	0.31 J	<0.13
Chromium	--	--	360,000	43.5	19.5	19.0	39.0	18.3	20.4	27.1	14.0	17.7	9.3	27.9	16.1	14.2	12.4	6.2
Lead ³	400	800	27	51.6	7.0	9.8	214 C,D	8.2	13.8	9.0	135 C,D	7.8	7.1	8.7	6.9	6.6	491 A,C,D	5.2
Mercury	3.13	3.13	0.21	--	0.015 J	<0.013	0.59 C	<0.012	<0.012	0.016 J	0.013 J	<0.012	<0.012	0.020 M0	<0.012	0.012 J	0.96 C	<0.012
Selenium	391	5,840	0.52	--	<1.2	<1.2	<1.3	<1.3	<1.2	<1.2	1.5 J C	<1.3	<1.2	<1.2	<1.2	<1.2	<1.3	<1.1

Notes:
 Analytical results displayed are for detected parameters only.
 VOCs = Volatile Organic Compounds
 PAHs = Polynuclear Aromatic Hydrocarbons
 RCL = Residual Contaminant Level
 BTV = Background Threshold Value
 µg/kg = micrograms per kilogram
 mg/kg = milligrams per kilogram
¹ Groundwater Pathway RCL listed is for 1,2,4- and 1,3,5-Trimethylbenzenes combined.
² Direct Contact RCL listed is for the more stringent m-Xylene.
³ Parameter BTV is larger than one or more of the RCLs or is the only standard available.
A Parameter exceeds NR 720 Residual Contaminant Level (RCL) for Non-Industrial Direct Contact.
B Parameter exceeds NR 720 RCL for Industrial Direct Contact.
C Parameter exceeds NR 720 RCL for Groundwater Pathway.
D Parameter exceeds Surficial BTV for metals.
J Estimated concentration at or above the LOD and below the LOQ.
M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
 #N/A = Not analyzed
 Soil RCLs and surficial BTVs established by the WDNR RR program using the EPA's RSL web-calculator with WAC NR 720 default parameters (WDNR PUB-RR-890, June 2014 - updated RCL spreadsheet, December 2017).

**NOTE: HIGHLIGHTED BORINGS REPRESENT THOSE THAT ARE
 PROPOSED FOR ON-SITE PLACEMENT
 (B-3, B-7, B-11, B-13, and B-14)**

**TABLE 1. SOIL ANALYTICAL RESULTS
 AHPRC PRE-CONSTRUCTION SITE INVESTIGATION
 1201 WEST WELLS STREET
 MILWAUKEE, WISCONSIN
 RAMBOLL PROJECT NO. 1690005255-001**

Parameters	Soil RCLs			BTV	B-8 (3')	B-8 (8')	B-9 (3')	B-9 (8')	B-10 (3')	B-10 (8')	B-11 (3')	B-11 (8')	B-12 (3')	B-12 (8')	B-13 (3')	B-13 (8')	B-14 (3')	B-14 (8')
	Non-Industrial Direct Contact	Industrial Direct Contact	Groundwater Pathway		01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18
VOCs (µg/kg)																		
sec-Butylbenzene	145,000	145,000	--	--	<27.5	<25.0	<37.9	<33.3	<78.1	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0
n-Butylbenzene	108,000	108,000	--	--	<27.5	<25.0	<37.9	<33.3	<78.1	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0
Chloroform	454	1,980	3.3	--	<51.0	<46.4	<70.4	<61.9	<145	<46.4	<74.9	<52.8	<65.4	<46.4	<50.5	<46.4	<60.3	<46.4
Ethylbenzene	8,020	35,400	1,570	--	<27.5	<25.0	<37.9	<33.3	<78.1	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0
Isopropylbenzene	268,000	268,000	--	--	<27.5	<25.0	<37.9	<33.3	<78.1	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0
n-Propylbenzene	264,000	264,000	--	--	<27.5	<25.0	<37.9	<33.3	<78.1	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0
Tetrachloroethene	33,000	145,000	4.54	--	<27.5	<25.0	80.7 J C	3,650 C	19,600 C	340 C	50.6 J C	<28.4	<35.2	38.6 J C	<27.2	<25.0	<32.5	<25.0
Trichloroethene	1,300	8,410	3.6	--	<27.5	<25.0	<37.9	<33.3	350 C	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0
1,2,4-Trimethylbenzene ¹	219,000	219,000	1,378.7	--	<27.5	<25.0	<37.9	<33.3	<78.1	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0
PAHs (µg/kg)																		
Acenaphthene	3,590,000	45,200,000	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Acenaphthylene	--	--	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Anthracene	17,900,000	100,000,000	196,949.2	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Benzo(a)anthracene	1140	20,800	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Benzo(a)pyrene	115	2110	470	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Benzo(b)fluoranthene	1150	21,100	478.1	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Benzo(ghi)perylene	--	--	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Benzo(k)fluoranthene	11,500	211,000	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Chrysene	115,000	2,110,000	144.2	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Dibenzo(a,h)anthracene	115	2110	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Fluoranthene	2,390,000	30,100,000	88,877.8	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Fluorene	2,390,000	30,100,000	14,829.9	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Indeno(1,2,3-cd)pyrene	1150	21,100	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
1-Methylnaphthalene	17,600	72,700	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2-Methylnaphthalene	239,000	3,010,000	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Naphthalene	5,520	24,100	658.2	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Phenanthrene	--	--	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Pyrene	1,790,000	22,600,000	54,545.5	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Metals (mg/kg)																		
Arsenic ³	0.677	3.00	0.58	8.3	5.1 J A,B,C	10.4 A,B,C,D	4.2 J A,B,C	4.6 J A,B,C	9.3 A,B,C,D	5.3 J A,B,C	5.1 J A,B,C	6.9 A,B,C	4.5 J A,B,C	3.8 J A,B,C	4.0 J A,B,C	5.0 J A,B,C	5.5 J A,B,C	4.8 J A,B,C
Barium ³	15,300	100,000	164.8	364	80.4	73.4	17.2	48.5	83.1	17.7	91.9	71.9	46.5	61.8	21.8	49.5	58.4	74.2
Cadmium ³	71	985	0.75	1.07	0.18 J	0.21 J	<0.14	0.19 J	0.43 J	0.20 J	0.17 J	0.24 J	0.16 J	0.20 J	0.28 J	0.23 J	0.22 J	0.24 J
Chromium	--	--	360,000	43.5	29.0	20.7	8.2	23.5	17.2	10.2	19.1	26.4	16.2	17.6	10.1	20.6	25.8	19.7
Lead ³	400	800	27	51.6	12.5	8.3	5.2	8.2	166 C,D	6.4	96.3 C,D	8.1	8.5	5.8	7.6	7.6	11.5	8.7
Mercury	3.13	3.13	0.21	--	0.042	0.016 J	<0.012	<0.013	0.32 C	0.019 J	0.38 C	0.019 J	0.018 J	<0.012	0.029 J	0.013 J	0.020 J	0.014 J
Selenium	391	5,840	0.52	--	<1.2	<1.2	<1.2	<1.3	<1.3	<1.3	<1.2	<1.3	1.4 J C	<1.3	<1.3	<1.2	<1.3	<1.2

Notes:

- Analytical results displayed are for detected parameters only.
- VOCs = Volatile Organic Compounds
- PAHs = Polynuclear Aromatic Hydrocarbons
- RCL = Residual Contaminant Level
- BTV = Background Threshold Value
- µg/kg = micrograms per kilogram
- mg/kg = milligrams per kilogram
- ¹ Groundwater Pathway RCL listed is for 1,2,4- and 1,3,5-Trimethylbenzenes combined.
- ² Direct Contact RCL listed is for the more stringent m-Xylene.
- ³ Parameter BTV is larger than one or more of the RCLs or is the only standard available.
- A** Parameter exceeds NR 720 Residual Contaminant Level (RCL) for Non-Industrial Direct Contact.
- B** Parameter exceeds NR 720 RCL for Industrial Direct Contact.
- C** Parameter exceeds NR 720 RCL for Groundwater Pathway.
- D** Parameter exceeds Surficial BTV for metals.
- J** Estimated concentration at or above the LOD and below the LOQ.
- M0** = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- #N/A = Not analyzed
- Soil RCLs and surficial BTVs established by the WDNR RR program using the EPA's RSL web-calculator with WAC NR 720 default parameters (WDNR PUB-RR-890, June 2014 - updated RCL spreadsheet, December 2017).

**NOTE: HIGHLIGHTED BORINGS REPRESENT THOSE THAT ARE
 PROPOSED FOR ON-SITE PLACEMENT
 (B-3, B-7, B-11, B-13, and B-14)**

**TABLE 1. SOIL ANALYTICAL RESULTS
AHPRC PRE-CONSTRUCTION SITE INVESTIGATION
1201 WEST WELLS STREET
MILWAUKEE, WISCONSIN
RAMBOLL PROJECT NO. 1690005255-001**

Parameters	Soil RCLs			BTV	B-15 (3')	B-15 (8')	B-16 (3')	B-16 (8')
	Non-Industrial Direct Contact	Industrial Direct Contact	Groundwater Pathway		01/10/18	01/10/18	01/10/18	01/10/18
VOCs (µg/kg)								
sec-Butylbenzene	145,000	145,000	--	--	<27.8	<30.1	<25.0	<25.0
n-Butylbenzene	108,000	108,000	--	--	<27.8	<30.1	<25.0	<25.0
Chloroform	454	1,980	3.3	--	<51.6	<56.0	<46.4	<46.4
Ethylbenzene	8,020	35,400	1,570	--	<27.8	<30.1	<25.0	<25.0
Isopropylbenzene	268,000	268,000	--	--	<27.8	<30.1	<25.0	<25.0
n-Propylbenzene	264,000	264,000	--	--	<27.8	<30.1	<25.0	<25.0
Tetrachloroethene	33,000	145,000	4.54	--	<27.8	<30.1	<25.0	<25.0
Trichloroethene	1,300	8,410	3.6	--	<27.8	<30.1	<25.0	<25.0
1,2,4-Trimethylbenzene ¹	219,000	219,000	1,378.7	--	<27.8	<30.1	<25.0	<25.0
PAHs (µg/kg)								
Anthracene	17,900,000	100,000,000	196,949.2	--	#N/A	#N/A	#N/A	#N/A
Benzo(a)anthracene	1140	20,800	--	--	#N/A	#N/A	#N/A	#N/A
Benzo(a)pyrene	115	2110	470	--	#N/A	#N/A	#N/A	#N/A
Benzo(b)fluoranthene	1150	21,100	478.1	--	#N/A	#N/A	#N/A	#N/A
Benzo(ghi)perylene	--	--	--	--	#N/A	#N/A	#N/A	#N/A
Benzo(k)fluoranthene	11,500	211,000	--	--	#N/A	#N/A	#N/A	#N/A
Chrysene	115,000	2,110,000	144.2	--	#N/A	#N/A	#N/A	#N/A
Dibenzo(a,h,)anthracene	115	2110	--	--	#N/A	#N/A	#N/A	#N/A
Fluoranthene	2,390,000	30,100,000	88,877.8	--	#N/A	#N/A	#N/A	#N/A
Indeno(1,2,3-cd)pyrene	1150	21,100	--	--	#N/A	#N/A	#N/A	#N/A
1-Methylnaphthalene	17,600	72,700	--	--	#N/A	#N/A	#N/A	#N/A
2-Methylnaphthalene	239,000	3,010,000	--	--	#N/A	#N/A	#N/A	#N/A
Naphthalene	5,520	24,100	658.2	--	#N/A	#N/A	#N/A	#N/A
Phenanthrene	--	--	--	--	#N/A	#N/A	#N/A	#N/A
Pyrene	1,790,000	22,600,000	54,545.5	--	#N/A	#N/A	#N/A	#N/A
Metals (mg/kg)								
Arsenic ³	0.677	3.00	0.58	8.3	4.8 J A,B,C	6.5 C	4.6 J A,B,C	5.6 C
Barium ³	15,300	100,000	164.8	364	71.1	67.3	59.8	61.2
Cadmium ³	71	985	0.75	1.07	<0.16	0.29 J	0.18 J	0.15 J
Chromium	--	--	360,000	43.5	22.2	27.3	26.1	18.0
Lead ³	400	800	27	51.6	11.2	9.8	10.3	7.1
Mercury	3.13	3.13	0.21	--	0.016 J	0.045	0.055	<0.012
Selenium	391	5,840	0.52	--	<1.3	<1.3	<1.3	<1.2

Notes:

Analytical results displayed are for detected parameters only.
VOCs = Volatile Organic Compounds
PAHs = Polynuclear Aromatic Hydrocarbons
RCL = Residual Contaminant Level
BTV = Background Threshold Value
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
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² Direct Contact RCL listed is for the more stringent m-Xylene.
³ Parameter BTV is larger than one or more of the RCLs or is the only standard available.
A Parameter exceeds NR 720 Residual Contaminant Level (RCL) for Non-Industrial Direct Contact.
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C Parameter exceeds NR 720 RCL for Groundwater Pathway.
D Parameter exceeds Surficial BTV for metals.
J Estimated concentration at or above the LOD and below the LOQ.
M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
#N/A = Not analyzed
Soil RCLs and surficial BTVs established by the WDNR RR program using the EPA's RSL web-calculator with WAC NR 720 default parameters (WDNR PUB-RR-890, June 2014 - updated RCL spreadsheet, December 2017).

October 18, 2017

Jeanne Tarvin
Ramboll Environ
175 North Corporate Drive
Suite 160
Brookfield, WI 53045

RE: Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

Dear Jeanne Tarvin:

Enclosed are the analytical results for sample(s) received by the laboratory on October 11, 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,



Steven Mleczo
steve.mleczo@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Jim Hutchens, Ramboll Environ
Jim Kane, Ramboll Environ
Snejana Karakis, Environ
David L. Markelz, Ramboll Environ
Michelle Murphy, Environ
Susan Petrofske, Ramboll Environ
Abigail M. Wedig, Environ International Corp



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

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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SAMPLE SUMMARY

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40158427001	B-2 (3-4')	Solid	10/09/17 09:15	10/11/17 09:25
40158427002	B-2 (12-13')	Solid	10/09/17 09:20	10/11/17 09:25
40158427003	B-1 (3-4')	Solid	10/09/17 10:00	10/11/17 09:25
40158427004	B-1 (11.5-12.5')	Solid	10/09/17 10:05	10/11/17 09:25
40158427005	B-4 (2-3')	Solid	10/09/17 10:50	10/11/17 09:25
40158427006	B-4 (10-11')	Solid	10/09/17 10:55	10/11/17 09:25
40158427007	TRIP BLANK	Solid	10/09/17 00:00	10/11/17 09:25
40158427008	B-3 (3-4')	Solid	10/09/17 11:35	10/11/17 09:25
40158427009	B-3 (11-12')	Solid	10/09/17 11:40	10/11/17 09:25
40158427010	B-5 (12.5-13.5')	Solid	10/09/17 12:15	10/11/17 09:25
40158427011	B-5 (14-15')	Solid	10/09/17 12:20	10/11/17 09:25
40158427012	B-6 (3-4')	Solid	10/09/17 12:55	10/11/17 09:25
40158427013	B-6 (11-12')	Solid	10/09/17 13:00	10/11/17 09:25
40158427014	TW-2	Water	10/10/17 08:55	10/11/17 09:25
40158427015	TW-1	Water	10/10/17 09:40	10/11/17 09:25
40158427016	TW-4	Water	10/10/17 10:10	10/11/17 09:25
40158427017	TW-3	Water	10/10/17 10:30	10/11/17 09:25
40158427018	TW-5	Water	10/10/17 11:05	10/11/17 09:25
40158427019	TW-6	Water	10/10/17 11:35	10/11/17 09:25

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40158427001	B-2 (3-4')	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	LAP	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
40158427002	B-2 (12-13')	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
40158427003	B-1 (3-4')	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
40158427004	B-1 (11.5-12.5')	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
40158427005	B-4 (2-3')	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
40158427006	B-4 (10-11')	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
40158427007	TRIP BLANK	EPA 8260	SMT	65	PASI-G
40158427008	B-3 (3-4')	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
40158427009	B-3 (11-12')	EPA 6010	JLD	7	PASI-G

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40158427010	B-5 (12.5-13.5')	EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
40158427011	B-5 (14-15')	EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
40158427012	B-6 (3-4')	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
40158427013	B-6 (11-12')	EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
40158427014	TW-2	ASTM D2974-87	RMV	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	65	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7470	AJT	1	PASI-G
40158427015	TW-1	EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	65	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	65	PASI-G
		EPA 6010	JLD	7	PASI-G
40158427016	TW-4	EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	65	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	65	PASI-G
40158427017	TW-3	EPA 6010	JLD	7	PASI-G
		EPA 8260	HNW	65	PASI-G

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40158427018	TW-5	EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	65	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
40158427019	TW-6	EPA 8260	HNW	65	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	65	PASI-G

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
40158427001	B-2 (3-4')					
EPA 6010	Arsenic	8.2	mg/kg	6.0	10/13/17 21:48	
EPA 6010	Barium	105	mg/kg	0.60	10/13/17 21:48	
EPA 6010	Cadmium	0.43J	mg/kg	0.60	10/13/17 21:48	
EPA 6010	Chromium	39.0	mg/kg	1.2	10/13/17 21:48	
EPA 6010	Lead	214	mg/kg	1.6	10/13/17 21:48	
EPA 7471	Mercury	0.59	mg/kg	0.044	10/17/17 11:45	
EPA 8270 by SIM	Acenaphthene	13.3J	ug/kg	16.2	10/13/17 14:56	
EPA 8270 by SIM	Acenaphthylene	6.3J	ug/kg	13.8	10/13/17 14:56	
EPA 8270 by SIM	Anthracene	25.3	ug/kg	23.9	10/13/17 14:56	
EPA 8270 by SIM	Benzo(a)anthracene	64.3	ug/kg	13.3	10/13/17 14:56	
EPA 8270 by SIM	Benzo(a)pyrene	65.7	ug/kg	10.5	10/13/17 14:56	
EPA 8270 by SIM	Benzo(b)fluoranthene	79.0	ug/kg	11.8	10/13/17 14:56	
EPA 8270 by SIM	Benzo(g,h,i)perylene	38.8	ug/kg	8.5	10/13/17 14:56	
EPA 8270 by SIM	Benzo(k)fluoranthene	33.5	ug/kg	10.5	10/13/17 14:56	
EPA 8270 by SIM	Chrysene	67.2	ug/kg	14.1	10/13/17 14:56	
EPA 8270 by SIM	Dibenz(a,h)anthracene	9.0J	ug/kg	9.4	10/13/17 14:56	
EPA 8270 by SIM	Fluoranthene	143	ug/kg	21.9	10/13/17 14:56	
EPA 8270 by SIM	Fluorene	15.0J	ug/kg	17.3	10/13/17 14:56	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	34.6	ug/kg	9.2	10/13/17 14:56	
EPA 8270 by SIM	1-Methylnaphthalene	7.5J	ug/kg	16.8	10/13/17 14:56	
EPA 8270 by SIM	2-Methylnaphthalene	7.7J	ug/kg	21.0	10/13/17 14:56	
EPA 8270 by SIM	Naphthalene	20.4J	ug/kg	35.3	10/13/17 14:56	
EPA 8270 by SIM	Phenanthrene	128	ug/kg	48.7	10/13/17 14:56	
EPA 8270 by SIM	Pyrene	126	ug/kg	18.8	10/13/17 14:56	
ASTM D2974-87	Percent Moisture	20.4	%	0.10	10/16/17 11:11	
40158427002	B-2 (12-13')					
EPA 6010	Arsenic	3.9J	mg/kg	5.7	10/13/17 21:50	
EPA 6010	Barium	49.9	mg/kg	0.57	10/13/17 21:50	
EPA 6010	Cadmium	0.19J	mg/kg	0.57	10/13/17 21:50	
EPA 6010	Chromium	18.3	mg/kg	1.1	10/13/17 21:50	
EPA 6010	Lead	8.2	mg/kg	1.5	10/13/17 21:50	
ASTM D2974-87	Percent Moisture	14.9	%	0.10	10/16/17 11:11	
40158427003	B-1 (3-4')					
EPA 6010	Arsenic	3.7J	mg/kg	5.3	10/13/17 21:52	
EPA 6010	Barium	48.0	mg/kg	0.53	10/13/17 21:52	
EPA 6010	Cadmium	0.15J	mg/kg	0.53	10/13/17 21:52	
EPA 6010	Chromium	19.5	mg/kg	1.1	10/13/17 21:52	
EPA 6010	Lead	7.0	mg/kg	1.4	10/13/17 21:52	
EPA 7471	Mercury	0.015J	mg/kg	0.038	10/17/17 11:49	
EPA 8270 by SIM	Benzo(a)anthracene	11.7J	ug/kg	11.8	10/13/17 15:30	
EPA 8270 by SIM	Benzo(a)pyrene	12.1	ug/kg	9.3	10/13/17 15:30	
EPA 8270 by SIM	Benzo(b)fluoranthene	20.6	ug/kg	10.5	10/13/17 15:30	
EPA 8270 by SIM	Benzo(g,h,i)perylene	11.1	ug/kg	7.5	10/13/17 15:30	
EPA 8270 by SIM	Benzo(k)fluoranthene	7.1J	ug/kg	9.3	10/13/17 15:30	
EPA 8270 by SIM	Chrysene	15.2	ug/kg	12.5	10/13/17 15:30	
EPA 8270 by SIM	Fluoranthene	33.9	ug/kg	19.3	10/13/17 15:30	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40158427003	B-1 (3-4')					
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	8.3	ug/kg	8.2	10/13/17 15:30	
EPA 8270 by SIM	Phenanthrene	15.6J	ug/kg	43.1	10/13/17 15:30	
EPA 8270 by SIM	Pyrene	27.9	ug/kg	16.7	10/13/17 15:30	
EPA 8260	Tetrachloroethene	44.8J	ug/kg	66.6	10/12/17 20:50	
ASTM D2974-87	Percent Moisture	10	%	0.10	10/16/17 11:11	
40158427004	B-1 (11.5-12.5')					
EPA 6010	Arsenic	4.6J	mg/kg	5.5	10/13/17 21:55	
EPA 6010	Barium	72.1	mg/kg	0.55	10/13/17 21:55	
EPA 6010	Cadmium	0.23J	mg/kg	0.55	10/13/17 21:55	
EPA 6010	Chromium	19.0	mg/kg	1.1	10/13/17 21:55	
EPA 6010	Lead	9.8	mg/kg	1.4	10/13/17 21:55	
EPA 8270 by SIM	Acenaphthene	7.1J	ug/kg	15.3	10/13/17 15:48	
EPA 8270 by SIM	Benzo(a)anthracene	17.3	ug/kg	12.6	10/13/17 15:48	
EPA 8270 by SIM	Benzo(a)pyrene	15.3	ug/kg	9.9	10/13/17 15:48	
EPA 8270 by SIM	Benzo(b)fluoranthene	21.8	ug/kg	11.2	10/13/17 15:48	
EPA 8270 by SIM	Benzo(g,h,i)perylene	10.7	ug/kg	8.0	10/13/17 15:48	
EPA 8270 by SIM	Benzo(k)fluoranthene	9.4J	ug/kg	9.9	10/13/17 15:48	
EPA 8270 by SIM	Chrysene	21.5	ug/kg	13.3	10/13/17 15:48	
EPA 8270 by SIM	Fluoranthene	52.2	ug/kg	20.7	10/13/17 15:48	
EPA 8270 by SIM	Fluorene	6.2J	ug/kg	16.4	10/13/17 15:48	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	9.2	ug/kg	8.7	10/13/17 15:48	
EPA 8270 by SIM	Phenanthrene	53.0	ug/kg	46.1	10/13/17 15:48	
EPA 8270 by SIM	Pyrene	43.9	ug/kg	17.8	10/13/17 15:48	
ASTM D2974-87	Percent Moisture	16.0	%	0.10	10/16/17 11:11	
40158427005	B-4 (2-3')					
EPA 6010	Arsenic	6.1	mg/kg	5.9	10/13/17 21:57	
EPA 6010	Barium	128	mg/kg	0.59	10/13/17 21:57	
EPA 6010	Cadmium	7.7	mg/kg	0.59	10/13/17 21:57	
EPA 6010	Chromium	14.0	mg/kg	1.2	10/13/17 21:57	
EPA 6010	Lead	135	mg/kg	1.5	10/13/17 21:57	
EPA 6010	Selenium	1.5J	mg/kg	5.9	10/13/17 21:57	
EPA 7471	Mercury	0.013J	mg/kg	0.041	10/17/17 11:54	
EPA 8270 by SIM	Anthracene	10.6J	ug/kg	22.4	10/13/17 16:05	
EPA 8270 by SIM	Benzo(a)anthracene	27.6	ug/kg	12.5	10/13/17 16:05	
EPA 8270 by SIM	Benzo(a)pyrene	26.3	ug/kg	9.9	10/13/17 16:05	
EPA 8270 by SIM	Benzo(b)fluoranthene	39.9	ug/kg	11.1	10/13/17 16:05	
EPA 8270 by SIM	Benzo(g,h,i)perylene	20.9	ug/kg	8.0	10/13/17 16:05	
EPA 8270 by SIM	Benzo(k)fluoranthene	14.4	ug/kg	9.9	10/13/17 16:05	
EPA 8270 by SIM	Chrysene	33.7	ug/kg	13.2	10/13/17 16:05	
EPA 8270 by SIM	Dibenz(a,h)anthracene	4.4J	ug/kg	8.8	10/13/17 16:05	
EPA 8270 by SIM	Fluoranthene	77.5	ug/kg	20.5	10/13/17 16:05	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	17.4	ug/kg	8.7	10/13/17 16:05	
EPA 8270 by SIM	Phenanthrene	57.0	ug/kg	45.8	10/13/17 16:05	
EPA 8270 by SIM	Pyrene	61.1	ug/kg	17.7	10/13/17 16:05	
EPA 8260	Tetrachloroethene	371	ug/kg	70.9	10/12/17 21:36	
ASTM D2974-87	Percent Moisture	15.3	%	0.10	10/16/17 12:45	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40158427006	B-4 (10-11')					
EPA 6010	Arsenic	4.1J	mg/kg	5.7	10/13/17 22:00	
EPA 6010	Barium	47.8	mg/kg	0.57	10/13/17 22:00	
EPA 6010	Cadmium	0.15J	mg/kg	0.57	10/13/17 22:00	
EPA 6010	Chromium	17.7	mg/kg	1.1	10/13/17 22:00	
EPA 6010	Lead	7.8	mg/kg	1.5	10/13/17 22:00	
EPA 8270 by SIM	Benzo(a)pyrene	3.7J	ug/kg	9.5	10/13/17 16:22	
EPA 8270 by SIM	Benzo(b)fluoranthene	4.7J	ug/kg	10.7	10/13/17 16:22	
EPA 8270 by SIM	Benzo(g,h,i)perylene	5.1J	ug/kg	7.7	10/13/17 16:22	
EPA 8270 by SIM	Fluoranthene	6.5J	ug/kg	19.8	10/13/17 16:22	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	2.6J	ug/kg	8.4	10/13/17 16:22	
EPA 8270 by SIM	Pyrene	5.4J	ug/kg	17.1	10/13/17 16:22	
ASTM D2974-87	Percent Moisture	12.4	%	0.10	10/16/17 13:20	
40158427008	B-3 (3-4')					
EPA 6010	Arsenic	6.9	mg/kg	5.4	10/13/17 22:07	
EPA 6010	Barium	86.2	mg/kg	0.54	10/13/17 22:07	
EPA 6010	Cadmium	0.19J	mg/kg	0.54	10/13/17 22:07	
EPA 6010	Chromium	20.4	mg/kg	1.1	10/13/17 22:07	
EPA 6010	Lead	13.8	mg/kg	1.4	10/13/17 22:07	
EPA 8270 by SIM	Acenaphthene	9.3J	ug/kg	15.0	10/13/17 16:39	
EPA 8270 by SIM	Anthracene	16.7J	ug/kg	22.1	10/13/17 16:39	
EPA 8270 by SIM	Benzo(a)anthracene	26.0	ug/kg	12.4	10/13/17 16:39	
EPA 8270 by SIM	Benzo(a)pyrene	20.2	ug/kg	9.8	10/13/17 16:39	
EPA 8270 by SIM	Benzo(b)fluoranthene	25.7	ug/kg	11.0	10/13/17 16:39	
EPA 8270 by SIM	Benzo(g,h,i)perylene	11.6	ug/kg	7.9	10/13/17 16:39	
EPA 8270 by SIM	Benzo(k)fluoranthene	10.9	ug/kg	9.7	10/13/17 16:39	
EPA 8270 by SIM	Chrysene	24.4	ug/kg	13.1	10/13/17 16:39	
EPA 8270 by SIM	Dibenz(a,h)anthracene	3.2J	ug/kg	8.7	10/13/17 16:39	
EPA 8270 by SIM	Fluoranthene	66.1	ug/kg	20.3	10/13/17 16:39	
EPA 8270 by SIM	Fluorene	9.7J	ug/kg	16.1	10/13/17 16:39	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	9.9	ug/kg	8.5	10/13/17 16:39	
EPA 8270 by SIM	Phenanthrene	79.8	ug/kg	45.2	10/13/17 16:39	
EPA 8270 by SIM	Pyrene	56.2	ug/kg	17.5	10/13/17 16:39	
EPA 8260	Tetrachloroethene	44.6J	ug/kg	69.8	10/12/17 22:22	
ASTM D2974-87	Percent Moisture	14.1	%	0.10	10/16/17 13:20	
40158427009	B-3 (11-12')					
EPA 6010	Arsenic	3.3J	mg/kg	5.6	10/13/17 22:10	
EPA 6010	Barium	65.6	mg/kg	0.56	10/13/17 22:10	
EPA 6010	Cadmium	0.28J	mg/kg	0.56	10/13/17 22:10	
EPA 6010	Chromium	27.1	mg/kg	1.1	10/13/17 22:10	
EPA 6010	Lead	9.0	mg/kg	1.5	10/13/17 22:10	
EPA 7471	Mercury	0.016J	mg/kg	0.043	10/17/17 12:06	
EPA 8270 by SIM	Benzo(a)anthracene	5.5J	ug/kg	12.6	10/13/17 16:56	
EPA 8270 by SIM	Benzo(a)pyrene	4.9J	ug/kg	9.9	10/13/17 16:56	
EPA 8270 by SIM	Benzo(b)fluoranthene	7.1J	ug/kg	11.1	10/13/17 16:56	
EPA 8270 by SIM	Benzo(g,h,i)perylene	4.3J	ug/kg	8.0	10/13/17 16:56	
EPA 8270 by SIM	Chrysene	6.6J	ug/kg	13.3	10/13/17 16:56	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40158427009	B-3 (11-12')					
EPA 8270 by SIM	Fluoranthene	15.2J	ug/kg	20.6	10/13/17 16:56	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	3.0J	ug/kg	8.7	10/13/17 16:56	
EPA 8270 by SIM	Pyrene	12.5J	ug/kg	17.8	10/13/17 16:56	
ASTM D2974-87	Percent Moisture	15.4	%	0.10	10/16/17 12:45	
40158427010	B-5 (12.5-13.5')					
EPA 6010	Arsenic	3.3J	mg/kg	5.4	10/13/17 22:12	
EPA 6010	Barium	20.0	mg/kg	0.54	10/13/17 22:12	
EPA 6010	Cadmium	0.16J	mg/kg	0.54	10/13/17 22:12	
EPA 6010	Chromium	9.3	mg/kg	1.1	10/13/17 22:12	
EPA 6010	Lead	7.1	mg/kg	1.4	10/13/17 22:12	
EPA 8270 by SIM	Benzo(b)fluoranthene	3.5J	ug/kg	10.6	10/13/17 17:13	
EPA 8270 by SIM	1-Methylnaphthalene	12.1J	ug/kg	15.1	10/13/17 17:13	
EPA 8270 by SIM	Naphthalene	52.5	ug/kg	31.7	10/13/17 17:13	
EPA 8260	Chloroform	151J	ug/kg	282	10/12/17 23:09	
EPA 8260	Ethylbenzene	74.1	ug/kg	67.7	10/12/17 23:09	
EPA 8260	Isopropylbenzene (Cumene)	112	ug/kg	67.7	10/12/17 23:09	
EPA 8260	n-Butylbenzene	324	ug/kg	67.7	10/12/17 23:09	
EPA 8260	n-Propylbenzene	545	ug/kg	67.7	10/12/17 23:09	
EPA 8260	sec-Butylbenzene	159	ug/kg	67.7	10/12/17 23:09	
ASTM D2974-87	Percent Moisture	11.4	%	0.10	10/16/17 12:45	
40158427011	B-5 (14-15')					
EPA 6010	Arsenic	3.5J	mg/kg	5.4	10/13/17 22:15	
EPA 6010	Barium	94.4	mg/kg	0.54	10/13/17 22:15	
EPA 6010	Cadmium	0.18J	mg/kg	0.54	10/13/17 22:15	
EPA 6010	Chromium	27.9	mg/kg	1.1	10/13/17 22:15	
EPA 6010	Lead	8.7	mg/kg	1.4	10/13/17 22:15	
EPA 7471	Mercury	0.020J	mg/kg	0.045	10/17/17 12:15	MO
EPA 8270 by SIM	1-Methylnaphthalene	47.0	ug/kg	16.5	10/13/17 17:31	
EPA 8270 by SIM	2-Methylnaphthalene	8.4J	ug/kg	20.5	10/13/17 17:31	
EPA 8270 by SIM	Naphthalene	35.3	ug/kg	34.6	10/13/17 17:31	
EPA 8260	1,2,4-Trimethylbenzene	36.6J	ug/kg	73.8	10/13/17 01:28	
EPA 8260	Chloroform	133J	ug/kg	307	10/13/17 01:28	
EPA 8260	Ethylbenzene	1060	ug/kg	73.8	10/13/17 01:28	
EPA 8260	Isopropylbenzene (Cumene)	211	ug/kg	73.8	10/13/17 01:28	
EPA 8260	n-Butylbenzene	152	ug/kg	73.8	10/13/17 01:28	
EPA 8260	n-Propylbenzene	778	ug/kg	73.8	10/13/17 01:28	
EPA 8260	sec-Butylbenzene	46.5J	ug/kg	73.8	10/13/17 01:28	
ASTM D2974-87	Percent Moisture	18.6	%	0.10	10/16/17 12:45	
40158427012	B-6 (3-4')					
EPA 6010	Arsenic	3.9J	mg/kg	5.3	10/13/17 22:17	
EPA 6010	Barium	43.7	mg/kg	0.53	10/13/17 22:17	
EPA 6010	Cadmium	0.21J	mg/kg	0.53	10/13/17 22:17	
EPA 6010	Chromium	16.1	mg/kg	1.1	10/13/17 22:17	
EPA 6010	Lead	6.9	mg/kg	1.4	10/13/17 22:17	
EPA 8270 by SIM	Benzo(a)anthracene	5.9J	ug/kg	12.2	10/13/17 17:48	
EPA 8270 by SIM	Benzo(a)pyrene	4.2J	ug/kg	9.7	10/13/17 17:48	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40158427012	B-6 (3-4')					
EPA 8270 by SIM	Benzo(b)fluoranthene	6.5J	ug/kg	10.9	10/13/17 17:48	
EPA 8270 by SIM	Benzo(g,h,i)perylene	3.2J	ug/kg	7.8	10/13/17 17:48	
EPA 8270 by SIM	Chrysene	6.5J	ug/kg	12.9	10/13/17 17:48	
EPA 8270 by SIM	Fluoranthene	10.7J	ug/kg	20.1	10/13/17 17:48	
EPA 8270 by SIM	Pyrene	12.1J	ug/kg	17.3	10/13/17 17:48	
EPA 8260	Tetrachloroethene	109	ug/kg	69.3	10/13/17 01:51	
ASTM D2974-87	Percent Moisture	13.4	%	0.10	10/16/17 12:45	
40158427013	B-6 (11-12')					
EPA 6010	Arsenic	3.7J	mg/kg	5.4	10/13/17 22:19	
EPA 6010	Barium	43.1	mg/kg	0.54	10/13/17 22:19	
EPA 6010	Cadmium	0.14J	mg/kg	0.54	10/13/17 22:19	
EPA 6010	Chromium	14.2	mg/kg	1.1	10/13/17 22:19	
EPA 6010	Lead	6.6	mg/kg	1.4	10/13/17 22:19	
EPA 7471	Mercury	0.012J	mg/kg	0.040	10/17/17 12:29	
EPA 8270 by SIM	1-Methylnaphthalene	5.0J	ug/kg	15.0	10/13/17 18:05	
EPA 8270 by SIM	Naphthalene	10.0J	ug/kg	31.5	10/13/17 18:05	
EPA 8260	Ethylbenzene	61.8J	ug/kg	67.3	10/13/17 02:14	
EPA 8260	Tetrachloroethene	39.1J	ug/kg	67.3	10/13/17 02:14	
EPA 8260	n-Propylbenzene	32.5J	ug/kg	67.3	10/13/17 02:14	
ASTM D2974-87	Percent Moisture	10.8	%	0.10	10/16/17 12:46	
40158427014	TW-2					
EPA 6010	Barium	170	ug/L	5.0	10/12/17 17:29	
EPA 8270 by HVI	Acenaphthene	0.022J	ug/L	0.062	10/13/17 16:26	
EPA 8270 by HVI	Benzo(b)fluoranthene	0.024J	ug/L	0.059	10/13/17 16:26	
EPA 8270 by HVI	Benzo(g,h,i)perylene	0.019J	ug/L	0.069	10/13/17 16:26	
EPA 8270 by HVI	Benzo(k)fluoranthene	0.020J	ug/L	0.077	10/13/17 16:26	
EPA 8270 by HVI	Chrysene	0.040J	ug/L	0.13	10/13/17 16:26	
EPA 8270 by HVI	Fluoranthene	0.13	ug/L	0.11	10/13/17 16:26	
EPA 8270 by HVI	Phenanthrene	0.089J	ug/L	0.14	10/13/17 16:26	
EPA 8270 by HVI	Pyrene	0.11	ug/L	0.078	10/13/17 16:26	
EPA 8270 by HVI	Total PAHs	0.55	ug/L		10/13/17 16:26	
EPA 8260	Methylene Chloride	0.46J	ug/L	1.0	10/12/17 15:48	B
40158427015	TW-1					
EPA 6010	Arsenic	10J	ug/L	25.0	10/12/17 17:31	
EPA 6010	Barium	239	ug/L	5.0	10/12/17 17:31	
EPA 8270 by HVI	Acenaphthene	0.051	ug/L	0.031	10/13/17 16:44	
EPA 8270 by HVI	Acenaphthylene	0.0082J	ug/L	0.026	10/13/17 16:44	
EPA 8270 by HVI	Anthracene	0.060	ug/L	0.054	10/13/17 16:44	
EPA 8270 by HVI	Benzo(a)anthracene	0.088	ug/L	0.039	10/13/17 16:44	
EPA 8270 by HVI	Benzo(a)pyrene	0.075	ug/L	0.054	10/13/17 16:44	
EPA 8270 by HVI	Benzo(b)fluoranthene	0.12	ug/L	0.030	10/13/17 16:44	
EPA 8270 by HVI	Benzo(g,h,i)perylene	0.077	ug/L	0.035	10/13/17 16:44	
EPA 8270 by HVI	Benzo(k)fluoranthene	0.074	ug/L	0.039	10/13/17 16:44	
EPA 8270 by HVI	Chrysene	0.17	ug/L	0.067	10/13/17 16:44	
EPA 8270 by HVI	Dibenz(a,h)anthracene	0.013J	ug/L	0.052	10/13/17 16:44	
EPA 8270 by HVI	Fluoranthene	0.35	ug/L	0.055	10/13/17 16:44	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
40158427015	TW-1					
EPA 8270 by HVI	Fluorene	0.040J	ug/L	0.041	10/13/17 16:44	
EPA 8270 by HVI	Indeno(1,2,3-cd)pyrene	0.059J	ug/L	0.091	10/13/17 16:44	
EPA 8270 by HVI	1-Methylnaphthalene	0.033	ug/L	0.030	10/13/17 16:44	
EPA 8270 by HVI	2-Methylnaphthalene	0.036	ug/L	0.025	10/13/17 16:44	
EPA 8270 by HVI	Naphthalene	0.17	ug/L	0.094	10/13/17 16:44	
EPA 8270 by HVI	Phenanthrene	0.33	ug/L	0.071	10/13/17 16:44	
EPA 8270 by HVI	Pyrene	0.32	ug/L	0.039	10/13/17 16:44	
EPA 8270 by HVI	Total PAHs	2.1	ug/L		10/13/17 16:44	
EPA 8260	Methylene Chloride	0.42J	ug/L	1.0	10/12/17 13:35	B
40158427016	TW-4					
EPA 6010	Barium	141	ug/L	5.0	10/12/17 17:39	
EPA 8270 by HVI	Acenaphthene	0.014J	ug/L	0.032	10/13/17 17:03	
EPA 8270 by HVI	Anthracene	0.014J	ug/L	0.056	10/13/17 17:03	
EPA 8270 by HVI	Benzo(a)anthracene	0.030J	ug/L	0.040	10/13/17 17:03	
EPA 8270 by HVI	Benzo(a)pyrene	0.031J	ug/L	0.056	10/13/17 17:03	
EPA 8270 by HVI	Benzo(b)fluoranthene	0.067	ug/L	0.031	10/13/17 17:03	
EPA 8270 by HVI	Benzo(g,h,i)perylene	0.046	ug/L	0.036	10/13/17 17:03	
EPA 8270 by HVI	Benzo(k)fluoranthene	0.036J	ug/L	0.040	10/13/17 17:03	
EPA 8270 by HVI	Chrysene	0.071	ug/L	0.069	10/13/17 17:03	
EPA 8270 by HVI	Fluoranthene	0.21	ug/L	0.057	10/13/17 17:03	
EPA 8270 by HVI	Fluorene	0.014J	ug/L	0.042	10/13/17 17:03	
EPA 8270 by HVI	Indeno(1,2,3-cd)pyrene	0.034J	ug/L	0.094	10/13/17 17:03	
EPA 8270 by HVI	1-Methylnaphthalene	0.0082J	ug/L	0.031	10/13/17 17:03	
EPA 8270 by HVI	2-Methylnaphthalene	0.012J	ug/L	0.026	10/13/17 17:03	
EPA 8270 by HVI	Phenanthrene	0.17	ug/L	0.073	10/13/17 17:03	
EPA 8270 by HVI	Pyrene	0.17	ug/L	0.041	10/13/17 17:03	
EPA 8270 by HVI	Total PAHs	0.95	ug/L		10/13/17 17:03	
EPA 8260	Methylene Chloride	0.46J	ug/L	1.0	10/12/17 13:58	B
40158427017	TW-3					
EPA 6010	Barium	114	ug/L	5.0	10/12/17 17:41	
EPA 8270 by HVI	Acenaphthene	0.0084J	ug/L	0.039	10/13/17 17:21	
EPA 8270 by HVI	Benzo(a)anthracene	0.023J	ug/L	0.049	10/13/17 17:21	
EPA 8270 by HVI	Benzo(a)pyrene	0.020J	ug/L	0.068	10/13/17 17:21	
EPA 8270 by HVI	Benzo(b)fluoranthene	0.043	ug/L	0.037	10/13/17 17:21	
EPA 8270 by HVI	Benzo(g,h,i)perylene	0.033J	ug/L	0.044	10/13/17 17:21	
EPA 8270 by HVI	Benzo(k)fluoranthene	0.026J	ug/L	0.049	10/13/17 17:21	
EPA 8270 by HVI	Chrysene	0.066J	ug/L	0.085	10/13/17 17:21	
EPA 8270 by HVI	Fluoranthene	0.15	ug/L	0.069	10/13/17 17:21	
EPA 8270 by HVI	1-Methylnaphthalene	0.012J	ug/L	0.038	10/13/17 17:21	
EPA 8270 by HVI	2-Methylnaphthalene	0.014J	ug/L	0.032	10/13/17 17:21	
EPA 8270 by HVI	Phenanthrene	0.13	ug/L	0.090	10/13/17 17:21	
EPA 8270 by HVI	Pyrene	0.14	ug/L	0.050	10/13/17 17:21	
EPA 8270 by HVI	Total PAHs	0.71	ug/L		10/13/17 17:21	
EPA 8260	cis-1,2-Dichloroethene	3.3	ug/L	1.0	10/12/17 14:42	
EPA 8260	trans-1,2-Dichloroethene	0.65J	ug/L	1.0	10/12/17 14:42	
EPA 8260	Methylene Chloride	0.31J	ug/L	1.0	10/12/17 14:42	B

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
40158427017	TW-3					
EPA 8260	Tetrachloroethene	188	ug/L	1.0	10/12/17 14:42	
EPA 8260	Trichloroethene	8.5	ug/L	1.0	10/12/17 14:42	
40158427018	TW-5					
EPA 6010	Barium	370	ug/L	5.0	10/12/17 17:44	
EPA 8270 by HVI	Acenaphthene	0.028J	ug/L	0.033	10/13/17 21:01	
EPA 8270 by HVI	Acenaphthylene	0.0062J	ug/L	0.027	10/13/17 21:01	
EPA 8270 by HVI	Benzo(a)anthracene	0.0085J	ug/L	0.041	10/13/17 21:01	
EPA 8270 by HVI	Chrysene	0.031J	ug/L	0.070	10/13/17 21:01	
EPA 8270 by HVI	Fluoranthene	0.033J	ug/L	0.057	10/13/17 21:01	
EPA 8270 by HVI	Fluorene	0.017J	ug/L	0.043	10/13/17 21:01	
EPA 8270 by HVI	1-Methylnaphthalene	1.4	ug/L	0.032	10/13/17 21:01	
EPA 8270 by HVI	2-Methylnaphthalene	0.041	ug/L	0.026	10/13/17 21:01	
EPA 8270 by HVI	Naphthalene	2.5	ug/L	0.099	10/13/17 21:01	
EPA 8270 by HVI	Phenanthrene	0.073J	ug/L	0.074	10/13/17 21:01	
EPA 8270 by HVI	Pyrene	0.030J	ug/L	0.041	10/13/17 21:01	
EPA 8270 by HVI	Total PAHs	4.2	ug/L		10/13/17 21:01	
EPA 8260	Benzene	12.3	ug/L	1.0	10/12/17 14:20	
EPA 8260	n-Butylbenzene	13.5	ug/L	1.0	10/12/17 14:20	
EPA 8260	sec-Butylbenzene	7.3	ug/L	5.0	10/12/17 14:20	
EPA 8260	tert-Butylbenzene	0.67J	ug/L	1.0	10/12/17 14:20	
EPA 8260	1,2-Dichloroethane	2.2	ug/L	1.0	10/12/17 14:20	
EPA 8260	cis-1,2-Dichloroethene	3.4	ug/L	1.0	10/12/17 14:20	
EPA 8260	trans-1,2-Dichloroethene	2.0	ug/L	1.0	10/12/17 14:20	
EPA 8260	Ethylbenzene	23.6	ug/L	1.0	10/12/17 14:20	
EPA 8260	Isopropylbenzene (Cumene)	12.7	ug/L	1.0	10/12/17 14:20	
EPA 8260	p-Isopropyltoluene	3.2	ug/L	1.0	10/12/17 14:20	
EPA 8260	n-Propylbenzene	47.7	ug/L	1.0	10/12/17 14:20	
EPA 8260	Tetrachloroethene	2.0	ug/L	1.0	10/12/17 14:20	
EPA 8260	Toluene	0.68J	ug/L	1.0	10/12/17 14:20	
EPA 8260	1,2,4-Trimethylbenzene	17.9	ug/L	1.0	10/12/17 14:20	
EPA 8260	Vinyl chloride	0.43J	ug/L	1.0	10/12/17 14:20	
EPA 8260	m&p-Xylene	1.2J	ug/L	2.0	10/12/17 14:20	L1
40158427019	TW-6					
EPA 6010	Arsenic	10.9J	ug/L	25.0	10/12/17 17:47	
EPA 6010	Barium	204	ug/L	5.0	10/12/17 17:47	
EPA 8270 by HVI	Acenaphthene	0.015J	ug/L	0.034	10/13/17 20:43	
EPA 8270 by HVI	Acenaphthylene	0.0062J	ug/L	0.028	10/13/17 20:43	
EPA 8270 by HVI	Benzo(a)anthracene	0.0087J	ug/L	0.042	10/13/17 20:43	
EPA 8270 by HVI	Fluoranthene	0.066	ug/L	0.059	10/13/17 20:43	
EPA 8270 by HVI	Fluorene	0.011J	ug/L	0.044	10/13/17 20:43	
EPA 8270 by HVI	1-Methylnaphthalene	3.2	ug/L	0.033	10/13/17 20:43	
EPA 8270 by HVI	2-Methylnaphthalene	0.15	ug/L	0.027	10/13/17 20:43	
EPA 8270 by HVI	Naphthalene	5.6	ug/L	0.10	10/13/17 20:43	
EPA 8270 by HVI	Phenanthrene	0.10	ug/L	0.077	10/13/17 20:43	
EPA 8270 by HVI	Pyrene	0.055	ug/L	0.043	10/13/17 20:43	
EPA 8270 by HVI	Total PAHs	9.3	ug/L		10/13/17 20:43	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40158427019	TW-6					
EPA 8260	Benzene	681	ug/L	10.0	10/13/17 10:47	
EPA 8260	n-Butylbenzene	5.8J	ug/L	10.0	10/13/17 10:47	
EPA 8260	cis-1,2-Dichloroethene	4.9J	ug/L	10.0	10/13/17 10:47	
EPA 8260	Ethylbenzene	404	ug/L	10.0	10/13/17 10:47	
EPA 8260	Isopropylbenzene (Cumene)	9.3J	ug/L	10.0	10/13/17 10:47	
EPA 8260	n-Propylbenzene	21.8	ug/L	10.0	10/13/17 10:47	
EPA 8260	Toluene	65.1	ug/L	10.0	10/13/17 10:47	
EPA 8260	1,2,4-Trimethylbenzene	154	ug/L	10.0	10/13/17 10:47	
EPA 8260	1,3,5-Trimethylbenzene	7.5J	ug/L	10.0	10/13/17 10:47	
EPA 8260	Xylene (Total)	250	ug/L	30.0	10/13/17 10:47	LS
EPA 8260	m&p-Xylene	246	ug/L	20.0	10/13/17 10:47	L1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-2 (3-4) **Lab ID: 40158427001** Collected: 10/09/17 09:15 Received: 10/11/17 09:25 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									
Arsenic	8.2	mg/kg	6.0	1.3	1	10/12/17 15:03	10/13/17 21:48	7440-38-2	
Barium	105	mg/kg	0.60	0.18	1	10/12/17 15:03	10/13/17 21:48	7440-39-3	
Cadmium	0.43J	mg/kg	0.60	0.16	1	10/12/17 15:03	10/13/17 21:48	7440-43-9	
Chromium	39.0	mg/kg	1.2	0.34	1	10/12/17 15:03	10/13/17 21:48	7440-47-3	
Lead	214	mg/kg	1.6	0.52	1	10/12/17 15:03	10/13/17 21:48	7439-92-1	
Selenium	<1.3	mg/kg	6.0	1.3	1	10/12/17 15:03	10/13/17 21:48	7782-49-2	
Silver	<0.42	mg/kg	1.2	0.42	1	10/12/17 15:03	10/13/17 21:48	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.59	mg/kg	0.044	0.013	1	10/17/17 06:54	10/17/17 11:45	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	13.3J	ug/kg	16.2	4.9	1	10/13/17 08:32	10/13/17 14:56	83-32-9	
Acenaphthylene	6.3J	ug/kg	13.8	4.1	1	10/13/17 08:32	10/13/17 14:56	208-96-8	
Anthracene	25.3	ug/kg	23.9	7.2	1	10/13/17 08:32	10/13/17 14:56	120-12-7	
Benzo(a)anthracene	64.3	ug/kg	13.3	4.0	1	10/13/17 08:32	10/13/17 14:56	56-55-3	
Benzo(a)pyrene	65.7	ug/kg	10.5	3.2	1	10/13/17 08:32	10/13/17 14:56	50-32-8	
Benzo(b)fluoranthene	79.0	ug/kg	11.8	3.5	1	10/13/17 08:32	10/13/17 14:56	205-99-2	
Benzo(g,h,i)perylene	38.8	ug/kg	8.5	2.6	1	10/13/17 08:32	10/13/17 14:56	191-24-2	
Benzo(k)fluoranthene	33.5	ug/kg	10.5	3.2	1	10/13/17 08:32	10/13/17 14:56	207-08-9	
Chrysene	67.2	ug/kg	14.1	4.2	1	10/13/17 08:32	10/13/17 14:56	218-01-9	
Dibenz(a,h)anthracene	9.0J	ug/kg	9.4	2.8	1	10/13/17 08:32	10/13/17 14:56	53-70-3	
Fluoranthene	143	ug/kg	21.9	6.5	1	10/13/17 08:32	10/13/17 14:56	206-44-0	
Fluorene	15.0J	ug/kg	17.3	5.2	1	10/13/17 08:32	10/13/17 14:56	86-73-7	
Indeno(1,2,3-cd)pyrene	34.6	ug/kg	9.2	2.8	1	10/13/17 08:32	10/13/17 14:56	193-39-5	
1-Methylnaphthalene	7.5J	ug/kg	16.8	5.1	1	10/13/17 08:32	10/13/17 14:56	90-12-0	
2-Methylnaphthalene	7.7J	ug/kg	21.0	6.3	1	10/13/17 08:32	10/13/17 14:56	91-57-6	
Naphthalene	20.4J	ug/kg	35.3	10.6	1	10/13/17 08:32	10/13/17 14:56	91-20-3	
Phenanthrene	128	ug/kg	48.7	14.6	1	10/13/17 08:32	10/13/17 14:56	85-01-8	
Pyrene	126	ug/kg	18.8	5.7	1	10/13/17 08:32	10/13/17 14:56	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	61	%	23-106		1	10/13/17 08:32	10/13/17 14:56	321-60-8	
Terphenyl-d14 (S)	63	%	29-106		1	10/13/17 08:32	10/13/17 14:56	1718-51-0	
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	10/12/17 11:00	10/13/17 09:35	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 11:00	10/13/17 09:35	120-82-1	W

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-2 (3-4) **Lab ID: 40158427001** Collected: 10/09/17 09:15 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 11:00	10/13/17 09:35	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 11:00	10/13/17 09:35	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 11:00	10/13/17 09:35	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 11:00	10/13/17 09:35	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 11:00	10/13/17 09:35	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 11:00	10/13/17 09:35	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 11:00	10/13/17 09:35	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	104-51-8	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-2 (3-4) **Lab ID: 40158427001** Collected: 10/09/17 09:15 Received: 10/11/17 09:25 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								
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	77	%	68-130		1	10/12/17 11:00	10/13/17 09:35	1868-53-7	
Toluene-d8 (S)	73	%	68-149		1	10/12/17 11:00	10/13/17 09:35	2037-26-5	
4-Bromofluorobenzene (S)	62	%	58-141		1	10/12/17 11:00	10/13/17 09:35	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	20.4	%	0.10	0.10	1		10/16/17 11:11		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-2 (12-13') **Lab ID: 40158427002** Collected: 10/09/17 09:20 Received: 10/11/17 09:25 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									
Arsenic	3.9J	mg/kg	5.7	1.2	1	10/12/17 15:03	10/13/17 21:50	7440-38-2	
Barium	49.9	mg/kg	0.57	0.17	1	10/12/17 15:03	10/13/17 21:50	7440-39-3	
Cadmium	0.19J	mg/kg	0.57	0.15	1	10/12/17 15:03	10/13/17 21:50	7440-43-9	
Chromium	18.3	mg/kg	1.1	0.31	1	10/12/17 15:03	10/13/17 21:50	7440-47-3	
Lead	8.2	mg/kg	1.5	0.49	1	10/12/17 15:03	10/13/17 21:50	7439-92-1	
Selenium	<1.3	mg/kg	5.7	1.3	1	10/12/17 15:03	10/13/17 21:50	7782-49-2	
Silver	<0.39	mg/kg	1.1	0.39	1	10/12/17 15:03	10/13/17 21:50	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.039	0.012	1	10/17/17 06:54	10/17/17 11:47	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.6	ug/kg	15.1	4.6	1	10/13/17 08:32	10/13/17 15:13	83-32-9	
Acenaphthylene	<3.9	ug/kg	12.9	3.9	1	10/13/17 08:32	10/13/17 15:13	208-96-8	
Anthracene	<6.7	ug/kg	22.3	6.7	1	10/13/17 08:32	10/13/17 15:13	120-12-7	
Benzo(a)anthracene	<3.7	ug/kg	12.4	3.7	1	10/13/17 08:32	10/13/17 15:13	56-55-3	
Benzo(a)pyrene	<2.9	ug/kg	9.8	2.9	1	10/13/17 08:32	10/13/17 15:13	50-32-8	
Benzo(b)fluoranthene	<3.3	ug/kg	11.0	3.3	1	10/13/17 08:32	10/13/17 15:13	205-99-2	
Benzo(g,h,i)perylene	<2.4	ug/kg	7.9	2.4	1	10/13/17 08:32	10/13/17 15:13	191-24-2	
Benzo(k)fluoranthene	<2.9	ug/kg	9.8	2.9	1	10/13/17 08:32	10/13/17 15:13	207-08-9	
Chrysene	<4.0	ug/kg	13.1	4.0	1	10/13/17 08:32	10/13/17 15:13	218-01-9	
Dibenz(a,h)anthracene	<2.6	ug/kg	8.7	2.6	1	10/13/17 08:32	10/13/17 15:13	53-70-3	
Fluoranthene	<6.1	ug/kg	20.4	6.1	1	10/13/17 08:32	10/13/17 15:13	206-44-0	
Fluorene	<4.9	ug/kg	16.2	4.9	1	10/13/17 08:32	10/13/17 15:13	86-73-7	
Indeno(1,2,3-cd)pyrene	<2.6	ug/kg	8.6	2.6	1	10/13/17 08:32	10/13/17 15:13	193-39-5	
1-Methylnaphthalene	<4.7	ug/kg	15.7	4.7	1	10/13/17 08:32	10/13/17 15:13	90-12-0	
2-Methylnaphthalene	<5.9	ug/kg	19.6	5.9	1	10/13/17 08:32	10/13/17 15:13	91-57-6	
Naphthalene	<9.9	ug/kg	33.0	9.9	1	10/13/17 08:32	10/13/17 15:13	91-20-3	
Phenanthrene	<13.7	ug/kg	45.5	13.7	1	10/13/17 08:32	10/13/17 15:13	85-01-8	
Pyrene	<5.3	ug/kg	17.6	5.3	1	10/13/17 08:32	10/13/17 15:13	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	51	%	23-106		1	10/13/17 08:32	10/13/17 15:13	321-60-8	
Terphenyl-d14 (S)	54	%	29-106		1	10/13/17 08:32	10/13/17 15:13	1718-51-0	
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	10/12/17 07:15	10/12/17 20:26	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 07:15	10/12/17 20:26	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-2 (12-13') **Lab ID: 40158427002** Collected: 10/09/17 09:20 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 07:15	10/12/17 20:26	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 07:15	10/12/17 20:26	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 07:15	10/12/17 20:26	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 07:15	10/12/17 20:26	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 07:15	10/12/17 20:26	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 07:15	10/12/17 20:26	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 07:15	10/12/17 20:26	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	104-51-8	W

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-2 (12-13') **Lab ID: 40158427002** Collected: 10/09/17 09:20 Received: 10/11/17 09:25 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								
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	90	%	68-130		1	10/12/17 07:15	10/12/17 20:26	1868-53-7	
Toluene-d8 (S)	89	%	68-149		1	10/12/17 07:15	10/12/17 20:26	2037-26-5	
4-Bromofluorobenzene (S)	77	%	58-141		1	10/12/17 07:15	10/12/17 20:26	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	14.9	%	0.10	0.10	1		10/16/17 11:11		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-1 (3-4) **Lab ID: 40158427003** Collected: 10/09/17 10:00 Received: 10/11/17 09:25 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									
Arsenic	3.7J	mg/kg	5.3	1.1	1	10/12/17 15:03	10/13/17 21:52	7440-38-2	
Barium	48.0	mg/kg	0.53	0.16	1	10/12/17 15:03	10/13/17 21:52	7440-39-3	
Cadmium	0.15J	mg/kg	0.53	0.14	1	10/12/17 15:03	10/13/17 21:52	7440-43-9	
Chromium	19.5	mg/kg	1.1	0.30	1	10/12/17 15:03	10/13/17 21:52	7440-47-3	
Lead	7.0	mg/kg	1.4	0.46	1	10/12/17 15:03	10/13/17 21:52	7439-92-1	
Selenium	<1.2	mg/kg	5.3	1.2	1	10/12/17 15:03	10/13/17 21:52	7782-49-2	
Silver	<0.37	mg/kg	1.1	0.37	1	10/12/17 15:03	10/13/17 21:52	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.015J	mg/kg	0.038	0.012	1	10/17/17 06:54	10/17/17 11:49	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.3	ug/kg	14.3	4.3	1	10/13/17 08:32	10/13/17 15:30	83-32-9	
Acenaphthylene	<3.7	ug/kg	12.2	3.7	1	10/13/17 08:32	10/13/17 15:30	208-96-8	
Anthracene	<6.3	ug/kg	21.1	6.3	1	10/13/17 08:32	10/13/17 15:30	120-12-7	
Benzo(a)anthracene	11.7J	ug/kg	11.8	3.5	1	10/13/17 08:32	10/13/17 15:30	56-55-3	
Benzo(a)pyrene	12.1	ug/kg	9.3	2.8	1	10/13/17 08:32	10/13/17 15:30	50-32-8	
Benzo(b)fluoranthene	20.6	ug/kg	10.5	3.1	1	10/13/17 08:32	10/13/17 15:30	205-99-2	
Benzo(g,h,i)perylene	11.1	ug/kg	7.5	2.3	1	10/13/17 08:32	10/13/17 15:30	191-24-2	
Benzo(k)fluoranthene	7.1J	ug/kg	9.3	2.8	1	10/13/17 08:32	10/13/17 15:30	207-08-9	
Chrysene	15.2	ug/kg	12.5	3.7	1	10/13/17 08:32	10/13/17 15:30	218-01-9	
Dibenz(a,h)anthracene	<2.5	ug/kg	8.3	2.5	1	10/13/17 08:32	10/13/17 15:30	53-70-3	
Fluoranthene	33.9	ug/kg	19.3	5.8	1	10/13/17 08:32	10/13/17 15:30	206-44-0	
Fluorene	<4.6	ug/kg	15.3	4.6	1	10/13/17 08:32	10/13/17 15:30	86-73-7	
Indeno(1,2,3-cd)pyrene	8.3	ug/kg	8.2	2.4	1	10/13/17 08:32	10/13/17 15:30	193-39-5	
1-Methylnaphthalene	<4.5	ug/kg	14.9	4.5	1	10/13/17 08:32	10/13/17 15:30	90-12-0	
2-Methylnaphthalene	<5.6	ug/kg	18.6	5.6	1	10/13/17 08:32	10/13/17 15:30	91-57-6	
Naphthalene	<9.4	ug/kg	31.2	9.4	1	10/13/17 08:32	10/13/17 15:30	91-20-3	
Phenanthrene	15.6J	ug/kg	43.1	13.0	1	10/13/17 08:32	10/13/17 15:30	85-01-8	
Pyrene	27.9	ug/kg	16.7	5.0	1	10/13/17 08:32	10/13/17 15:30	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	68	%	23-106		1	10/13/17 08:32	10/13/17 15:30	321-60-8	
Terphenyl-d14 (S)	69	%	29-106		1	10/13/17 08:32	10/13/17 15:30	1718-51-0	
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	10/12/17 07:15	10/12/17 20:50	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 07:15	10/12/17 20:50	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-1 (3-4) **Lab ID: 40158427003** Collected: 10/09/17 10:00 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 07:15	10/12/17 20:50	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 07:15	10/12/17 20:50	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 07:15	10/12/17 20:50	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 07:15	10/12/17 20:50	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 07:15	10/12/17 20:50	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	100-42-5	W
Tetrachloroethene	44.8J	ug/kg	66.6	27.8	1	10/12/17 07:15	10/12/17 20:50	127-18-4	
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 07:15	10/12/17 20:50	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 07:15	10/12/17 20:50	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	104-51-8	W

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-1 (3-4) **Lab ID: 40158427003** Collected: 10/09/17 10:00 Received: 10/11/17 09:25 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								
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	91	%	68-130		1	10/12/17 07:15	10/12/17 20:50	1868-53-7	
Toluene-d8 (S)	87	%	68-149		1	10/12/17 07:15	10/12/17 20:50	2037-26-5	
4-Bromofluorobenzene (S)	76	%	58-141		1	10/12/17 07:15	10/12/17 20:50	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	10	%	0.10	0.10	1		10/16/17 11:11		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

Sample: B-1 (11.5-12.5') **Lab ID: 40158427004** Collected: 10/09/17 10:05 Received: 10/11/17 09:25 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									
Arsenic	4.6J	mg/kg	5.5	1.2	1	10/12/17 15:03	10/13/17 21:55	7440-38-2	
Barium	72.1	mg/kg	0.55	0.17	1	10/12/17 15:03	10/13/17 21:55	7440-39-3	
Cadmium	0.23J	mg/kg	0.55	0.15	1	10/12/17 15:03	10/13/17 21:55	7440-43-9	
Chromium	19.0	mg/kg	1.1	0.31	1	10/12/17 15:03	10/13/17 21:55	7440-47-3	
Lead	9.8	mg/kg	1.4	0.48	1	10/12/17 15:03	10/13/17 21:55	7439-92-1	
Selenium	<1.2	mg/kg	5.5	1.2	1	10/12/17 15:03	10/13/17 21:55	7782-49-2	
Silver	<0.38	mg/kg	1.1	0.38	1	10/12/17 15:03	10/13/17 21:55	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.013	mg/kg	0.043	0.013	1	10/17/17 06:54	10/17/17 11:52	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	7.1J	ug/kg	15.3	4.6	1	10/13/17 08:32	10/13/17 15:48	83-32-9	
Acenaphthylene	<3.9	ug/kg	13.1	3.9	1	10/13/17 08:32	10/13/17 15:48	208-96-8	
Anthracene	<6.8	ug/kg	22.6	6.8	1	10/13/17 08:32	10/13/17 15:48	120-12-7	
Benzo(a)anthracene	17.3	ug/kg	12.6	3.8	1	10/13/17 08:32	10/13/17 15:48	56-55-3	
Benzo(a)pyrene	15.3	ug/kg	9.9	3.0	1	10/13/17 08:32	10/13/17 15:48	50-32-8	
Benzo(b)fluoranthene	21.8	ug/kg	11.2	3.4	1	10/13/17 08:32	10/13/17 15:48	205-99-2	
Benzo(g,h,i)perylene	10.7	ug/kg	8.0	2.4	1	10/13/17 08:32	10/13/17 15:48	191-24-2	
Benzo(k)fluoranthene	9.4J	ug/kg	9.9	3.0	1	10/13/17 08:32	10/13/17 15:48	207-08-9	
Chrysene	21.5	ug/kg	13.3	4.0	1	10/13/17 08:32	10/13/17 15:48	218-01-9	
Dibenz(a,h)anthracene	<2.7	ug/kg	8.9	2.7	1	10/13/17 08:32	10/13/17 15:48	53-70-3	
Fluoranthene	52.2	ug/kg	20.7	6.2	1	10/13/17 08:32	10/13/17 15:48	206-44-0	
Fluorene	6.2J	ug/kg	16.4	4.9	1	10/13/17 08:32	10/13/17 15:48	86-73-7	
Indeno(1,2,3-cd)pyrene	9.2	ug/kg	8.7	2.6	1	10/13/17 08:32	10/13/17 15:48	193-39-5	
1-Methylnaphthalene	<4.8	ug/kg	15.9	4.8	1	10/13/17 08:32	10/13/17 15:48	90-12-0	
2-Methylnaphthalene	<5.9	ug/kg	19.8	5.9	1	10/13/17 08:32	10/13/17 15:48	91-57-6	
Naphthalene	<10.0	ug/kg	33.4	10.0	1	10/13/17 08:32	10/13/17 15:48	91-20-3	C4
Phenanthrene	53.0	ug/kg	46.1	13.8	1	10/13/17 08:32	10/13/17 15:48	85-01-8	
Pyrene	43.9	ug/kg	17.8	5.4	1	10/13/17 08:32	10/13/17 15:48	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	56	%	23-106		1	10/13/17 08:32	10/13/17 15:48	321-60-8	
Terphenyl-d14 (S)	51	%	29-106		1	10/13/17 08:32	10/13/17 15:48	1718-51-0	
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	10/12/17 07:15	10/12/17 21:13	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 07:15	10/12/17 21:13	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-1 (11.5-12.5') **Lab ID: 40158427004** Collected: 10/09/17 10:05 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 07:15	10/12/17 21:13	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 07:15	10/12/17 21:13	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 07:15	10/12/17 21:13	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 07:15	10/12/17 21:13	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 07:15	10/12/17 21:13	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 07:15	10/12/17 21:13	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 07:15	10/12/17 21:13	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	104-51-8	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-1 (11.5-12.5') **Lab ID: 40158427004** Collected: 10/09/17 10:05 Received: 10/11/17 09:25 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									
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	80	%	68-130		1	10/12/17 07:15	10/12/17 21:13	1868-53-7	
Toluene-d8 (S)	81	%	68-149		1	10/12/17 07:15	10/12/17 21:13	2037-26-5	
4-Bromofluorobenzene (S)	72	%	58-141		1	10/12/17 07:15	10/12/17 21:13	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	16.0	%	0.10	0.10	1		10/16/17 11:11		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-4 (2-3) **Lab ID: 40158427005** Collected: 10/09/17 10:50 Received: 10/11/17 09:25 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									
Arsenic	6.1	mg/kg	5.9	1.2	1	10/12/17 15:03	10/13/17 21:57	7440-38-2	
Barium	128	mg/kg	0.59	0.18	1	10/12/17 15:03	10/13/17 21:57	7440-39-3	
Cadmium	7.7	mg/kg	0.59	0.16	1	10/12/17 15:03	10/13/17 21:57	7440-43-9	
Chromium	14.0	mg/kg	1.2	0.33	1	10/12/17 15:03	10/13/17 21:57	7440-47-3	
Lead	135	mg/kg	1.5	0.51	1	10/12/17 15:03	10/13/17 21:57	7439-92-1	
Selenium	1.5J	mg/kg	5.9	1.3	1	10/12/17 15:03	10/13/17 21:57	7782-49-2	
Silver	<0.41	mg/kg	1.2	0.41	1	10/12/17 15:03	10/13/17 21:57	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.013J	mg/kg	0.041	0.012	1	10/17/17 06:54	10/17/17 11:54	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.6	ug/kg	15.2	4.6	1	10/13/17 08:32	10/13/17 16:05	83-32-9	
Acenaphthylene	<3.9	ug/kg	13.0	3.9	1	10/13/17 08:32	10/13/17 16:05	208-96-8	
Anthracene	10.6J	ug/kg	22.4	6.7	1	10/13/17 08:32	10/13/17 16:05	120-12-7	
Benzo(a)anthracene	27.6	ug/kg	12.5	3.7	1	10/13/17 08:32	10/13/17 16:05	56-55-3	
Benzo(a)pyrene	26.3	ug/kg	9.9	3.0	1	10/13/17 08:32	10/13/17 16:05	50-32-8	
Benzo(b)fluoranthene	39.9	ug/kg	11.1	3.3	1	10/13/17 08:32	10/13/17 16:05	205-99-2	
Benzo(g,h,i)perylene	20.9	ug/kg	8.0	2.4	1	10/13/17 08:32	10/13/17 16:05	191-24-2	
Benzo(k)fluoranthene	14.4	ug/kg	9.9	3.0	1	10/13/17 08:32	10/13/17 16:05	207-08-9	
Chrysene	33.7	ug/kg	13.2	4.0	1	10/13/17 08:32	10/13/17 16:05	218-01-9	
Dibenz(a,h)anthracene	4.4J	ug/kg	8.8	2.6	1	10/13/17 08:32	10/13/17 16:05	53-70-3	
Fluoranthene	77.5	ug/kg	20.5	6.1	1	10/13/17 08:32	10/13/17 16:05	206-44-0	
Fluorene	<4.9	ug/kg	16.3	4.9	1	10/13/17 08:32	10/13/17 16:05	86-73-7	
Indeno(1,2,3-cd)pyrene	17.4	ug/kg	8.7	2.6	1	10/13/17 08:32	10/13/17 16:05	193-39-5	
1-Methylnaphthalene	<4.8	ug/kg	15.8	4.8	1	10/13/17 08:32	10/13/17 16:05	90-12-0	
2-Methylnaphthalene	<5.9	ug/kg	19.7	5.9	1	10/13/17 08:32	10/13/17 16:05	91-57-6	
Naphthalene	<9.9	ug/kg	33.2	9.9	1	10/13/17 08:32	10/13/17 16:05	91-20-3	
Phenanthrene	57.0	ug/kg	45.8	13.8	1	10/13/17 08:32	10/13/17 16:05	85-01-8	
Pyrene	61.1	ug/kg	17.7	5.3	1	10/13/17 08:32	10/13/17 16:05	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	64	%	23-106		1	10/13/17 08:32	10/13/17 16:05	321-60-8	
Terphenyl-d14 (S)	62	%	29-106		1	10/13/17 08:32	10/13/17 16:05	1718-51-0	
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	10/12/17 07:15	10/12/17 21:36	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 07:15	10/12/17 21:36	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-4 (2-3') Lab ID: **40158427005** Collected: 10/09/17 10:50 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 07:15	10/12/17 21:36	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 07:15	10/12/17 21:36	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 07:15	10/12/17 21:36	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 07:15	10/12/17 21:36	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 07:15	10/12/17 21:36	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	100-42-5	W
Tetrachloroethene	371	ug/kg	70.9	29.5	1	10/12/17 07:15	10/12/17 21:36	127-18-4	
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 07:15	10/12/17 21:36	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 07:15	10/12/17 21:36	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	104-51-8	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-4 (2-3') **Lab ID: 40158427005** Collected: 10/09/17 10:50 Received: 10/11/17 09:25 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								
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	87	%	68-130		1	10/12/17 07:15	10/12/17 21:36	1868-53-7	
Toluene-d8 (S)	87	%	68-149		1	10/12/17 07:15	10/12/17 21:36	2037-26-5	
4-Bromofluorobenzene (S)	75	%	58-141		1	10/12/17 07:15	10/12/17 21:36	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	15.3	%	0.10	0.10	1		10/16/17 12:45		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-4 (10-11') **Lab ID: 40158427006** Collected: 10/09/17 10:55 Received: 10/11/17 09:25 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									
Arsenic	4.1J	mg/kg	5.7	1.2	1	10/12/17 15:03	10/13/17 22:00	7440-38-2	
Barium	47.8	mg/kg	0.57	0.17	1	10/12/17 15:03	10/13/17 22:00	7440-39-3	
Cadmium	0.15J	mg/kg	0.57	0.15	1	10/12/17 15:03	10/13/17 22:00	7440-43-9	
Chromium	17.7	mg/kg	1.1	0.32	1	10/12/17 15:03	10/13/17 22:00	7440-47-3	
Lead	7.8	mg/kg	1.5	0.49	1	10/12/17 15:03	10/13/17 22:00	7439-92-1	
Selenium	<1.3	mg/kg	5.7	1.3	1	10/12/17 15:03	10/13/17 22:00	7782-49-2	
Silver	<0.39	mg/kg	1.1	0.39	1	10/12/17 15:03	10/13/17 22:00	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.038	0.012	1	10/17/17 06:54	10/17/17 12:01	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.4	ug/kg	14.7	4.4	1	10/13/17 08:32	10/13/17 16:22	83-32-9	
Acenaphthylene	<3.8	ug/kg	12.5	3.8	1	10/13/17 08:32	10/13/17 16:22	208-96-8	
Anthracene	<6.5	ug/kg	21.7	6.5	1	10/13/17 08:32	10/13/17 16:22	120-12-7	
Benzo(a)anthracene	<3.6	ug/kg	12.1	3.6	1	10/13/17 08:32	10/13/17 16:22	56-55-3	
Benzo(a)pyrene	3.7J	ug/kg	9.5	2.9	1	10/13/17 08:32	10/13/17 16:22	50-32-8	
Benzo(b)fluoranthene	4.7J	ug/kg	10.7	3.2	1	10/13/17 08:32	10/13/17 16:22	205-99-2	
Benzo(g,h,i)perylene	5.1J	ug/kg	7.7	2.3	1	10/13/17 08:32	10/13/17 16:22	191-24-2	
Benzo(k)fluoranthene	<2.9	ug/kg	9.5	2.9	1	10/13/17 08:32	10/13/17 16:22	207-08-9	
Chrysene	<3.8	ug/kg	12.8	3.8	1	10/13/17 08:32	10/13/17 16:22	218-01-9	
Dibenz(a,h)anthracene	<2.6	ug/kg	8.5	2.6	1	10/13/17 08:32	10/13/17 16:22	53-70-3	
Fluoranthene	6.5J	ug/kg	19.8	5.9	1	10/13/17 08:32	10/13/17 16:22	206-44-0	
Fluorene	<4.7	ug/kg	15.7	4.7	1	10/13/17 08:32	10/13/17 16:22	86-73-7	
Indeno(1,2,3-cd)pyrene	2.6J	ug/kg	8.4	2.5	1	10/13/17 08:32	10/13/17 16:22	193-39-5	
1-Methylnaphthalene	<4.6	ug/kg	15.3	4.6	1	10/13/17 08:32	10/13/17 16:22	90-12-0	
2-Methylnaphthalene	<5.7	ug/kg	19.0	5.7	1	10/13/17 08:32	10/13/17 16:22	91-57-6	
Naphthalene	<9.6	ug/kg	32.1	9.6	1	10/13/17 08:32	10/13/17 16:22	91-20-3	C4
Phenanthrene	<13.3	ug/kg	44.3	13.3	1	10/13/17 08:32	10/13/17 16:22	85-01-8	
Pyrene	5.4J	ug/kg	17.1	5.1	1	10/13/17 08:32	10/13/17 16:22	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	58	%	23-106		1	10/13/17 08:32	10/13/17 16:22	321-60-8	
Terphenyl-d14 (S)	59	%	29-106		1	10/13/17 08:32	10/13/17 16:22	1718-51-0	
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	10/12/17 07:15	10/12/17 21:59	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 07:15	10/12/17 21:59	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-4 (10-11') Lab ID: 40158427006 Collected: 10/09/17 10:55 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 07:15	10/12/17 21:59	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 07:15	10/12/17 21:59	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 07:15	10/12/17 21:59	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 07:15	10/12/17 21:59	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 07:15	10/12/17 21:59	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 07:15	10/12/17 21:59	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 07:15	10/12/17 21:59	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	104-51-8	W

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-4 (10-11') **Lab ID: 40158427006** Collected: 10/09/17 10:55 Received: 10/11/17 09:25 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							
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	86	%	68-130		1	10/12/17 07:15	10/12/17 21:59	1868-53-7	
Toluene-d8 (S)	83	%	68-149		1	10/12/17 07:15	10/12/17 21:59	2037-26-5	
4-Bromofluorobenzene (S)	69	%	58-141		1	10/12/17 07:15	10/12/17 21:59	460-00-4	
Percent Moisture		Analytical Method: ASTM D2974-87							
Percent Moisture	12.4	%	0.10	0.10	1		10/16/17 13:20		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: **TRIP BLANK** Lab ID: **40158427007** Collected: 10/09/17 00:00 Received: 10/11/17 09:25 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	10/12/17 07:15	10/12/17 17:21	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 07:15	10/12/17 17:21	120-82-1	W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 07:15	10/12/17 17:21	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 07:15	10/12/17 17:21	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 07:15	10/12/17 17:21	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 07:15	10/12/17 17:21	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 07:15	10/12/17 17:21	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TRIP BLANK **Lab ID: 40158427007** Collected: 10/09/17 00:00 Received: 10/11/17 09:25 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 07:15	10/12/17 17:21	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 07:15	10/12/17 17:21	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	84	%	68-130		1	10/12/17 07:15	10/12/17 17:21	1868-53-7	
Toluene-d8 (S)	77	%	68-149		1	10/12/17 07:15	10/12/17 17:21	2037-26-5	
4-Bromofluorobenzene (S)	79	%	58-141		1	10/12/17 07:15	10/12/17 17:21	460-00-4	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-3 (3-4) **Lab ID: 40158427008** Collected: 10/09/17 11:35 Received: 10/11/17 09:25 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									
Arsenic	6.9	mg/kg	5.4	1.1	1	10/12/17 15:03	10/13/17 22:07	7440-38-2	
Barium	86.2	mg/kg	0.54	0.16	1	10/12/17 15:03	10/13/17 22:07	7440-39-3	
Cadmium	0.19J	mg/kg	0.54	0.14	1	10/12/17 15:03	10/13/17 22:07	7440-43-9	
Chromium	20.4	mg/kg	1.1	0.30	1	10/12/17 15:03	10/13/17 22:07	7440-47-3	
Lead	13.8	mg/kg	1.4	0.47	1	10/12/17 15:03	10/13/17 22:07	7439-92-1	
Selenium	<1.2	mg/kg	5.4	1.2	1	10/12/17 15:03	10/13/17 22:07	7782-49-2	
Silver	<0.37	mg/kg	1.1	0.37	1	10/12/17 15:03	10/13/17 22:07	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.040	0.012	1	10/17/17 06:54	10/17/17 12:03	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	9.3J	ug/kg	15.0	4.5	1	10/13/17 08:32	10/13/17 16:39	83-32-9	
Acenaphthylene	<3.8	ug/kg	12.8	3.8	1	10/13/17 08:32	10/13/17 16:39	208-96-8	
Anthracene	16.7J	ug/kg	22.1	6.7	1	10/13/17 08:32	10/13/17 16:39	120-12-7	
Benzo(a)anthracene	26.0	ug/kg	12.4	3.7	1	10/13/17 08:32	10/13/17 16:39	56-55-3	
Benzo(a)pyrene	20.2	ug/kg	9.8	2.9	1	10/13/17 08:32	10/13/17 16:39	50-32-8	
Benzo(b)fluoranthene	25.7	ug/kg	11.0	3.3	1	10/13/17 08:32	10/13/17 16:39	205-99-2	
Benzo(g,h,i)perylene	11.6	ug/kg	7.9	2.4	1	10/13/17 08:32	10/13/17 16:39	191-24-2	
Benzo(k)fluoranthene	10.9	ug/kg	9.7	2.9	1	10/13/17 08:32	10/13/17 16:39	207-08-9	
Chrysene	24.4	ug/kg	13.1	3.9	1	10/13/17 08:32	10/13/17 16:39	218-01-9	
Dibenz(a,h)anthracene	3.2J	ug/kg	8.7	2.6	1	10/13/17 08:32	10/13/17 16:39	53-70-3	
Fluoranthene	66.1	ug/kg	20.3	6.1	1	10/13/17 08:32	10/13/17 16:39	206-44-0	
Fluorene	9.7J	ug/kg	16.1	4.8	1	10/13/17 08:32	10/13/17 16:39	86-73-7	
Indeno(1,2,3-cd)pyrene	9.9	ug/kg	8.5	2.6	1	10/13/17 08:32	10/13/17 16:39	193-39-5	
1-Methylnaphthalene	<4.7	ug/kg	15.6	4.7	1	10/13/17 08:32	10/13/17 16:39	90-12-0	
2-Methylnaphthalene	<5.8	ug/kg	19.5	5.8	1	10/13/17 08:32	10/13/17 16:39	91-57-6	
Naphthalene	<9.8	ug/kg	32.8	9.8	1	10/13/17 08:32	10/13/17 16:39	91-20-3	
Phenanthrene	79.8	ug/kg	45.2	13.6	1	10/13/17 08:32	10/13/17 16:39	85-01-8	
Pyrene	56.2	ug/kg	17.5	5.3	1	10/13/17 08:32	10/13/17 16:39	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	61	%	23-106		1	10/13/17 08:32	10/13/17 16:39	321-60-8	
Terphenyl-d14 (S)	60	%	29-106		1	10/13/17 08:32	10/13/17 16:39	1718-51-0	
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	10/12/17 07:15	10/12/17 22:22	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 07:15	10/12/17 22:22	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-3 (3-4) **Lab ID: 40158427008** Collected: 10/09/17 11:35 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 07:15	10/12/17 22:22	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 07:15	10/12/17 22:22	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 07:15	10/12/17 22:22	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 07:15	10/12/17 22:22	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 07:15	10/12/17 22:22	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	100-42-5	W
Tetrachloroethene	44.6J	ug/kg	69.8	29.1	1	10/12/17 07:15	10/12/17 22:22	127-18-4	
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 07:15	10/12/17 22:22	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 07:15	10/12/17 22:22	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	104-51-8	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-3 (3-4) **Lab ID: 40158427008** Collected: 10/09/17 11:35 Received: 10/11/17 09:25 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								
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	93	%	68-130		1	10/12/17 07:15	10/12/17 22:22	1868-53-7	
Toluene-d8 (S)	96	%	68-149		1	10/12/17 07:15	10/12/17 22:22	2037-26-5	
4-Bromofluorobenzene (S)	83	%	58-141		1	10/12/17 07:15	10/12/17 22:22	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	14.1	%	0.10	0.10	1		10/16/17 13:20		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-3 (11-12') **Lab ID: 40158427009** Collected: 10/09/17 11:40 Received: 10/11/17 09:25 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									
Arsenic	3.3J	mg/kg	5.6	1.2	1	10/12/17 15:03	10/13/17 22:10	7440-38-2	
Barium	65.6	mg/kg	0.56	0.17	1	10/12/17 15:03	10/13/17 22:10	7440-39-3	
Cadmium	0.28J	mg/kg	0.56	0.15	1	10/12/17 15:03	10/13/17 22:10	7440-43-9	
Chromium	27.1	mg/kg	1.1	0.31	1	10/12/17 15:03	10/13/17 22:10	7440-47-3	
Lead	9.0	mg/kg	1.5	0.48	1	10/12/17 15:03	10/13/17 22:10	7439-92-1	
Selenium	<1.2	mg/kg	5.6	1.2	1	10/12/17 15:03	10/13/17 22:10	7782-49-2	
Silver	<0.38	mg/kg	1.1	0.38	1	10/12/17 15:03	10/13/17 22:10	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.016J	mg/kg	0.043	0.013	1	10/17/17 06:54	10/17/17 12:06	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.6	ug/kg	15.3	4.6	1	10/13/17 08:32	10/13/17 16:56	83-32-9	
Acenaphthylene	<3.9	ug/kg	13.0	3.9	1	10/13/17 08:32	10/13/17 16:56	208-96-8	
Anthracene	<6.8	ug/kg	22.5	6.8	1	10/13/17 08:32	10/13/17 16:56	120-12-7	
Benzo(a)anthracene	5.5J	ug/kg	12.6	3.8	1	10/13/17 08:32	10/13/17 16:56	56-55-3	
Benzo(a)pyrene	4.9J	ug/kg	9.9	3.0	1	10/13/17 08:32	10/13/17 16:56	50-32-8	
Benzo(b)fluoranthene	7.1J	ug/kg	11.1	3.3	1	10/13/17 08:32	10/13/17 16:56	205-99-2	
Benzo(g,h,i)perylene	4.3J	ug/kg	8.0	2.4	1	10/13/17 08:32	10/13/17 16:56	191-24-2	
Benzo(k)fluoranthene	<3.0	ug/kg	9.9	3.0	1	10/13/17 08:32	10/13/17 16:56	207-08-9	
Chrysene	6.6J	ug/kg	13.3	4.0	1	10/13/17 08:32	10/13/17 16:56	218-01-9	
Dibenz(a,h)anthracene	<2.6	ug/kg	8.8	2.6	1	10/13/17 08:32	10/13/17 16:56	53-70-3	
Fluoranthene	15.2J	ug/kg	20.6	6.2	1	10/13/17 08:32	10/13/17 16:56	206-44-0	
Fluorene	<4.9	ug/kg	16.3	4.9	1	10/13/17 08:32	10/13/17 16:56	86-73-7	
Indeno(1,2,3-cd)pyrene	3.0J	ug/kg	8.7	2.6	1	10/13/17 08:32	10/13/17 16:56	193-39-5	
1-Methylnaphthalene	<4.8	ug/kg	15.9	4.8	1	10/13/17 08:32	10/13/17 16:56	90-12-0	
2-Methylnaphthalene	<5.9	ug/kg	19.8	5.9	1	10/13/17 08:32	10/13/17 16:56	91-57-6	
Naphthalene	<10	ug/kg	33.3	10	1	10/13/17 08:32	10/13/17 16:56	91-20-3	
Phenanthrene	<13.8	ug/kg	46.0	13.8	1	10/13/17 08:32	10/13/17 16:56	85-01-8	
Pyrene	12.5J	ug/kg	17.8	5.3	1	10/13/17 08:32	10/13/17 16:56	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	63	%	23-106		1	10/13/17 08:32	10/13/17 16:56	321-60-8	
Terphenyl-d14 (S)	63	%	29-106		1	10/13/17 08:32	10/13/17 16:56	1718-51-0	
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	10/12/17 07:15	10/12/17 22:45	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 07:15	10/12/17 22:45	120-82-1	W

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-3 (11-12') Lab ID: 40158427009 Collected: 10/09/17 11:40 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 07:15	10/12/17 22:45	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 07:15	10/12/17 22:45	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 07:15	10/12/17 22:45	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 07:15	10/12/17 22:45	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 07:15	10/12/17 22:45	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 07:15	10/12/17 22:45	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 07:15	10/12/17 22:45	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	104-51-8	W

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-3 (11-12') **Lab ID: 40158427009** Collected: 10/09/17 11:40 Received: 10/11/17 09:25 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							
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	88	%	68-130		1	10/12/17 07:15	10/12/17 22:45	1868-53-7	
Toluene-d8 (S)	90	%	68-149		1	10/12/17 07:15	10/12/17 22:45	2037-26-5	
4-Bromofluorobenzene (S)	76	%	58-141		1	10/12/17 07:15	10/12/17 22:45	460-00-4	
Percent Moisture		Analytical Method: ASTM D2974-87							
Percent Moisture	15.4	%	0.10	0.10	1		10/16/17 12:45		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-5 (12.5-13.5') **Lab ID: 40158427010** Collected: 10/09/17 12:15 Received: 10/11/17 09:25 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									
Arsenic	3.3J	mg/kg	5.4	1.1	1	10/12/17 15:03	10/13/17 22:12	7440-38-2	
Barium	20.0	mg/kg	0.54	0.16	1	10/12/17 15:03	10/13/17 22:12	7440-39-3	
Cadmium	0.16J	mg/kg	0.54	0.14	1	10/12/17 15:03	10/13/17 22:12	7440-43-9	
Chromium	9.3	mg/kg	1.1	0.30	1	10/12/17 15:03	10/13/17 22:12	7440-47-3	
Lead	7.1	mg/kg	1.4	0.47	1	10/12/17 15:03	10/13/17 22:12	7439-92-1	
Selenium	<1.2	mg/kg	5.4	1.2	1	10/12/17 15:03	10/13/17 22:12	7782-49-2	
Silver	<0.37	mg/kg	1.1	0.37	1	10/12/17 15:03	10/13/17 22:12	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.041	0.012	1	10/17/17 06:54	10/17/17 12:08	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.4	ug/kg	14.6	4.4	1	10/13/17 08:32	10/13/17 17:13	83-32-9	
Acenaphthylene	<3.7	ug/kg	12.4	3.7	1	10/13/17 08:32	10/13/17 17:13	208-96-8	
Anthracene	<6.4	ug/kg	21.4	6.4	1	10/13/17 08:32	10/13/17 17:13	120-12-7	
Benzo(a)anthracene	<3.6	ug/kg	12.0	3.6	1	10/13/17 08:32	10/13/17 17:13	56-55-3	
Benzo(a)pyrene	<2.8	ug/kg	9.4	2.8	1	10/13/17 08:32	10/13/17 17:13	50-32-8	
Benzo(b)fluoranthene	3.5J	ug/kg	10.6	3.2	1	10/13/17 08:32	10/13/17 17:13	205-99-2	
Benzo(g,h,i)perylene	<2.3	ug/kg	7.6	2.3	1	10/13/17 08:32	10/13/17 17:13	191-24-2	
Benzo(k)fluoranthene	<2.8	ug/kg	9.4	2.8	1	10/13/17 08:32	10/13/17 17:13	207-08-9	
Chrysene	<3.8	ug/kg	12.6	3.8	1	10/13/17 08:32	10/13/17 17:13	218-01-9	
Dibenz(a,h)anthracene	<2.5	ug/kg	8.4	2.5	1	10/13/17 08:32	10/13/17 17:13	53-70-3	
Fluoranthene	<5.9	ug/kg	19.6	5.9	1	10/13/17 08:32	10/13/17 17:13	206-44-0	
Fluorene	<4.7	ug/kg	15.6	4.7	1	10/13/17 08:32	10/13/17 17:13	86-73-7	
Indeno(1,2,3-cd)pyrene	<2.5	ug/kg	8.3	2.5	1	10/13/17 08:32	10/13/17 17:13	193-39-5	
1-Methylnaphthalene	12.1J	ug/kg	15.1	4.5	1	10/13/17 08:32	10/13/17 17:13	90-12-0	
2-Methylnaphthalene	<5.6	ug/kg	18.8	5.6	1	10/13/17 08:32	10/13/17 17:13	91-57-6	
Naphthalene	52.5	ug/kg	31.7	9.5	1	10/13/17 08:32	10/13/17 17:13	91-20-3	
Phenanthrene	<13.1	ug/kg	43.8	13.1	1	10/13/17 08:32	10/13/17 17:13	85-01-8	
Pyrene	<5.1	ug/kg	16.9	5.1	1	10/13/17 08:32	10/13/17 17:13	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	64	%	23-106		1	10/13/17 08:32	10/13/17 17:13	321-60-8	
Terphenyl-d14 (S)	68	%	29-106		1	10/13/17 08:32	10/13/17 17:13	1718-51-0	
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	10/12/17 07:15	10/12/17 23:09	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 07:15	10/12/17 23:09	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-5 (12.5-13.5') Lab ID: 40158427010 Collected: 10/09/17 12:15 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 07:15	10/12/17 23:09	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 07:15	10/12/17 23:09	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 07:15	10/12/17 23:09	75-00-3	W
Chloroform	151J	ug/kg	282	52.4	1	10/12/17 07:15	10/12/17 23:09	67-66-3	
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	108-20-3	W
Ethylbenzene	74.1	ug/kg	67.7	28.2	1	10/12/17 07:15	10/12/17 23:09	100-41-4	
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	87-68-3	W
Isopropylbenzene (Cumene)	112	ug/kg	67.7	28.2	1	10/12/17 07:15	10/12/17 23:09	98-82-8	
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 07:15	10/12/17 23:09	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 07:15	10/12/17 23:09	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 07:15	10/12/17 23:09	179601-23-1	W
n-Butylbenzene	324	ug/kg	67.7	28.2	1	10/12/17 07:15	10/12/17 23:09	104-51-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-5 (12.5-13.5') **Lab ID: 40158427010** Collected: 10/09/17 12:15 Received: 10/11/17 09:25 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							
n-Propylbenzene	545	ug/kg	67.7	28.2	1	10/12/17 07:15	10/12/17 23:09	103-65-1	
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	99-87-6	W
sec-Butylbenzene	159	ug/kg	67.7	28.2	1	10/12/17 07:15	10/12/17 23:09	135-98-8	
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	86	%	68-130		1	10/12/17 07:15	10/12/17 23:09	1868-53-7	
Toluene-d8 (S)	84	%	68-149		1	10/12/17 07:15	10/12/17 23:09	2037-26-5	
4-Bromofluorobenzene (S)	84	%	58-141		1	10/12/17 07:15	10/12/17 23:09	460-00-4	
Percent Moisture		Analytical Method: ASTM D2974-87							
Percent Moisture	11.4	%	0.10	0.10	1		10/16/17 12:45		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

Sample: B-5 (14-15') **Lab ID: 40158427011** Collected: 10/09/17 12:20 Received: 10/11/17 09:25 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									
Arsenic	3.5J	mg/kg	5.4	1.1	1	10/12/17 15:03	10/13/17 22:15	7440-38-2	
Barium	94.4	mg/kg	0.54	0.16	1	10/12/17 15:03	10/13/17 22:15	7440-39-3	
Cadmium	0.18J	mg/kg	0.54	0.14	1	10/12/17 15:03	10/13/17 22:15	7440-43-9	
Chromium	27.9	mg/kg	1.1	0.30	1	10/12/17 15:03	10/13/17 22:15	7440-47-3	
Lead	8.7	mg/kg	1.4	0.46	1	10/12/17 15:03	10/13/17 22:15	7439-92-1	
Selenium	<1.2	mg/kg	5.4	1.2	1	10/12/17 15:03	10/13/17 22:15	7782-49-2	
Silver	<0.37	mg/kg	1.1	0.37	1	10/12/17 15:03	10/13/17 22:15	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.020J	mg/kg	0.045	0.014	1	10/17/17 06:56	10/17/17 12:15	7439-97-6	M0
8270 MSSV PAH by SIM Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.8	ug/kg	15.9	4.8	1	10/13/17 08:32	10/13/17 17:31	83-32-9	
Acenaphthylene	<4.1	ug/kg	13.5	4.1	1	10/13/17 08:32	10/13/17 17:31	208-96-8	
Anthracene	<7.0	ug/kg	23.4	7.0	1	10/13/17 08:32	10/13/17 17:31	120-12-7	
Benzo(a)anthracene	<3.9	ug/kg	13.0	3.9	1	10/13/17 08:32	10/13/17 17:31	56-55-3	
Benzo(a)pyrene	<3.1	ug/kg	10.3	3.1	1	10/13/17 08:32	10/13/17 17:31	50-32-8	
Benzo(b)fluoranthene	<3.5	ug/kg	11.6	3.5	1	10/13/17 08:32	10/13/17 17:31	205-99-2	
Benzo(g,h,i)perylene	<2.5	ug/kg	8.3	2.5	1	10/13/17 08:32	10/13/17 17:31	191-24-2	
Benzo(k)fluoranthene	<3.1	ug/kg	10.3	3.1	1	10/13/17 08:32	10/13/17 17:31	207-08-9	
Chrysene	<4.1	ug/kg	13.8	4.1	1	10/13/17 08:32	10/13/17 17:31	218-01-9	
Dibenz(a,h)anthracene	<2.8	ug/kg	9.2	2.8	1	10/13/17 08:32	10/13/17 17:31	53-70-3	
Fluoranthene	<6.4	ug/kg	21.4	6.4	1	10/13/17 08:32	10/13/17 17:31	206-44-0	
Fluorene	<5.1	ug/kg	17.0	5.1	1	10/13/17 08:32	10/13/17 17:31	86-73-7	
Indeno(1,2,3-cd)pyrene	<2.7	ug/kg	9.0	2.7	1	10/13/17 08:32	10/13/17 17:31	193-39-5	
1-Methylnaphthalene	47.0	ug/kg	16.5	4.9	1	10/13/17 08:32	10/13/17 17:31	90-12-0	
2-Methylnaphthalene	8.4J	ug/kg	20.5	6.2	1	10/13/17 08:32	10/13/17 17:31	91-57-6	
Naphthalene	35.3	ug/kg	34.6	10.4	1	10/13/17 08:32	10/13/17 17:31	91-20-3	
Phenanthrene	<14.3	ug/kg	47.7	14.3	1	10/13/17 08:32	10/13/17 17:31	85-01-8	
Pyrene	<5.5	ug/kg	18.5	5.5	1	10/13/17 08:32	10/13/17 17:31	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	61	%	23-106		1	10/13/17 08:32	10/13/17 17:31	321-60-8	
Terphenyl-d14 (S)	60	%	29-106		1	10/13/17 08:32	10/13/17 17:31	1718-51-0	
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	10/12/17 11:00	10/13/17 01:28	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 11:00	10/13/17 01:28	120-82-1	W

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-5 (14-15') **Lab ID: 40158427011** Collected: 10/09/17 12:20 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	36.6J	ug/kg	73.8	30.7	1	10/12/17 11:00	10/13/17 01:28	95-63-6	
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 11:00	10/13/17 01:28	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 11:00	10/13/17 01:28	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 11:00	10/13/17 01:28	75-00-3	W
Chloroform	133J	ug/kg	307	57.1	1	10/12/17 11:00	10/13/17 01:28	67-66-3	
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	108-20-3	W
Ethylbenzene	1060	ug/kg	73.8	30.7	1	10/12/17 11:00	10/13/17 01:28	100-41-4	
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	87-68-3	W
Isopropylbenzene (Cumene)	211	ug/kg	73.8	30.7	1	10/12/17 11:00	10/13/17 01:28	98-82-8	
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 11:00	10/13/17 01:28	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 11:00	10/13/17 01:28	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 11:00	10/13/17 01:28	179601-23-1	W
n-Butylbenzene	152	ug/kg	73.8	30.7	1	10/12/17 11:00	10/13/17 01:28	104-51-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-5 (14-15') **Lab ID: 40158427011** Collected: 10/09/17 12:20 Received: 10/11/17 09:25 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							
n-Propylbenzene	778	ug/kg	73.8	30.7	1	10/12/17 11:00	10/13/17 01:28	103-65-1	
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	99-87-6	W
sec-Butylbenzene	46.5J	ug/kg	73.8	30.7	1	10/12/17 11:00	10/13/17 01:28	135-98-8	
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	81	%	68-130		1	10/12/17 11:00	10/13/17 01:28	1868-53-7	
Toluene-d8 (S)	83	%	68-149		1	10/12/17 11:00	10/13/17 01:28	2037-26-5	
4-Bromofluorobenzene (S)	76	%	58-141		1	10/12/17 11:00	10/13/17 01:28	460-00-4	
Percent Moisture		Analytical Method: ASTM D2974-87							
Percent Moisture	18.6	%	0.10	0.10	1		10/16/17 12:45		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-6 (3-4) **Lab ID: 40158427012** Collected: 10/09/17 12:55 Received: 10/11/17 09:25 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									
Arsenic	3.9J	mg/kg	5.3	1.1	1	10/12/17 15:03	10/13/17 22:17	7440-38-2	
Barium	43.7	mg/kg	0.53	0.16	1	10/12/17 15:03	10/13/17 22:17	7440-39-3	
Cadmium	0.21J	mg/kg	0.53	0.14	1	10/12/17 15:03	10/13/17 22:17	7440-43-9	
Chromium	16.1	mg/kg	1.1	0.30	1	10/12/17 15:03	10/13/17 22:17	7440-47-3	
Lead	6.9	mg/kg	1.4	0.46	1	10/12/17 15:03	10/13/17 22:17	7439-92-1	
Selenium	<1.2	mg/kg	5.3	1.2	1	10/12/17 15:03	10/13/17 22:17	7782-49-2	
Silver	<0.37	mg/kg	1.1	0.37	1	10/12/17 15:03	10/13/17 22:17	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.039	0.012	1	10/17/17 06:56	10/17/17 12:22	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.5	ug/kg	14.9	4.5	1	10/13/17 08:32	10/13/17 17:48	83-32-9	
Acenaphthylene	<3.8	ug/kg	12.7	3.8	1	10/13/17 08:32	10/13/17 17:48	208-96-8	
Anthracene	<6.6	ug/kg	21.9	6.6	1	10/13/17 08:32	10/13/17 17:48	120-12-7	
Benzo(a)anthracene	5.9J	ug/kg	12.2	3.7	1	10/13/17 08:32	10/13/17 17:48	56-55-3	
Benzo(a)pyrene	4.2J	ug/kg	9.7	2.9	1	10/13/17 08:32	10/13/17 17:48	50-32-8	
Benzo(b)fluoranthene	6.5J	ug/kg	10.9	3.3	1	10/13/17 08:32	10/13/17 17:48	205-99-2	
Benzo(g,h,i)perylene	3.2J	ug/kg	7.8	2.3	1	10/13/17 08:32	10/13/17 17:48	191-24-2	
Benzo(k)fluoranthene	<2.9	ug/kg	9.7	2.9	1	10/13/17 08:32	10/13/17 17:48	207-08-9	
Chrysene	6.5J	ug/kg	12.9	3.9	1	10/13/17 08:32	10/13/17 17:48	218-01-9	
Dibenz(a,h)anthracene	<2.6	ug/kg	8.6	2.6	1	10/13/17 08:32	10/13/17 17:48	53-70-3	
Fluoranthene	10.7J	ug/kg	20.1	6.0	1	10/13/17 08:32	10/13/17 17:48	206-44-0	
Fluorene	<4.8	ug/kg	15.9	4.8	1	10/13/17 08:32	10/13/17 17:48	86-73-7	
Indeno(1,2,3-cd)pyrene	<2.5	ug/kg	8.5	2.5	1	10/13/17 08:32	10/13/17 17:48	193-39-5	
1-Methylnaphthalene	<4.6	ug/kg	15.5	4.6	1	10/13/17 08:32	10/13/17 17:48	90-12-0	
2-Methylnaphthalene	<5.8	ug/kg	19.3	5.8	1	10/13/17 08:32	10/13/17 17:48	91-57-6	
Naphthalene	<9.7	ug/kg	32.5	9.7	1	10/13/17 08:32	10/13/17 17:48	91-20-3	
Phenanthrene	<13.5	ug/kg	44.8	13.5	1	10/13/17 08:32	10/13/17 17:48	85-01-8	
Pyrene	12.1J	ug/kg	17.3	5.2	1	10/13/17 08:32	10/13/17 17:48	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	68	%	23-106		1	10/13/17 08:32	10/13/17 17:48	321-60-8	
Terphenyl-d14 (S)	61	%	29-106		1	10/13/17 08:32	10/13/17 17:48	1718-51-0	
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	10/12/17 11:00	10/13/17 01:51	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 11:00	10/13/17 01:51	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-6 (3-4) **Lab ID: 40158427012** Collected: 10/09/17 12:55 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 11:00	10/13/17 01:51	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 11:00	10/13/17 01:51	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 11:00	10/13/17 01:51	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 11:00	10/13/17 01:51	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 11:00	10/13/17 01:51	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	100-42-5	W
Tetrachloroethene	109	ug/kg	69.3	28.9	1	10/12/17 11:00	10/13/17 01:51	127-18-4	
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 11:00	10/13/17 01:51	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 11:00	10/13/17 01:51	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	104-51-8	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-6 (3-4) **Lab ID: 40158427012** Collected: 10/09/17 12:55 Received: 10/11/17 09:25 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								
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	86	%	68-130		1	10/12/17 11:00	10/13/17 01:51	1868-53-7	
Toluene-d8 (S)	85	%	68-149		1	10/12/17 11:00	10/13/17 01:51	2037-26-5	
4-Bromofluorobenzene (S)	73	%	58-141		1	10/12/17 11:00	10/13/17 01:51	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	13.4	%	0.10	0.10	1		10/16/17 12:45		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-6 (11-12') **Lab ID: 40158427013** Collected: 10/09/17 13:00 Received: 10/11/17 09:25 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									
Arsenic	3.7J	mg/kg	5.4	1.1	1	10/12/17 15:03	10/13/17 22:19	7440-38-2	
Barium	43.1	mg/kg	0.54	0.16	1	10/12/17 15:03	10/13/17 22:19	7440-39-3	
Cadmium	0.14J	mg/kg	0.54	0.14	1	10/12/17 15:03	10/13/17 22:19	7440-43-9	
Chromium	14.2	mg/kg	1.1	0.30	1	10/12/17 15:03	10/13/17 22:19	7440-47-3	
Lead	6.6	mg/kg	1.4	0.46	1	10/12/17 15:03	10/13/17 22:19	7439-92-1	
Selenium	<1.2	mg/kg	5.4	1.2	1	10/12/17 15:03	10/13/17 22:19	7782-49-2	
Silver	<0.37	mg/kg	1.1	0.37	1	10/12/17 15:03	10/13/17 22:19	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.012J	mg/kg	0.040	0.012	1	10/17/17 06:56	10/17/17 12:29	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.3	ug/kg	14.5	4.3	1	10/13/17 08:32	10/13/17 18:05	83-32-9	
Acenaphthylene	<3.7	ug/kg	12.3	3.7	1	10/13/17 08:32	10/13/17 18:05	208-96-8	
Anthracene	<6.4	ug/kg	21.3	6.4	1	10/13/17 08:32	10/13/17 18:05	120-12-7	
Benzo(a)anthracene	<3.6	ug/kg	11.9	3.6	1	10/13/17 08:32	10/13/17 18:05	56-55-3	
Benzo(a)pyrene	<2.8	ug/kg	9.4	2.8	1	10/13/17 08:32	10/13/17 18:05	50-32-8	
Benzo(b)fluoranthene	<3.2	ug/kg	10.5	3.2	1	10/13/17 08:32	10/13/17 18:05	205-99-2	
Benzo(g,h,i)perylene	<2.3	ug/kg	7.6	2.3	1	10/13/17 08:32	10/13/17 18:05	191-24-2	
Benzo(k)fluoranthene	<2.8	ug/kg	9.4	2.8	1	10/13/17 08:32	10/13/17 18:05	207-08-9	
Chrysene	<3.8	ug/kg	12.5	3.8	1	10/13/17 08:32	10/13/17 18:05	218-01-9	
Dibenz(a,h)anthracene	<2.5	ug/kg	8.3	2.5	1	10/13/17 08:32	10/13/17 18:05	53-70-3	
Fluoranthene	<5.8	ug/kg	19.5	5.8	1	10/13/17 08:32	10/13/17 18:05	206-44-0	
Fluorene	<4.6	ug/kg	15.5	4.6	1	10/13/17 08:32	10/13/17 18:05	86-73-7	
Indeno(1,2,3-cd)pyrene	<2.5	ug/kg	8.2	2.5	1	10/13/17 08:32	10/13/17 18:05	193-39-5	
1-Methylnaphthalene	5.0J	ug/kg	15.0	4.5	1	10/13/17 08:32	10/13/17 18:05	90-12-0	
2-Methylnaphthalene	<5.6	ug/kg	18.7	5.6	1	10/13/17 08:32	10/13/17 18:05	91-57-6	
Naphthalene	10.0J	ug/kg	31.5	9.4	1	10/13/17 08:32	10/13/17 18:05	91-20-3	
Phenanthrene	<13.1	ug/kg	43.5	13.1	1	10/13/17 08:32	10/13/17 18:05	85-01-8	
Pyrene	<5.1	ug/kg	16.8	5.1	1	10/13/17 08:32	10/13/17 18:05	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	62	%	23-106		1	10/13/17 08:32	10/13/17 18:05	321-60-8	
Terphenyl-d14 (S)	62	%	29-106		1	10/13/17 08:32	10/13/17 18:05	1718-51-0	
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	10/12/17 11:00	10/13/17 02:14	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 11:00	10/13/17 02:14	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-6 (11-12') **Lab ID: 40158427013** Collected: 10/09/17 13:00 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 11:00	10/13/17 02:14	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 11:00	10/13/17 02:14	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 11:00	10/13/17 02:14	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 11:00	10/13/17 02:14	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	108-20-3	W
Ethylbenzene	61.8J	ug/kg	67.3	28.0	1	10/12/17 11:00	10/13/17 02:14	100-41-4	
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 11:00	10/13/17 02:14	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	100-42-5	W
Tetrachloroethene	39.1J	ug/kg	67.3	28.0	1	10/12/17 11:00	10/13/17 02:14	127-18-4	
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 11:00	10/13/17 02:14	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 11:00	10/13/17 02:14	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	104-51-8	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-6 (11-12') **Lab ID: 40158427013** Collected: 10/09/17 13:00 Received: 10/11/17 09:25 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							
n-Propylbenzene	32.5J	ug/kg	67.3	28.0	1	10/12/17 11:00	10/13/17 02:14	103-65-1	
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	92	%	68-130		1	10/12/17 11:00	10/13/17 02:14	1868-53-7	
Toluene-d8 (S)	93	%	68-149		1	10/12/17 11:00	10/13/17 02:14	2037-26-5	
4-Bromofluorobenzene (S)	82	%	58-141		1	10/12/17 11:00	10/13/17 02:14	460-00-4	
Percent Moisture		Analytical Method: ASTM D2974-87							
Percent Moisture	10.8	%	0.10	0.10	1		10/16/17 12:46		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-2 **Lab ID: 40158427014** Collected: 10/10/17 08:55 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Arsenic	<8.3	ug/L	25.0	8.3	1	10/12/17 09:27	10/12/17 17:29	7440-38-2	
Barium	170	ug/L	5.0	1.5	1	10/12/17 09:27	10/12/17 17:29	7440-39-3	
Cadmium	<1.3	ug/L	5.0	1.3	1	10/12/17 09:27	10/12/17 17:29	7440-43-9	
Chromium	<2.5	ug/L	10.0	2.5	1	10/12/17 09:27	10/12/17 17:29	7440-47-3	
Lead	<4.3	ug/L	13.0	4.3	1	10/12/17 09:27	10/12/17 17:29	7439-92-1	
Selenium	<16.6	ug/L	50.0	16.6	1	10/12/17 09:27	10/12/17 17:29	7782-49-2	
Silver	<3.3	ug/L	10.0	3.3	1	10/12/17 09:27	10/12/17 17:29	7440-22-4	
7470 Mercury Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	<0.13	ug/L	0.42	0.13	1	10/13/17 11:00	10/16/17 09:02	7439-97-6	
8270 MSSV PAH by HVI Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510									
Acenaphthene	0.022J	ug/L	0.062	0.012	1	10/12/17 12:41	10/13/17 16:26	83-32-9	
Acenaphthylene	<0.010	ug/L	0.051	0.010	1	10/12/17 12:41	10/13/17 16:26	208-96-8	
Anthracene	<0.021	ug/L	0.11	0.021	1	10/12/17 12:41	10/13/17 16:26	120-12-7	
Benzo(a)anthracene	<0.015	ug/L	0.077	0.015	1	10/12/17 12:41	10/13/17 16:26	56-55-3	
Benzo(a)pyrene	<0.021	ug/L	0.11	0.021	1	10/12/17 12:41	10/13/17 16:26	50-32-8	
Benzo(b)fluoranthene	0.024J	ug/L	0.059	0.012	1	10/12/17 12:41	10/13/17 16:26	205-99-2	
Benzo(g,h,i)perylene	0.019J	ug/L	0.069	0.014	1	10/12/17 12:41	10/13/17 16:26	191-24-2	
Benzo(k)fluoranthene	0.020J	ug/L	0.077	0.015	1	10/12/17 12:41	10/13/17 16:26	207-08-9	
Chrysene	0.040J	ug/L	0.13	0.027	1	10/12/17 12:41	10/13/17 16:26	218-01-9	
Dibenz(a,h)anthracene	<0.020	ug/L	0.10	0.020	1	10/12/17 12:41	10/13/17 16:26	53-70-3	
Fluoranthene	0.13	ug/L	0.11	0.022	1	10/12/17 12:41	10/13/17 16:26	206-44-0	
Fluorene	<0.016	ug/L	0.081	0.016	1	10/12/17 12:41	10/13/17 16:26	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.036	ug/L	0.18	0.036	1	10/12/17 12:41	10/13/17 16:26	193-39-5	
1-Methylnaphthalene	<0.012	ug/L	0.060	0.012	1	10/12/17 12:41	10/13/17 16:26	90-12-0	
2-Methylnaphthalene	<0.010	ug/L	0.050	0.010	1	10/12/17 12:41	10/13/17 16:26	91-57-6	
Naphthalene	<0.037	ug/L	0.19	0.037	1	10/12/17 12:41	10/13/17 16:26	91-20-3	
Phenanthrene	0.089J	ug/L	0.14	0.028	1	10/12/17 12:41	10/13/17 16:26	85-01-8	
Pyrene	0.11	ug/L	0.078	0.016	1	10/12/17 12:41	10/13/17 16:26	129-00-0	
Total PAHs	0.55	ug/L			1	10/12/17 12:41	10/13/17 16:26		
Surrogates									
2-Fluorobiphenyl (S)	50	%	35-84		1	10/12/17 12:41	10/13/17 16:26	321-60-8	
Terphenyl-d14 (S)	64	%	10-129		1	10/12/17 12:41	10/13/17 16:26	1718-51-0	
8260 MSV Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		10/12/17 15:48	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		10/12/17 15:48	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		10/12/17 15:48	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		10/12/17 15:48	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		10/12/17 15:48	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	56-23-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-2 **Lab ID: 40158427014** Collected: 10/10/17 08:55 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		10/12/17 15:48	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		10/12/17 15:48	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		10/12/17 15:48	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		10/12/17 15:48	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		10/12/17 15:48	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		10/12/17 15:48	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		10/12/17 15:48	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		10/12/17 15:48	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		10/12/17 15:48	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		10/12/17 15:48	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		10/12/17 15:48	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		10/12/17 15:48	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		10/12/17 15:48	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		10/12/17 15:48	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		10/12/17 15:48	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		10/12/17 15:48	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		10/12/17 15:48	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		10/12/17 15:48	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	99-87-6	
Methylene Chloride	0.46J	ug/L	1.0	0.23	1		10/12/17 15:48	75-09-2	B
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		10/12/17 15:48	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		10/12/17 15:48	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	100-42-5	L1
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		10/12/17 15:48	630-20-6	
1,1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		10/12/17 15:48	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		10/12/17 15:48	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		10/12/17 15:48	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		10/12/17 15:48	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		10/12/17 15:48	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		10/12/17 15:48	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	96-18-4	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-2 **Lab ID: 40158427014** Collected: 10/10/17 08:55 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		10/12/17 15:48	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/12/17 15:48	1330-20-7	LS
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		10/12/17 15:48	179601-23-1	L1
o-Xylene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	82	%	61-130		1		10/12/17 15:48	460-00-4	HS,pH
Dibromofluoromethane (S)	93	%	67-130		1		10/12/17 15:48	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		10/12/17 15:48	2037-26-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-1 **Lab ID:** 40158427015 Collected: 10/10/17 09:40 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Arsenic	10J	ug/L	25.0	8.3	1	10/12/17 09:27	10/12/17 17:31	7440-38-2	
Barium	239	ug/L	5.0	1.5	1	10/12/17 09:27	10/12/17 17:31	7440-39-3	
Cadmium	<1.3	ug/L	5.0	1.3	1	10/12/17 09:27	10/12/17 17:31	7440-43-9	
Chromium	<2.5	ug/L	10.0	2.5	1	10/12/17 09:27	10/12/17 17:31	7440-47-3	
Lead	<4.3	ug/L	13.0	4.3	1	10/12/17 09:27	10/12/17 17:31	7439-92-1	
Selenium	<16.6	ug/L	50.0	16.6	1	10/12/17 09:27	10/12/17 17:31	7782-49-2	
Silver	<3.3	ug/L	10.0	3.3	1	10/12/17 09:27	10/12/17 17:31	7440-22-4	
7470 Mercury Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	<0.25	ug/L	0.84	0.25	1	10/17/17 12:45	10/18/17 11:12	7439-97-6	D3
8270 MSSV PAH by HVI Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510									
Acenaphthene	0.051	ug/L	0.031	0.0063	1	10/12/17 12:41	10/13/17 16:44	83-32-9	
Acenaphthylene	0.0082J	ug/L	0.026	0.0051	1	10/12/17 12:41	10/13/17 16:44	208-96-8	
Anthracene	0.060	ug/L	0.054	0.011	1	10/12/17 12:41	10/13/17 16:44	120-12-7	
Benzo(a)anthracene	0.088	ug/L	0.039	0.0078	1	10/12/17 12:41	10/13/17 16:44	56-55-3	
Benzo(a)pyrene	0.075	ug/L	0.054	0.011	1	10/12/17 12:41	10/13/17 16:44	50-32-8	
Benzo(b)fluoranthene	0.12	ug/L	0.030	0.0059	1	10/12/17 12:41	10/13/17 16:44	205-99-2	
Benzo(g,h,i)perylene	0.077	ug/L	0.035	0.0070	1	10/12/17 12:41	10/13/17 16:44	191-24-2	
Benzo(k)fluoranthene	0.074	ug/L	0.039	0.0078	1	10/12/17 12:41	10/13/17 16:44	207-08-9	
Chrysene	0.17	ug/L	0.067	0.013	1	10/12/17 12:41	10/13/17 16:44	218-01-9	
Dibenz(a,h)anthracene	0.013J	ug/L	0.052	0.010	1	10/12/17 12:41	10/13/17 16:44	53-70-3	
Fluoranthene	0.35	ug/L	0.055	0.011	1	10/12/17 12:41	10/13/17 16:44	206-44-0	
Fluorene	0.040J	ug/L	0.041	0.0082	1	10/12/17 12:41	10/13/17 16:44	86-73-7	
Indeno(1,2,3-cd)pyrene	0.059J	ug/L	0.091	0.018	1	10/12/17 12:41	10/13/17 16:44	193-39-5	
1-Methylnaphthalene	0.033	ug/L	0.030	0.0061	1	10/12/17 12:41	10/13/17 16:44	90-12-0	
2-Methylnaphthalene	0.036	ug/L	0.025	0.0051	1	10/12/17 12:41	10/13/17 16:44	91-57-6	
Naphthalene	0.17	ug/L	0.094	0.019	1	10/12/17 12:41	10/13/17 16:44	91-20-3	
Phenanthrene	0.33	ug/L	0.071	0.014	1	10/12/17 12:41	10/13/17 16:44	85-01-8	
Pyrene	0.32	ug/L	0.039	0.0079	1	10/12/17 12:41	10/13/17 16:44	129-00-0	
Total PAHs	2.1	ug/L			1	10/12/17 12:41	10/13/17 16:44		
Surrogates									
2-Fluorobiphenyl (S)	61	%	35-84		1	10/12/17 12:41	10/13/17 16:44	321-60-8	
Terphenyl-d14 (S)	68	%	10-129		1	10/12/17 12:41	10/13/17 16:44	1718-51-0	
8260 MSV Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		10/12/17 13:35	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		10/12/17 13:35	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		10/12/17 13:35	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		10/12/17 13:35	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		10/12/17 13:35	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	56-23-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-1 Lab ID: 40158427015 Collected: 10/10/17 09:40 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		10/12/17 13:35	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		10/12/17 13:35	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		10/12/17 13:35	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		10/12/17 13:35	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		10/12/17 13:35	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		10/12/17 13:35	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		10/12/17 13:35	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		10/12/17 13:35	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		10/12/17 13:35	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		10/12/17 13:35	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		10/12/17 13:35	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		10/12/17 13:35	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		10/12/17 13:35	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		10/12/17 13:35	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		10/12/17 13:35	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		10/12/17 13:35	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		10/12/17 13:35	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		10/12/17 13:35	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	99-87-6	
Methylene Chloride	0.42J	ug/L	1.0	0.23	1		10/12/17 13:35	75-09-2	B
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		10/12/17 13:35	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		10/12/17 13:35	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	100-42-5	L1
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		10/12/17 13:35	630-20-6	
1,1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		10/12/17 13:35	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		10/12/17 13:35	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		10/12/17 13:35	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		10/12/17 13:35	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		10/12/17 13:35	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		10/12/17 13:35	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	96-18-4	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-1 **Lab ID: 40158427015** Collected: 10/10/17 09:40 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		10/12/17 13:35	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/12/17 13:35	1330-20-7	LS
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		10/12/17 13:35	179601-23-1	L1
o-Xylene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	81	%	61-130		1		10/12/17 13:35	460-00-4	
Dibromofluoromethane (S)	95	%	67-130		1		10/12/17 13:35	1868-53-7	
Toluene-d8 (S)	92	%	70-130		1		10/12/17 13:35	2037-26-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-4 **Lab ID: 40158427016** Collected: 10/10/17 10:10 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Arsenic	<8.3	ug/L	25.0	8.3	1	10/12/17 09:27	10/12/17 17:39	7440-38-2	
Barium	141	ug/L	5.0	1.5	1	10/12/17 09:27	10/12/17 17:39	7440-39-3	
Cadmium	<1.3	ug/L	5.0	1.3	1	10/12/17 09:27	10/12/17 17:39	7440-43-9	
Chromium	<2.5	ug/L	10.0	2.5	1	10/12/17 09:27	10/12/17 17:39	7440-47-3	
Lead	<4.3	ug/L	13.0	4.3	1	10/12/17 09:27	10/12/17 17:39	7439-92-1	
Selenium	<16.6	ug/L	50.0	16.6	1	10/12/17 09:27	10/12/17 17:39	7782-49-2	
Silver	<3.3	ug/L	10.0	3.3	1	10/12/17 09:27	10/12/17 17:39	7440-22-4	
7470 Mercury Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	<0.50	ug/L	1.7	0.50	1	10/17/17 12:45	10/18/17 11:15	7439-97-6	D3
8270 MSSV PAH by HVI Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510									
Acenaphthene	0.014J	ug/L	0.032	0.0065	1	10/12/17 12:41	10/13/17 17:03	83-32-9	
Acenaphthylene	<0.0053	ug/L	0.026	0.0053	1	10/12/17 12:41	10/13/17 17:03	208-96-8	
Anthracene	0.014J	ug/L	0.056	0.011	1	10/12/17 12:41	10/13/17 17:03	120-12-7	
Benzo(a)anthracene	0.030J	ug/L	0.040	0.0080	1	10/12/17 12:41	10/13/17 17:03	56-55-3	
Benzo(a)pyrene	0.031J	ug/L	0.056	0.011	1	10/12/17 12:41	10/13/17 17:03	50-32-8	
Benzo(b)fluoranthene	0.067	ug/L	0.031	0.0061	1	10/12/17 12:41	10/13/17 17:03	205-99-2	
Benzo(g,h,i)perylene	0.046	ug/L	0.036	0.0072	1	10/12/17 12:41	10/13/17 17:03	191-24-2	
Benzo(k)fluoranthene	0.036J	ug/L	0.040	0.0080	1	10/12/17 12:41	10/13/17 17:03	207-08-9	
Chrysene	0.071	ug/L	0.069	0.014	1	10/12/17 12:41	10/13/17 17:03	218-01-9	
Dibenz(a,h)anthracene	<0.011	ug/L	0.053	0.011	1	10/12/17 12:41	10/13/17 17:03	53-70-3	
Fluoranthene	0.21	ug/L	0.057	0.011	1	10/12/17 12:41	10/13/17 17:03	206-44-0	
Fluorene	0.014J	ug/L	0.042	0.0085	1	10/12/17 12:41	10/13/17 17:03	86-73-7	
Indeno(1,2,3-cd)pyrene	0.034J	ug/L	0.094	0.019	1	10/12/17 12:41	10/13/17 17:03	193-39-5	
1-Methylnaphthalene	0.0082J	ug/L	0.031	0.0063	1	10/12/17 12:41	10/13/17 17:03	90-12-0	
2-Methylnaphthalene	0.012J	ug/L	0.026	0.0052	1	10/12/17 12:41	10/13/17 17:03	91-57-6	
Naphthalene	<0.020	ug/L	0.097	0.020	1	10/12/17 12:41	10/13/17 17:03	91-20-3	
Phenanthrene	0.17	ug/L	0.073	0.015	1	10/12/17 12:41	10/13/17 17:03	85-01-8	
Pyrene	0.17	ug/L	0.041	0.0081	1	10/12/17 12:41	10/13/17 17:03	129-00-0	
Total PAHs	0.95	ug/L			1	10/12/17 12:41	10/13/17 17:03		
Surrogates									
2-Fluorobiphenyl (S)	59	%	35-84		1	10/12/17 12:41	10/13/17 17:03	321-60-8	
Terphenyl-d14 (S)	76	%	10-129		1	10/12/17 12:41	10/13/17 17:03	1718-51-0	
8260 MSV Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		10/12/17 13:58	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		10/12/17 13:58	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		10/12/17 13:58	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		10/12/17 13:58	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		10/12/17 13:58	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	56-23-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-4 Lab ID: 40158427016 Collected: 10/10/17 10:10 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		10/12/17 13:58	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		10/12/17 13:58	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		10/12/17 13:58	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		10/12/17 13:58	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		10/12/17 13:58	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		10/12/17 13:58	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		10/12/17 13:58	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		10/12/17 13:58	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		10/12/17 13:58	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		10/12/17 13:58	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		10/12/17 13:58	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		10/12/17 13:58	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		10/12/17 13:58	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		10/12/17 13:58	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		10/12/17 13:58	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		10/12/17 13:58	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		10/12/17 13:58	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		10/12/17 13:58	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	99-87-6	
Methylene Chloride	0.46J	ug/L	1.0	0.23	1		10/12/17 13:58	75-09-2	B
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		10/12/17 13:58	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		10/12/17 13:58	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	100-42-5	L1
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		10/12/17 13:58	630-20-6	
1,1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		10/12/17 13:58	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		10/12/17 13:58	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		10/12/17 13:58	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		10/12/17 13:58	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		10/12/17 13:58	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		10/12/17 13:58	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	96-18-4	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-4 **Lab ID: 40158427016** Collected: 10/10/17 10:10 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		10/12/17 13:58	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/12/17 13:58	1330-20-7	LS
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		10/12/17 13:58	179601-23-1	L1
o-Xylene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	82	%	61-130		1		10/12/17 13:58	460-00-4	
Dibromofluoromethane (S)	99	%	67-130		1		10/12/17 13:58	1868-53-7	
Toluene-d8 (S)	92	%	70-130		1		10/12/17 13:58	2037-26-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-3 **Lab ID: 40158427017** Collected: 10/10/17 10:30 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Arsenic	<8.3	ug/L	25.0	8.3	1	10/12/17 09:27	10/12/17 17:41	7440-38-2	
Barium	114	ug/L	5.0	1.5	1	10/12/17 09:27	10/12/17 17:41	7440-39-3	
Cadmium	<1.3	ug/L	5.0	1.3	1	10/12/17 09:27	10/12/17 17:41	7440-43-9	
Chromium	<2.5	ug/L	10.0	2.5	1	10/12/17 09:27	10/12/17 17:41	7440-47-3	
Lead	<4.3	ug/L	13.0	4.3	1	10/12/17 09:27	10/12/17 17:41	7439-92-1	
Selenium	<16.6	ug/L	50.0	16.6	1	10/12/17 09:27	10/12/17 17:41	7782-49-2	
Silver	<3.3	ug/L	10.0	3.3	1	10/12/17 09:27	10/12/17 17:41	7440-22-4	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	<0.13	ug/L	0.42	0.13	1	10/13/17 11:00	10/16/17 09:04	7439-97-6	
8270 MSSV PAH by HVI									
Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510									
Acenaphthene	0.0084J	ug/L	0.039	0.0079	1	10/12/17 12:41	10/13/17 17:21	83-32-9	
Acenaphthylene	<0.0065	ug/L	0.032	0.0065	1	10/12/17 12:41	10/13/17 17:21	208-96-8	
Anthracene	<0.014	ug/L	0.068	0.014	1	10/12/17 12:41	10/13/17 17:21	120-12-7	
Benzo(a)anthracene	0.023J	ug/L	0.049	0.0098	1	10/12/17 12:41	10/13/17 17:21	56-55-3	
Benzo(a)pyrene	0.020J	ug/L	0.068	0.014	1	10/12/17 12:41	10/13/17 17:21	50-32-8	
Benzo(b)fluoranthene	0.043	ug/L	0.037	0.0075	1	10/12/17 12:41	10/13/17 17:21	205-99-2	
Benzo(g,h,i)perylene	0.033J	ug/L	0.044	0.0088	1	10/12/17 12:41	10/13/17 17:21	191-24-2	
Benzo(k)fluoranthene	0.026J	ug/L	0.049	0.0098	1	10/12/17 12:41	10/13/17 17:21	207-08-9	
Chrysene	0.066J	ug/L	0.085	0.017	1	10/12/17 12:41	10/13/17 17:21	218-01-9	
Dibenz(a,h)anthracene	<0.013	ug/L	0.065	0.013	1	10/12/17 12:41	10/13/17 17:21	53-70-3	
Fluoranthene	0.15	ug/L	0.069	0.014	1	10/12/17 12:41	10/13/17 17:21	206-44-0	
Fluorene	<0.010	ug/L	0.052	0.010	1	10/12/17 12:41	10/13/17 17:21	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.023	ug/L	0.11	0.023	1	10/12/17 12:41	10/13/17 17:21	193-39-5	
1-Methylnaphthalene	0.012J	ug/L	0.038	0.0077	1	10/12/17 12:41	10/13/17 17:21	90-12-0	
2-Methylnaphthalene	0.014J	ug/L	0.032	0.0064	1	10/12/17 12:41	10/13/17 17:21	91-57-6	
Naphthalene	<0.024	ug/L	0.12	0.024	1	10/12/17 12:41	10/13/17 17:21	91-20-3	
Phenanthrene	0.13	ug/L	0.090	0.018	1	10/12/17 12:41	10/13/17 17:21	85-01-8	
Pyrene	0.14	ug/L	0.050	0.0099	1	10/12/17 12:41	10/13/17 17:21	129-00-0	
Total PAHs	0.71	ug/L			1	10/12/17 12:41	10/13/17 17:21		
Surrogates									
2-Fluorobiphenyl (S)	58	%	35-84		1	10/12/17 12:41	10/13/17 17:21	321-60-8	
Terphenyl-d14 (S)	33	%	10-129		1	10/12/17 12:41	10/13/17 17:21	1718-51-0	
8260 MSV									
Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		10/12/17 14:42	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		10/12/17 14:42	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		10/12/17 14:42	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		10/12/17 14:42	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		10/12/17 14:42	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	56-23-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-3 **Lab ID: 40158427017** Collected: 10/10/17 10:30 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		10/12/17 14:42	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		10/12/17 14:42	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		10/12/17 14:42	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		10/12/17 14:42	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		10/12/17 14:42	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		10/12/17 14:42	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		10/12/17 14:42	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		10/12/17 14:42	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		10/12/17 14:42	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		10/12/17 14:42	75-35-4	
cis-1,2-Dichloroethene	3.3	ug/L	1.0	0.26	1		10/12/17 14:42	156-59-2	
trans-1,2-Dichloroethene	0.65J	ug/L	1.0	0.26	1		10/12/17 14:42	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		10/12/17 14:42	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		10/12/17 14:42	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		10/12/17 14:42	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		10/12/17 14:42	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		10/12/17 14:42	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		10/12/17 14:42	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	99-87-6	
Methylene Chloride	0.31J	ug/L	1.0	0.23	1		10/12/17 14:42	75-09-2	B
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		10/12/17 14:42	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		10/12/17 14:42	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	100-42-5	L1
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		10/12/17 14:42	630-20-6	
1,1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		10/12/17 14:42	79-34-5	
Tetrachloroethene	188	ug/L	1.0	0.50	1		10/12/17 14:42	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		10/12/17 14:42	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		10/12/17 14:42	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		10/12/17 14:42	79-00-5	
Trichloroethene	8.5	ug/L	1.0	0.33	1		10/12/17 14:42	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		10/12/17 14:42	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	96-18-4	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-3 **Lab ID: 40158427017** Collected: 10/10/17 10:30 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		10/12/17 14:42	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/12/17 14:42	1330-20-7	LS
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		10/12/17 14:42	179601-23-1	L1
o-Xylene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	81	%	61-130		1		10/12/17 14:42	460-00-4	pH
Dibromofluoromethane (S)	89	%	67-130		1		10/12/17 14:42	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		10/12/17 14:42	2037-26-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

Sample: TW-5 **Lab ID: 40158427018** Collected: 10/10/17 11:05 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Arsenic	<8.3	ug/L	25.0	8.3	1	10/12/17 09:27	10/12/17 17:44	7440-38-2	
Barium	370	ug/L	5.0	1.5	1	10/12/17 09:27	10/12/17 17:44	7440-39-3	
Cadmium	<1.3	ug/L	5.0	1.3	1	10/12/17 09:27	10/12/17 17:44	7440-43-9	
Chromium	<2.5	ug/L	10.0	2.5	1	10/12/17 09:27	10/12/17 17:44	7440-47-3	
Lead	<4.3	ug/L	13.0	4.3	1	10/12/17 09:27	10/12/17 17:44	7439-92-1	
Selenium	<16.6	ug/L	50.0	16.6	1	10/12/17 09:27	10/12/17 17:44	7782-49-2	
Silver	<3.3	ug/L	10.0	3.3	1	10/12/17 09:27	10/12/17 17:44	7440-22-4	
7470 Mercury Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	<0.50	ug/L	1.7	0.50	1	10/17/17 12:45	10/18/17 11:17	7439-97-6	D3
8270 MSSV PAH by HVI Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510									
Acenaphthene	0.028J	ug/L	0.033	0.0065	1	10/12/17 12:41	10/13/17 21:01	83-32-9	
Acenaphthylene	0.0062J	ug/L	0.027	0.0054	1	10/12/17 12:41	10/13/17 21:01	208-96-8	
Anthracene	<0.011	ug/L	0.056	0.011	1	10/12/17 12:41	10/13/17 21:01	120-12-7	
Benzo(a)anthracene	0.0085J	ug/L	0.041	0.0081	1	10/12/17 12:41	10/13/17 21:01	56-55-3	
Benzo(a)pyrene	<0.011	ug/L	0.057	0.011	1	10/12/17 12:41	10/13/17 21:01	50-32-8	
Benzo(b)fluoranthene	<0.0062	ug/L	0.031	0.0062	1	10/12/17 12:41	10/13/17 21:01	205-99-2	
Benzo(g,h,i)perylene	<0.0073	ug/L	0.036	0.0073	1	10/12/17 12:41	10/13/17 21:01	191-24-2	
Benzo(k)fluoranthene	<0.0081	ug/L	0.041	0.0081	1	10/12/17 12:41	10/13/17 21:01	207-08-9	
Chrysene	0.031J	ug/L	0.070	0.014	1	10/12/17 12:41	10/13/17 21:01	218-01-9	
Dibenz(a,h)anthracene	<0.011	ug/L	0.054	0.011	1	10/12/17 12:41	10/13/17 21:01	53-70-3	
Fluoranthene	0.033J	ug/L	0.057	0.011	1	10/12/17 12:41	10/13/17 21:01	206-44-0	
Fluorene	0.017J	ug/L	0.043	0.0086	1	10/12/17 12:41	10/13/17 21:01	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.019	ug/L	0.095	0.019	1	10/12/17 12:41	10/13/17 21:01	193-39-5	
1-Methylnaphthalene	1.4	ug/L	0.032	0.0063	1	10/12/17 12:41	10/13/17 21:01	90-12-0	
2-Methylnaphthalene	0.041	ug/L	0.026	0.0053	1	10/12/17 12:41	10/13/17 21:01	91-57-6	
Naphthalene	2.5	ug/L	0.099	0.020	1	10/12/17 12:41	10/13/17 21:01	91-20-3	
Phenanthrene	0.073J	ug/L	0.074	0.015	1	10/12/17 12:41	10/13/17 21:01	85-01-8	
Pyrene	0.030J	ug/L	0.041	0.0082	1	10/12/17 12:41	10/13/17 21:01	129-00-0	
Total PAHs	4.2	ug/L			1	10/12/17 12:41	10/13/17 21:01		
Surrogates									
2-Fluorobiphenyl (S)	67	%	35-84		1	10/12/17 12:41	10/13/17 21:01	321-60-8	
Terphenyl-d14 (S)	69	%	10-129		1	10/12/17 12:41	10/13/17 21:01	1718-51-0	
8260 MSV Analytical Method: EPA 8260									
Benzene	12.3	ug/L	1.0	0.50	1		10/12/17 14:20	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		10/12/17 14:20	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		10/12/17 14:20	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		10/12/17 14:20	74-83-9	
n-Butylbenzene	13.5	ug/L	1.0	0.50	1		10/12/17 14:20	104-51-8	
sec-Butylbenzene	7.3	ug/L	5.0	2.2	1		10/12/17 14:20	135-98-8	
tert-Butylbenzene	0.67J	ug/L	1.0	0.18	1		10/12/17 14:20	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	56-23-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-5 **Lab ID: 40158427018** Collected: 10/10/17 11:05 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		10/12/17 14:20	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		10/12/17 14:20	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		10/12/17 14:20	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		10/12/17 14:20	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		10/12/17 14:20	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		10/12/17 14:20	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		10/12/17 14:20	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		10/12/17 14:20	75-34-3	
1,2-Dichloroethane	2.2	ug/L	1.0	0.17	1		10/12/17 14:20	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		10/12/17 14:20	75-35-4	
cis-1,2-Dichloroethene	3.4	ug/L	1.0	0.26	1		10/12/17 14:20	156-59-2	
trans-1,2-Dichloroethene	2.0	ug/L	1.0	0.26	1		10/12/17 14:20	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		10/12/17 14:20	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		10/12/17 14:20	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		10/12/17 14:20	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		10/12/17 14:20	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	108-20-3	
Ethylbenzene	23.6	ug/L	1.0	0.50	1		10/12/17 14:20	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		10/12/17 14:20	87-68-3	
Isopropylbenzene (Cumene)	12.7	ug/L	1.0	0.14	1		10/12/17 14:20	98-82-8	
p-Isopropyltoluene	3.2	ug/L	1.0	0.50	1		10/12/17 14:20	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		10/12/17 14:20	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		10/12/17 14:20	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		10/12/17 14:20	91-20-3	
n-Propylbenzene	47.7	ug/L	1.0	0.50	1		10/12/17 14:20	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	100-42-5	L1
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		10/12/17 14:20	630-20-6	
1,1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		10/12/17 14:20	79-34-5	
Tetrachloroethene	2.0	ug/L	1.0	0.50	1		10/12/17 14:20	127-18-4	
Toluene	0.68J	ug/L	1.0	0.50	1		10/12/17 14:20	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		10/12/17 14:20	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		10/12/17 14:20	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		10/12/17 14:20	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		10/12/17 14:20	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		10/12/17 14:20	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	96-18-4	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-5 **Lab ID: 40158427018** Collected: 10/10/17 11:05 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
1,2,4-Trimethylbenzene	17.9	ug/L	1.0	0.50	1		10/12/17 14:20	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	108-67-8	
Vinyl chloride	0.43J	ug/L	1.0	0.18	1		10/12/17 14:20	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/12/17 14:20	1330-20-7	LS
m&p-Xylene	1.2J	ug/L	2.0	1.0	1		10/12/17 14:20	179601-23-1	L1
o-Xylene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	84	%	61-130		1		10/12/17 14:20	460-00-4	
Dibromofluoromethane (S)	89	%	67-130		1		10/12/17 14:20	1868-53-7	
Toluene-d8 (S)	96	%	70-130		1		10/12/17 14:20	2037-26-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-6 **Lab ID:** 40158427019 Collected: 10/10/17 11:35 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Arsenic	10.9J	ug/L	25.0	8.3	1	10/12/17 09:27	10/12/17 17:47	7440-38-2	
Barium	204	ug/L	5.0	1.5	1	10/12/17 09:27	10/12/17 17:47	7440-39-3	
Cadmium	<1.3	ug/L	5.0	1.3	1	10/12/17 09:27	10/12/17 17:47	7440-43-9	
Chromium	<2.5	ug/L	10.0	2.5	1	10/12/17 09:27	10/12/17 17:47	7440-47-3	
Lead	<4.3	ug/L	13.0	4.3	1	10/12/17 09:27	10/12/17 17:47	7439-92-1	
Selenium	<16.6	ug/L	50.0	16.6	1	10/12/17 09:27	10/12/17 17:47	7782-49-2	
Silver	<3.3	ug/L	10.0	3.3	1	10/12/17 09:27	10/12/17 17:47	7440-22-4	
7470 Mercury Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	<0.25	ug/L	0.84	0.25	1	10/17/17 12:45	10/18/17 11:19	7439-97-6	D3
8270 MSSV PAH by HVI Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510									
Acenaphthene	0.015J	ug/L	0.034	0.0067	1	10/12/17 12:41	10/13/17 20:43	83-32-9	
Acenaphthylene	0.0062J	ug/L	0.028	0.0055	1	10/12/17 12:41	10/13/17 20:43	208-96-8	
Anthracene	<0.012	ug/L	0.058	0.012	1	10/12/17 12:41	10/13/17 20:43	120-12-7	
Benzo(a)anthracene	0.0087J	ug/L	0.042	0.0084	1	10/12/17 12:41	10/13/17 20:43	56-55-3	
Benzo(a)pyrene	<0.012	ug/L	0.058	0.012	1	10/12/17 12:41	10/13/17 20:43	50-32-8	
Benzo(b)fluoranthene	<0.0064	ug/L	0.032	0.0064	1	10/12/17 12:41	10/13/17 20:43	205-99-2	
Benzo(g,h,i)perylene	<0.0075	ug/L	0.038	0.0075	1	10/12/17 12:41	10/13/17 20:43	191-24-2	
Benzo(k)fluoranthene	<0.0084	ug/L	0.042	0.0084	1	10/12/17 12:41	10/13/17 20:43	207-08-9	
Chrysene	<0.014	ug/L	0.072	0.014	1	10/12/17 12:41	10/13/17 20:43	218-01-9	
Dibenz(a,h)anthracene	<0.011	ug/L	0.056	0.011	1	10/12/17 12:41	10/13/17 20:43	53-70-3	
Fluoranthene	0.066	ug/L	0.059	0.012	1	10/12/17 12:41	10/13/17 20:43	206-44-0	
Fluorene	0.011J	ug/L	0.044	0.0089	1	10/12/17 12:41	10/13/17 20:43	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.020	ug/L	0.098	0.020	1	10/12/17 12:41	10/13/17 20:43	193-39-5	
1-Methylnaphthalene	3.2	ug/L	0.033	0.0066	1	10/12/17 12:41	10/13/17 20:43	90-12-0	
2-Methylnaphthalene	0.15	ug/L	0.027	0.0054	1	10/12/17 12:41	10/13/17 20:43	91-57-6	
Naphthalene	5.6	ug/L	0.10	0.020	1	10/12/17 12:41	10/13/17 20:43	91-20-3	
Phenanthrene	0.10	ug/L	0.077	0.015	1	10/12/17 12:41	10/13/17 20:43	85-01-8	
Pyrene	0.055	ug/L	0.043	0.0085	1	10/12/17 12:41	10/13/17 20:43	129-00-0	
Total PAHs	9.3	ug/L			1	10/12/17 12:41	10/13/17 20:43		
Surrogates									
2-Fluorobiphenyl (S)	53	%	35-84		1	10/12/17 12:41	10/13/17 20:43	321-60-8	
Terphenyl-d14 (S)	65	%	10-129		1	10/12/17 12:41	10/13/17 20:43	1718-51-0	
8260 MSV Analytical Method: EPA 8260									
Benzene	681	ug/L	10.0	5.0	10		10/13/17 10:47	71-43-2	
Bromobenzene	<2.3	ug/L	10.0	2.3	10		10/13/17 10:47	108-86-1	
Bromochloromethane	<3.4	ug/L	10.0	3.4	10		10/13/17 10:47	74-97-5	
Bromodichloromethane	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	75-27-4	
Bromoform	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	75-25-2	
Bromomethane	<24.3	ug/L	50.0	24.3	10		10/13/17 10:47	74-83-9	
n-Butylbenzene	5.8J	ug/L	10.0	5.0	10		10/13/17 10:47	104-51-8	
sec-Butylbenzene	<21.9	ug/L	50.0	21.9	10		10/13/17 10:47	135-98-8	
tert-Butylbenzene	<1.8	ug/L	10.0	1.8	10		10/13/17 10:47	98-06-6	
Carbon tetrachloride	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	56-23-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-6 **Lab ID: 40158427019** Collected: 10/10/17 11:35 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Chlorobenzene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	108-90-7	
Chloroethane	<3.7	ug/L	10.0	3.7	10		10/13/17 10:47	75-00-3	
Chloroform	<25.0	ug/L	50.0	25.0	10		10/13/17 10:47	67-66-3	
Chloromethane	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	74-87-3	
2-Chlorotoluene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	95-49-8	
4-Chlorotoluene	<2.1	ug/L	10.0	2.1	10		10/13/17 10:47	106-43-4	
1,2-Dibromo-3-chloropropane	<21.6	ug/L	50.0	21.6	10		10/13/17 10:47	96-12-8	
Dibromochloromethane	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	124-48-1	
1,2-Dibromoethane (EDB)	<1.8	ug/L	10.0	1.8	10		10/13/17 10:47	106-93-4	
Dibromomethane	<4.3	ug/L	10.0	4.3	10		10/13/17 10:47	74-95-3	
1,2-Dichlorobenzene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	95-50-1	
1,3-Dichlorobenzene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	541-73-1	
1,4-Dichlorobenzene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	106-46-7	
Dichlorodifluoromethane	<2.2	ug/L	10.0	2.2	10		10/13/17 10:47	75-71-8	
1,1-Dichloroethane	<2.4	ug/L	10.0	2.4	10		10/13/17 10:47	75-34-3	
1,2-Dichloroethane	<1.7	ug/L	10.0	1.7	10		10/13/17 10:47	107-06-2	
1,1-Dichloroethene	<4.1	ug/L	10.0	4.1	10		10/13/17 10:47	75-35-4	
cis-1,2-Dichloroethene	4.9J	ug/L	10.0	2.6	10		10/13/17 10:47	156-59-2	
trans-1,2-Dichloroethene	<2.6	ug/L	10.0	2.6	10		10/13/17 10:47	156-60-5	
1,2-Dichloropropane	<2.3	ug/L	10.0	2.3	10		10/13/17 10:47	78-87-5	
1,3-Dichloropropane	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	142-28-9	
2,2-Dichloropropane	<4.8	ug/L	10.0	4.8	10		10/13/17 10:47	594-20-7	
1,1-Dichloropropene	<4.4	ug/L	10.0	4.4	10		10/13/17 10:47	563-58-6	
cis-1,3-Dichloropropene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	10061-01-5	
trans-1,3-Dichloropropene	<2.3	ug/L	10.0	2.3	10		10/13/17 10:47	10061-02-6	
Diisopropyl ether	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	108-20-3	
Ethylbenzene	404	ug/L	10.0	5.0	10		10/13/17 10:47	100-41-4	
Hexachloro-1,3-butadiene	<21.1	ug/L	50.0	21.1	10		10/13/17 10:47	87-68-3	
Isopropylbenzene (Cumene)	9.3J	ug/L	10.0	1.4	10		10/13/17 10:47	98-82-8	
p-Isopropyltoluene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	99-87-6	
Methylene Chloride	<2.3	ug/L	10.0	2.3	10		10/13/17 10:47	75-09-2	
Methyl-tert-butyl ether	<1.7	ug/L	10.0	1.7	10		10/13/17 10:47	1634-04-4	
Naphthalene	<25.0	ug/L	50.0	25.0	10		10/13/17 10:47	91-20-3	
n-Propylbenzene	21.8	ug/L	10.0	5.0	10		10/13/17 10:47	103-65-1	
Styrene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	100-42-5	L1
1,1,1,2-Tetrachloroethane	<1.8	ug/L	10.0	1.8	10		10/13/17 10:47	630-20-6	
1,1,1,2,2-Tetrachloroethane	<2.5	ug/L	10.0	2.5	10		10/13/17 10:47	79-34-5	
Tetrachloroethene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	127-18-4	
Toluene	65.1	ug/L	10.0	5.0	10		10/13/17 10:47	108-88-3	
1,2,3-Trichlorobenzene	<21.3	ug/L	50.0	21.3	10		10/13/17 10:47	87-61-6	
1,2,4-Trichlorobenzene	<22.1	ug/L	50.0	22.1	10		10/13/17 10:47	120-82-1	
1,1,1-Trichloroethane	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	71-55-6	
1,1,2-Trichloroethane	<2.0	ug/L	10.0	2.0	10		10/13/17 10:47	79-00-5	
Trichloroethene	<3.3	ug/L	10.0	3.3	10		10/13/17 10:47	79-01-6	
Trichlorofluoromethane	<1.8	ug/L	10.0	1.8	10		10/13/17 10:47	75-69-4	
1,2,3-Trichloropropane	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	96-18-4	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-6 **Lab ID: 40158427019** Collected: 10/10/17 11:35 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
1,2,4-Trimethylbenzene	154	ug/L	10.0	5.0	10		10/13/17 10:47	95-63-6	
1,3,5-Trimethylbenzene	7.5J	ug/L	10.0	5.0	10		10/13/17 10:47	108-67-8	
Vinyl chloride	<1.8	ug/L	10.0	1.8	10		10/13/17 10:47	75-01-4	
Xylene (Total)	250	ug/L	30.0	15.0	10		10/13/17 10:47	1330-20-7	LS
m&p-Xylene	246	ug/L	20.0	10.0	10		10/13/17 10:47	179601-23-1	L1
o-Xylene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	84	%	61-130		10		10/13/17 10:47	460-00-4	
Dibromofluoromethane (S)	90	%	67-130		10		10/13/17 10:47	1868-53-7	
Toluene-d8 (S)	93	%	70-130		10		10/13/17 10:47	2037-26-5	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

QC Batch: 270522 Analysis Method: EPA 7470
 QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
 Associated Lab Samples: 40158427014, 40158427017

METHOD BLANK: 1589868 Matrix: Water

Associated Lab Samples: 40158427014, 40158427017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	10/16/17 08:46	

LABORATORY CONTROL SAMPLE: 1589869

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.6	93	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1589870 1589871

Parameter	Units	40158330009		MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec						
Mercury	ug/L	<0.13	5	5	5.1	5.1	101	101	85-115	0	20				

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

QC Batch: 270857 Analysis Method: EPA 7470
 QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
 Associated Lab Samples: 40158427015, 40158427016, 40158427018, 40158427019

METHOD BLANK: 1592216 Matrix: Water
 Associated Lab Samples: 40158427015, 40158427016, 40158427018, 40158427019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	10/18/17 10:56	

LABORATORY CONTROL SAMPLE: 1592217

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.2	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1592218 1592219

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		40158646008 Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Mercury	ug/L	<0.13	5	5	4.9	5.0	98	100	85-115	2	20	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

QC Batch: 270711

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Associated Lab Samples: 40158427001, 40158427002, 40158427003, 40158427004, 40158427005, 40158427006, 40158427008, 40158427009, 40158427010

METHOD BLANK: 1591630

Matrix: Solid

Associated Lab Samples: 40158427001, 40158427002, 40158427003, 40158427004, 40158427005, 40158427006, 40158427008, 40158427009, 40158427010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.011	0.037	10/17/17 11:06	

LABORATORY CONTROL SAMPLE: 1591631

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.83	0.93	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1591632 1591633

Parameter	Units	40157938015		MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Mercury	mg/kg	<0.012	.88	.87	.86	0.82	99	94	85-115	6	20			

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

QC Batch: 270712 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 40158427011, 40158427012, 40158427013

METHOD BLANK: 1591634 Matrix: Solid
Associated Lab Samples: 40158427011, 40158427012, 40158427013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.011	0.037	10/17/17 12:10	

LABORATORY CONTROL SAMPLE: 1591635

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.83	0.82	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1591636 1591637

Parameter	Units	40158427011 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Mercury	mg/kg	0.020J	1	0.78	1	0.79	74	75	85-115	1	20	M0

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

QC Batch: 270418 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 40158427001, 40158427002, 40158427003, 40158427004, 40158427005, 40158427006, 40158427008, 40158427009, 40158427010, 40158427011, 40158427012, 40158427013

METHOD BLANK: 1589201 Matrix: Solid
Associated Lab Samples: 40158427001, 40158427002, 40158427003, 40158427004, 40158427005, 40158427006, 40158427008, 40158427009, 40158427010, 40158427011, 40158427012, 40158427013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<1.0	5.0	10/13/17 21:15	
Barium	mg/kg	<0.15	0.50	10/13/17 21:15	
Cadmium	mg/kg	<0.13	0.50	10/13/17 21:15	
Chromium	mg/kg	<0.28	1.0	10/13/17 21:15	
Lead	mg/kg	<0.43	1.3	10/13/17 21:15	
Selenium	mg/kg	<1.1	5.0	10/13/17 21:15	
Silver	mg/kg	<0.34	1.0	10/13/17 21:15	

LABORATORY CONTROL SAMPLE: 1589202

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	50.0	100	80-120	
Barium	mg/kg	50	51.1	102	80-120	
Cadmium	mg/kg	50	51.5	103	80-120	
Chromium	mg/kg	50	50.6	101	80-120	
Lead	mg/kg	50	50.7	101	80-120	
Selenium	mg/kg	50	52.2	104	80-120	
Silver	mg/kg	25	25.4	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1589203 1589204

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40158436001 Result	Spike Conc.	Spike Conc.	MS Result						
Arsenic	mg/kg	8.5	58.6	59	65.9	67.2	98	100	75-125	2	20
Barium	mg/kg	60.8	58.6	59	128	133	115	122	75-125	3	20
Cadmium	mg/kg	<0.16	58.6	59	59.6	60.6	102	103	75-125	2	20
Chromium	mg/kg	28.4	58.6	59	86.8	85.0	100	96	75-125	2	20
Lead	mg/kg	13.8	58.6	59	65.6	66.0	88	89	75-125	1	20
Selenium	mg/kg	<1.3	58.6	59	59.8	59.7	102	101	75-125	0	20
Silver	mg/kg	<0.40	29.3	29.5	30.1	30.6	102	103	75-125	2	20

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

QC Batch: 270342 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 40158427014, 40158427015, 40158427016, 40158427017, 40158427018, 40158427019

METHOD BLANK: 1588846 Matrix: Water
Associated Lab Samples: 40158427014, 40158427015, 40158427016, 40158427017, 40158427018, 40158427019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<8.3	25.0	10/12/17 16:41	
Barium	ug/L	<1.5	5.0	10/12/17 16:41	
Cadmium	ug/L	<1.3	5.0	10/12/17 16:41	
Chromium	ug/L	<2.5	10.0	10/12/17 16:41	
Lead	ug/L	<4.3	13.0	10/12/17 16:41	
Selenium	ug/L	<16.6	50.0	10/12/17 16:41	
Silver	ug/L	<3.3	10.0	10/12/17 16:41	

LABORATORY CONTROL SAMPLE: 1588847

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	508	102	80-120	
Barium	ug/L	500	529	106	80-120	
Cadmium	ug/L	500	519	104	80-120	
Chromium	ug/L	500	525	105	80-120	
Lead	ug/L	500	506	101	80-120	
Selenium	ug/L	500	532	106	80-120	
Silver	ug/L	250	254	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1588848 1588849

Parameter	Units	40158149001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Arsenic	ug/L	<8.3	500	500	511	508	102	101	75-125	1	20		
Barium	ug/L	15.9	500	500	542	547	105	106	75-125	1	20		
Cadmium	ug/L	<1.3	500	500	519	525	104	105	75-125	1	20		
Chromium	ug/L	<2.5	500	500	535	536	107	107	75-125	0	20		
Lead	ug/L	<4.3	500	500	507	511	101	102	75-125	1	20		
Selenium	ug/L	<16.6	500	500	519	529	104	106	75-125	2	20		
Silver	ug/L	<3.3	250	250	258	259	103	104	75-125	1	20		

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

QC Batch: 270402 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40158427002, 40158427003, 40158427004, 40158427005, 40158427006, 40158427007, 40158427008, 40158427009, 40158427010

METHOD BLANK: 1589146 Matrix: Solid
Associated Lab Samples: 40158427002, 40158427003, 40158427004, 40158427005, 40158427006, 40158427007, 40158427008, 40158427009, 40158427010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	10/12/17 09:24	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	10/12/17 09:24	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	10/12/17 09:24	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	10/12/17 09:24	
1,1-Dichloroethane	ug/kg	<17.6	50.0	10/12/17 09:24	
1,1-Dichloroethene	ug/kg	<17.6	50.0	10/12/17 09:24	
1,1-Dichloropropene	ug/kg	<14.0	50.0	10/12/17 09:24	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	10/12/17 09:24	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	10/12/17 09:24	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	10/12/17 09:24	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	10/12/17 09:24	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	10/12/17 09:24	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	10/12/17 09:24	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	10/12/17 09:24	
1,2-Dichloroethane	ug/kg	<15.0	50.0	10/12/17 09:24	
1,2-Dichloropropane	ug/kg	<16.8	50.0	10/12/17 09:24	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	10/12/17 09:24	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	10/12/17 09:24	
1,3-Dichloropropane	ug/kg	<12.0	50.0	10/12/17 09:24	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	10/12/17 09:24	
2,2-Dichloropropane	ug/kg	<12.6	50.0	10/12/17 09:24	
2-Chlorotoluene	ug/kg	<15.8	50.0	10/12/17 09:24	
4-Chlorotoluene	ug/kg	<13.0	50.0	10/12/17 09:24	
Benzene	ug/kg	<9.2	20.0	10/12/17 09:24	
Bromobenzene	ug/kg	<20.6	50.0	10/12/17 09:24	
Bromochloromethane	ug/kg	<21.4	50.0	10/12/17 09:24	
Bromodichloromethane	ug/kg	<9.8	50.0	10/12/17 09:24	
Bromoform	ug/kg	<19.8	50.0	10/12/17 09:24	
Bromomethane	ug/kg	<69.9	250	10/12/17 09:24	
Carbon tetrachloride	ug/kg	<12.1	50.0	10/12/17 09:24	
Chlorobenzene	ug/kg	<14.8	50.0	10/12/17 09:24	
Chloroethane	ug/kg	<67.0	250	10/12/17 09:24	
Chloroform	ug/kg	<46.4	250	10/12/17 09:24	
Chloromethane	ug/kg	<20.4	50.0	10/12/17 09:24	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	10/12/17 09:24	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	10/12/17 09:24	
Dibromochloromethane	ug/kg	<17.9	50.0	10/12/17 09:24	
Dibromomethane	ug/kg	<19.3	50.0	10/12/17 09:24	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	10/12/17 09:24	
Diisopropyl ether	ug/kg	<17.7	50.0	10/12/17 09:24	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

METHOD BLANK: 1589146

Matrix: Solid

Associated Lab Samples: 40158427002, 40158427003, 40158427004, 40158427005, 40158427006, 40158427007, 40158427008, 40158427009, 40158427010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/kg	<12.4	50.0	10/12/17 09:24	
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	10/12/17 09:24	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	10/12/17 09:24	
m&p-Xylene	ug/kg	<34.4	100	10/12/17 09:24	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	10/12/17 09:24	
Methylene Chloride	ug/kg	<16.2	50.0	10/12/17 09:24	
n-Butylbenzene	ug/kg	<10.5	50.0	10/12/17 09:24	
n-Propylbenzene	ug/kg	<11.6	50.0	10/12/17 09:24	
Naphthalene	ug/kg	<40.0	250	10/12/17 09:24	
o-Xylene	ug/kg	<14.0	50.0	10/12/17 09:24	
p-Isopropyltoluene	ug/kg	<12.0	50.0	10/12/17 09:24	
sec-Butylbenzene	ug/kg	<11.9	50.0	10/12/17 09:24	
Styrene	ug/kg	<9.0	50.0	10/12/17 09:24	
tert-Butylbenzene	ug/kg	<9.5	50.0	10/12/17 09:24	
Tetrachloroethene	ug/kg	<12.9	50.0	10/12/17 09:24	
Toluene	ug/kg	<11.2	50.0	10/12/17 09:24	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	10/12/17 09:24	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	10/12/17 09:24	
Trichloroethene	ug/kg	<23.6	50.0	10/12/17 09:24	
Trichlorofluoromethane	ug/kg	<24.7	50.0	10/12/17 09:24	
Vinyl chloride	ug/kg	<21.1	50.0	10/12/17 09:24	
Xylene (Total)	ug/kg	<48.4	150	10/12/17 09:24	
4-Bromofluorobenzene (S)	%	83	58-141	10/12/17 09:24	
Dibromofluoromethane (S)	%	95	68-130	10/12/17 09:24	
Toluene-d8 (S)	%	94	68-149	10/12/17 09:24	

LABORATORY CONTROL SAMPLE: 1589147

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2340	94	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2460	98	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2550	102	70-130	
1,1-Dichloroethane	ug/kg	2500	2270	91	63-124	
1,1-Dichloroethene	ug/kg	2500	2340	94	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	2050	82	78-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	1950	78	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2490	100	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2360	94	70-130	
1,2-Dichloroethane	ug/kg	2500	2250	90	56-135	
1,2-Dichloropropane	ug/kg	2500	2280	91	77-122	
1,3-Dichlorobenzene	ug/kg	2500	2330	93	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2420	97	70-130	
Benzene	ug/kg	2500	2450	98	66-130	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

LABORATORY CONTROL SAMPLE: 1589147

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/kg	2500	2370	95	62-135	
Bromoform	ug/kg	2500	2070	83	68-130	
Bromomethane	ug/kg	2500	2410	96	29-137	
Carbon tetrachloride	ug/kg	2500	2460	98	57-130	
Chlorobenzene	ug/kg	2500	2380	95	70-130	
Chloroethane	ug/kg	2500	2430	97	36-144	
Chloroform	ug/kg	2500	2380	95	69-115	
Chloromethane	ug/kg	2500	1680	67	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2360	94	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	2060	82	70-130	
Dibromochloromethane	ug/kg	2500	2170	87	70-130	
Dichlorodifluoromethane	ug/kg	2500	1480	59	10-99	
Ethylbenzene	ug/kg	2500	2400	96	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2420	97	70-130	
m&p-Xylene	ug/kg	5000	5020	100	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2340	93	63-134	
Methylene Chloride	ug/kg	2500	2370	95	56-123	
o-Xylene	ug/kg	2500	2500	100	70-130	
Styrene	ug/kg	2500	2610	104	70-130	
Tetrachloroethene	ug/kg	2500	2400	96	70-131	
Toluene	ug/kg	2500	2480	99	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2510	101	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	2080	83	68-130	
Trichloroethene	ug/kg	2500	2400	96	70-130	
Trichlorofluoromethane	ug/kg	2500	2360	95	37-149	
Vinyl chloride	ug/kg	2500	1890	76	43-128	
Xylene (Total)	ug/kg	7500	7510	100	70-130	
4-Bromofluorobenzene (S)	%			93	58-141	
Dibromofluoromethane (S)	%			100	68-130	
Toluene-d8 (S)	%			92	68-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1589148 1589149

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40158381004 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
1,1,1-Trichloroethane	ug/kg	<25.0	1370	1370	1110	1170	81	85	57-123	5	20	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1370	1370	1410	1350	103	99	73-135	4	20	
1,1,2-Trichloroethane	ug/kg	<25.0	1370	1370	1370	1340	100	98	70-130	2	20	
1,1-Dichloroethane	ug/kg	<25.0	1370	1370	1140	1160	83	85	63-124	2	20	
1,1-Dichloroethene	ug/kg	<25.0	1370	1370	1030	1080	75	79	48-117	5	23	
1,2,4-Trichlorobenzene	ug/kg	<47.6	1370	1370	1220	1140	89	83	78-145	7	20	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	1370	1370	1110	1060	81	77	38-168	5	22	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	1370	1370	1330	1280	97	94	70-130	4	20	
1,2-Dichlorobenzene	ug/kg	<25.0	1370	1370	1360	1300	99	95	70-130	5	20	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		1589148		1589149							
Parameter	Units	40158381004	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
1,2-Dichloroethane	ug/kg	<25.0	1370	1370	1190	1180	87	86	56-145	1	20
1,2-Dichloropropane	ug/kg	<25.0	1370	1370	1190	1250	87	92	77-123	6	20
1,3-Dichlorobenzene	ug/kg	<25.0	1370	1370	1290	1250	95	91	70-130	4	20
1,4-Dichlorobenzene	ug/kg	<25.0	1370	1370	1380	1320	101	97	70-130	4	20
Benzene	ug/kg	<25.0	1370	1370	1240	1280	90	94	65-130	4	20
Bromodichloromethane	ug/kg	<25.0	1370	1370	1180	1190	86	87	59-141	1	20
Bromoform	ug/kg	<25.0	1370	1370	1230	1180	90	86	59-141	4	20
Bromomethane	ug/kg	<69.9	1370	1370	1180	1160	86	85	28-139	1	20
Carbon tetrachloride	ug/kg	<25.0	1370	1370	1030	1130	75	82	50-130	9	20
Chlorobenzene	ug/kg	<25.0	1370	1370	1290	1250	94	91	70-130	3	20
Chloroethane	ug/kg	<67.0	1370	1370	1100	1120	80	82	36-144	2	20
Chloroform	ug/kg	<46.4	1370	1370	1240	1240	90	90	68-122	0	20
Chloromethane	ug/kg	<25.0	1370	1370	815	853	60	62	30-126	4	20
cis-1,2-Dichloroethene	ug/kg	<25.0	1370	1370	1210	1220	89	89	63-130	1	20
cis-1,3-Dichloropropene	ug/kg	<25.0	1370	1370	1100	1080	80	79	70-130	2	20
Dibromochloromethane	ug/kg	<25.0	1370	1370	1220	1190	89	87	66-136	3	20
Dichlorodifluoromethane	ug/kg	<25.0	1370	1370	609	684	44	50	10-99	12	33
Ethylbenzene	ug/kg	<25.0	1370	1370	1180	1170	86	85	80-122	1	20
Isopropylbenzene (Cumene)	ug/kg	<25.0	1370	1370	1190	1190	87	87	70-130	0	20
m&p-Xylene	ug/kg	<50.0	2740	2740	2540	2540	93	93	70-130	0	20
Methyl-tert-butyl ether	ug/kg	<25.0	1370	1370	1260	1190	92	87	63-134	6	20
Methylene Chloride	ug/kg	<25.0	1370	1370	1250	1240	90	89	56-127	1	20
o-Xylene	ug/kg	<25.0	1370	1370	1240	1210	90	89	70-130	2	20
Styrene	ug/kg	<25.0	1370	1370	1340	1320	98	96	70-130	2	20
Tetrachloroethene	ug/kg	<25.0	1370	1370	1170	1160	85	85	70-131	0	20
Toluene	ug/kg	<25.0	1370	1370	1260	1250	92	91	80-120	1	20
trans-1,2-Dichloroethene	ug/kg	<25.0	1370	1370	1180	1260	86	92	60-130	7	20
trans-1,3-Dichloropropene	ug/kg	<25.0	1370	1370	1130	1090	82	80	68-130	3	20
Trichloroethene	ug/kg	<25.0	1370	1370	1210	1240	88	90	70-130	3	20
Trichlorofluoromethane	ug/kg	<25.0	1370	1370	1010	1130	74	82	37-149	11	24
Vinyl chloride	ug/kg	<25.0	1370	1370	776	818	57	60	39-128	5	20
Xylene (Total)	ug/kg	<75.0	4110	4110	3780	3760	92	92	70-130	1	20
4-Bromofluorobenzene (S)	%						100	98	58-141		
Dibromofluoromethane (S)	%						102	103	68-130		
Toluene-d8 (S)	%						102	100	68-149		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

QC Batch: 270424 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40158427001, 40158427011, 40158427012, 40158427013

METHOD BLANK: 1589223 Matrix: Solid
Associated Lab Samples: 40158427001, 40158427011, 40158427012, 40158427013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	10/12/17 16:58	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	10/12/17 16:58	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	10/12/17 16:58	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	10/12/17 16:58	
1,1-Dichloroethane	ug/kg	<17.6	50.0	10/12/17 16:58	
1,1-Dichloroethene	ug/kg	<17.6	50.0	10/12/17 16:58	
1,1-Dichloropropene	ug/kg	<14.0	50.0	10/12/17 16:58	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	10/12/17 16:58	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	10/12/17 16:58	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	10/12/17 16:58	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	10/12/17 16:58	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	10/12/17 16:58	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	10/12/17 16:58	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	10/12/17 16:58	
1,2-Dichloroethane	ug/kg	<15.0	50.0	10/12/17 16:58	
1,2-Dichloropropane	ug/kg	<16.8	50.0	10/12/17 16:58	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	10/12/17 16:58	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	10/12/17 16:58	
1,3-Dichloropropane	ug/kg	<12.0	50.0	10/12/17 16:58	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	10/12/17 16:58	
2,2-Dichloropropane	ug/kg	<12.6	50.0	10/12/17 16:58	
2-Chlorotoluene	ug/kg	<15.8	50.0	10/12/17 16:58	
4-Chlorotoluene	ug/kg	<13.0	50.0	10/12/17 16:58	
Benzene	ug/kg	<9.2	20.0	10/12/17 16:58	
Bromobenzene	ug/kg	<20.6	50.0	10/12/17 16:58	
Bromochloromethane	ug/kg	<21.4	50.0	10/12/17 16:58	
Bromodichloromethane	ug/kg	<9.8	50.0	10/12/17 16:58	
Bromoform	ug/kg	<19.8	50.0	10/12/17 16:58	
Bromomethane	ug/kg	<69.9	250	10/12/17 16:58	
Carbon tetrachloride	ug/kg	<12.1	50.0	10/12/17 16:58	
Chlorobenzene	ug/kg	<14.8	50.0	10/12/17 16:58	
Chloroethane	ug/kg	<67.0	250	10/12/17 16:58	
Chloroform	ug/kg	<46.4	250	10/12/17 16:58	
Chloromethane	ug/kg	<20.4	50.0	10/12/17 16:58	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	10/12/17 16:58	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	10/12/17 16:58	
Dibromochloromethane	ug/kg	<17.9	50.0	10/12/17 16:58	
Dibromomethane	ug/kg	<19.3	50.0	10/12/17 16:58	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	10/12/17 16:58	
Diisopropyl ether	ug/kg	<17.7	50.0	10/12/17 16:58	
Ethylbenzene	ug/kg	<12.4	50.0	10/12/17 16:58	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

METHOD BLANK: 1589223 Matrix: Solid
Associated Lab Samples: 40158427001, 40158427011, 40158427012, 40158427013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	10/12/17 16:58	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	10/12/17 16:58	
m&p-Xylene	ug/kg	<34.4	100	10/12/17 16:58	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	10/12/17 16:58	
Methylene Chloride	ug/kg	<16.2	50.0	10/12/17 16:58	
n-Butylbenzene	ug/kg	<10.5	50.0	10/12/17 16:58	
n-Propylbenzene	ug/kg	<11.6	50.0	10/12/17 16:58	
Naphthalene	ug/kg	<40.0	250	10/12/17 16:58	
o-Xylene	ug/kg	<14.0	50.0	10/12/17 16:58	
p-Isopropyltoluene	ug/kg	<12.0	50.0	10/12/17 16:58	
sec-Butylbenzene	ug/kg	<11.9	50.0	10/12/17 16:58	
Styrene	ug/kg	<9.0	50.0	10/12/17 16:58	
tert-Butylbenzene	ug/kg	<9.5	50.0	10/12/17 16:58	
Tetrachloroethene	ug/kg	<12.9	50.0	10/12/17 16:58	
Toluene	ug/kg	<11.2	50.0	10/12/17 16:58	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	10/12/17 16:58	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	10/12/17 16:58	
Trichloroethene	ug/kg	<23.6	50.0	10/12/17 16:58	
Trichlorofluoromethane	ug/kg	<24.7	50.0	10/12/17 16:58	
Vinyl chloride	ug/kg	<21.1	50.0	10/12/17 16:58	
Xylene (Total)	ug/kg	<48.4	150	10/12/17 16:58	
4-Bromofluorobenzene (S)	%	78	58-141	10/12/17 16:58	
Dibromofluoromethane (S)	%	90	68-130	10/12/17 16:58	
Toluene-d8 (S)	%	90	68-149	10/12/17 16:58	

LABORATORY CONTROL SAMPLE: 1589224

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2330	93	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2380	95	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2390	96	70-130	
1,1-Dichloroethane	ug/kg	2500	2260	90	63-124	
1,1-Dichloroethene	ug/kg	2500	2310	92	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	2020	81	78-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	1870	75	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2460	98	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2250	90	70-130	
1,2-Dichloroethane	ug/kg	2500	2220	89	56-135	
1,2-Dichloropropane	ug/kg	2500	2220	89	77-122	
1,3-Dichlorobenzene	ug/kg	2500	2290	92	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2330	93	70-130	
Benzene	ug/kg	2500	2430	97	66-130	
Bromodichloromethane	ug/kg	2500	2220	89	62-135	
Bromoform	ug/kg	2500	1920	77	68-130	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

LABORATORY CONTROL SAMPLE: 1589224

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/kg	2500	2380	95	29-137	
Carbon tetrachloride	ug/kg	2500	2220	89	57-130	
Chlorobenzene	ug/kg	2500	2340	94	70-130	
Chloroethane	ug/kg	2500	2390	96	36-144	
Chloroform	ug/kg	2500	2340	94	69-115	
Chloromethane	ug/kg	2500	1710	68	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2360	95	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	1980	79	70-130	
Dibromochloromethane	ug/kg	2500	2090	84	70-130	
Dichlorodifluoromethane	ug/kg	2500	1330	53	10-99	
Ethylbenzene	ug/kg	2500	2260	90	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2350	94	70-130	
m&p-Xylene	ug/kg	5000	4760	95	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2360	95	63-134	
Methylene Chloride	ug/kg	2500	2310	92	56-123	
o-Xylene	ug/kg	2500	2400	96	70-130	
Styrene	ug/kg	2500	2470	99	70-130	
Tetrachloroethene	ug/kg	2500	2210	89	70-131	
Toluene	ug/kg	2500	2390	96	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2550	102	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	1970	79	68-130	
Trichloroethene	ug/kg	2500	2350	94	70-130	
Trichlorofluoromethane	ug/kg	2500	2220	89	37-149	
Vinyl chloride	ug/kg	2500	1930	77	43-128	
Xylene (Total)	ug/kg	7500	7160	95	70-130	
4-Bromofluorobenzene (S)	%			88	58-141	
Dibromofluoromethane (S)	%			92	68-130	
Toluene-d8 (S)	%			87	68-149	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

QC Batch: 270330 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40158427014, 40158427015, 40158427016, 40158427017, 40158427018, 40158427019

METHOD BLANK: 1588806 Matrix: Water
Associated Lab Samples: 40158427014, 40158427015, 40158427016, 40158427017, 40158427018, 40158427019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	10/12/17 08:49	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	10/12/17 08:49	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	10/12/17 08:49	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	10/12/17 08:49	
1,1-Dichloroethane	ug/L	<0.24	1.0	10/12/17 08:49	
1,1-Dichloroethene	ug/L	<0.41	1.0	10/12/17 08:49	
1,1-Dichloropropene	ug/L	<0.44	1.0	10/12/17 08:49	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	10/12/17 08:49	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	10/12/17 08:49	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	10/12/17 08:49	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	10/12/17 08:49	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	10/12/17 08:49	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	10/12/17 08:49	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	10/12/17 08:49	
1,2-Dichloroethane	ug/L	<0.17	1.0	10/12/17 08:49	
1,2-Dichloropropane	ug/L	<0.23	1.0	10/12/17 08:49	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	10/12/17 08:49	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	10/12/17 08:49	
1,3-Dichloropropane	ug/L	<0.50	1.0	10/12/17 08:49	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	10/12/17 08:49	
2,2-Dichloropropane	ug/L	<0.48	1.0	10/12/17 08:49	
2-Chlorotoluene	ug/L	<0.50	1.0	10/12/17 08:49	
4-Chlorotoluene	ug/L	<0.21	1.0	10/12/17 08:49	
Benzene	ug/L	<0.50	1.0	10/12/17 08:49	
Bromobenzene	ug/L	<0.23	1.0	10/12/17 08:49	
Bromochloromethane	ug/L	<0.34	1.0	10/12/17 08:49	
Bromodichloromethane	ug/L	<0.50	1.0	10/12/17 08:49	
Bromoform	ug/L	<0.50	1.0	10/12/17 08:49	
Bromomethane	ug/L	<2.4	5.0	10/12/17 08:49	
Carbon tetrachloride	ug/L	<0.50	1.0	10/12/17 08:49	
Chlorobenzene	ug/L	<0.50	1.0	10/12/17 08:49	
Chloroethane	ug/L	<0.37	1.0	10/12/17 08:49	
Chloroform	ug/L	<2.5	5.0	10/12/17 08:49	
Chloromethane	ug/L	<0.50	1.0	10/12/17 08:49	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	10/12/17 08:49	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	10/12/17 08:49	
Dibromochloromethane	ug/L	<0.50	1.0	10/12/17 08:49	
Dibromomethane	ug/L	<0.43	1.0	10/12/17 08:49	
Dichlorodifluoromethane	ug/L	<0.22	1.0	10/12/17 08:49	
Diisopropyl ether	ug/L	<0.50	1.0	10/12/17 08:49	
Ethylbenzene	ug/L	<0.50	1.0	10/12/17 08:49	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

METHOD BLANK: 1588806

Matrix: Water

Associated Lab Samples: 40158427014, 40158427015, 40158427016, 40158427017, 40158427018, 40158427019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	10/12/17 08:49	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	10/12/17 08:49	
m&p-Xylene	ug/L	<1.0	2.0	10/12/17 08:49	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	10/12/17 08:49	
Methylene Chloride	ug/L	0.38J	1.0	10/12/17 08:49	
n-Butylbenzene	ug/L	<0.50	1.0	10/12/17 08:49	
n-Propylbenzene	ug/L	<0.50	1.0	10/12/17 08:49	
Naphthalene	ug/L	<2.5	5.0	10/12/17 08:49	
o-Xylene	ug/L	<0.50	1.0	10/12/17 08:49	
p-Isopropyltoluene	ug/L	<0.50	1.0	10/12/17 08:49	
sec-Butylbenzene	ug/L	<2.2	5.0	10/12/17 08:49	
Styrene	ug/L	<0.50	1.0	10/12/17 08:49	
tert-Butylbenzene	ug/L	<0.18	1.0	10/12/17 08:49	
Tetrachloroethene	ug/L	<0.50	1.0	10/12/17 08:49	
Toluene	ug/L	<0.50	1.0	10/12/17 08:49	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	10/12/17 08:49	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	10/12/17 08:49	
Trichloroethene	ug/L	<0.33	1.0	10/12/17 08:49	
Trichlorofluoromethane	ug/L	<0.18	1.0	10/12/17 08:49	
Vinyl chloride	ug/L	<0.18	1.0	10/12/17 08:49	
Xylene (Total)	ug/L	<1.5	3.0	10/12/17 08:49	
4-Bromofluorobenzene (S)	%	83	61-130	10/12/17 08:49	
Dibromofluoromethane (S)	%	91	67-130	10/12/17 08:49	
Toluene-d8 (S)	%	94	70-130	10/12/17 08:49	

LABORATORY CONTROL SAMPLE: 1588807

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	49.0	98	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	56.9	114	70-130	
1,1,2-Trichloroethane	ug/L	50	51.3	103	70-130	
1,1-Dichloroethane	ug/L	50	51.3	103	71-132	
1,1-Dichloroethene	ug/L	50	57.5	115	75-130	
1,2,4-Trichlorobenzene	ug/L	50	61.6	123	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	46.3	93	63-123	
1,2-Dibromoethane (EDB)	ug/L	50	56.8	114	70-130	
1,2-Dichlorobenzene	ug/L	50	59.0	118	70-130	
1,2-Dichloroethane	ug/L	50	47.8	96	70-131	
1,2-Dichloropropane	ug/L	50	45.5	91	80-120	
1,3-Dichlorobenzene	ug/L	50	57.4	115	70-130	
1,4-Dichlorobenzene	ug/L	50	57.9	116	70-130	
Benzene	ug/L	50	47.3	95	73-145	
Bromodichloromethane	ug/L	50	51.9	104	70-130	
Bromoform	ug/L	50	56.4	113	67-130	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

LABORATORY CONTROL SAMPLE: 1588807

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	50	32.0	64	26-128	
Carbon tetrachloride	ug/L	50	45.2	90	70-133	
Chlorobenzene	ug/L	50	57.5	115	70-130	
Chloroethane	ug/L	50	40.4	81	58-120	
Chloroform	ug/L	50	45.9	92	80-121	
Chloromethane	ug/L	50	30.2	60	40-127	
cis-1,2-Dichloroethene	ug/L	50	48.7	97	70-130	
cis-1,3-Dichloropropene	ug/L	50	49.2	98	70-130	
Dibromochloromethane	ug/L	50	50.3	101	70-130	
Dichlorodifluoromethane	ug/L	50	14.9	30	20-135	
Ethylbenzene	ug/L	50	59.1	118	87-129	
Isopropylbenzene (Cumene)	ug/L	50	65.1	130	70-130	
m&p-Xylene	ug/L	100	133	133	70-130 L1	
Methyl-tert-butyl ether	ug/L	50	54.2	108	66-143	
Methylene Chloride	ug/L	50	58.9	118	70-130	
o-Xylene	ug/L	50	62.8	126	70-130	
Styrene	ug/L	50	67.3	135	70-130 L1	
Tetrachloroethene	ug/L	50	58.3	117	70-130	
Toluene	ug/L	50	54.2	108	82-130	
trans-1,2-Dichloroethene	ug/L	50	64.6	129	75-132	
trans-1,3-Dichloropropene	ug/L	50	42.8	86	70-130	
Trichloroethene	ug/L	50	53.7	107	70-130	
Trichlorofluoromethane	ug/L	50	53.3	107	76-133	
Vinyl chloride	ug/L	50	31.3	63	57-136	
Xylene (Total)	ug/L	150	195	130	70-130 LS	
4-Bromofluorobenzene (S)	%			101	61-130	
Dibromofluoromethane (S)	%			93	67-130	
Toluene-d8 (S)	%			91	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1588810 1588811

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40158432005 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
1,1,1-Trichloroethane	ug/L	<0.50	50	50	51.6	50.9	103	102	70-134	1	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	56.6	50.6	113	101	70-130	11	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	52.5	49.3	105	99	70-130	6	20	
1,1-Dichloroethane	ug/L	<0.24	50	50	53.3	51.7	107	103	71-133	3	20	
1,1-Dichloroethene	ug/L	<0.41	50	50	63.2	61.6	126	123	75-136	2	20	
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	62.0	57.0	124	114	70-130	8	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	45.8	43.1	92	86	63-123	6	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	57.4	55.7	115	111	70-130	3	20	
1,2-Dichlorobenzene	ug/L	<0.50	50	50	60.2	55.3	120	111	70-130	8	20	
1,2-Dichloroethane	ug/L	<0.17	50	50	49.1	47.2	98	94	70-131	4	20	
1,2-Dichloropropane	ug/L	<0.23	50	50	48.6	45.5	97	91	80-120	7	20	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

Parameter	Units	40158432005		MS		MSD		MS		MSD		% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	MSD Spike Conc.	Result	MSD Result	% Rec	MSD % Rec							
MATRIX SPIKE & MATRIX SPIKE DUPLICATE:			1588810													
1,3-Dichlorobenzene	ug/L	<0.50	50	50	58.7	54.5	117	109	70-130	8	20					
1,4-Dichlorobenzene	ug/L	<0.50	50	50	58.2	54.5	116	109	70-130	7	20					
Benzene	ug/L	<0.50	50	50	48.7	47.7	97	95	73-145	2	20					
Bromodichloromethane	ug/L	<0.50	50	50	53.0	51.1	106	102	70-130	4	20					
Bromoform	ug/L	<0.50	50	50	57.4	54.3	115	109	67-130	5	20					
Bromomethane	ug/L	<2.4	50	50	39.0	39.1	78	78	26-129	0	20					
Carbon tetrachloride	ug/L	<0.50	50	50	47.4	47.2	95	94	70-134	0	20					
Chlorobenzene	ug/L	<0.50	50	50	58.5	56.2	117	112	70-130	4	20					
Chloroethane	ug/L	<0.37	50	50	45.6	44.4	91	89	58-120	3	20					
Chloroform	ug/L	<2.5	50	50	47.8	53.1	96	106	80-121	11	20					
Chloromethane	ug/L	<0.50	50	50	42.5	41.5	85	83	40-128	2	20					
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	62.9	60.7	126	121	70-130	4	20					
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	50.9	49.7	102	99	70-130	2	20					
Dibromochloromethane	ug/L	<0.50	50	50	52.2	50.6	104	101	70-130	3	20					
Dichlorodifluoromethane	ug/L	<0.22	50	50	30.8	31.0	62	62	20-146	1	20					
Ethylbenzene	ug/L	<0.50	50	50	59.4	57.6	119	115	87-129	3	20					
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	66.0	63.3	132	127	70-130	4	20	M1				
m&p-Xylene	ug/L	<1.0	100	100	134	128	134	128	70-130	4	20	M0				
Methyl-tert-butyl ether	ug/L	<0.17	50	50	55.6	53.3	111	107	66-143	4	20					
Methylene Chloride	ug/L	0.25J	50	50	60.8	60.4	121	120	70-130	1	20					
o-Xylene	ug/L	<0.50	50	50	63.4	61.6	127	123	70-130	3	20					
Styrene	ug/L	<0.50	50	50	69.3	65.8	139	132	70-130	5	20	M0				
Tetrachloroethene	ug/L	<0.50	50	50	58.5	56.5	117	113	70-130	4	20					
Toluene	ug/L	<0.50	50	50	54.7	53.7	109	107	82-131	2	20					
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	67.6	66.0	135	132	75-135	2	20					
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	44.7	42.2	89	84	70-130	6	20					
Trichloroethene	ug/L	<0.33	50	50	54.3	53.3	109	107	70-130	2	20					
Trichlorofluoromethane	ug/L	<0.18	50	50	60.1	57.1	120	114	76-150	5	20					
Vinyl chloride	ug/L	<0.18	50	50	40.5	39.4	81	79	56-143	3	20					
Xylene (Total)	ug/L	<1.5	150	150	197	190	131	127	70-130	4	20	MS				
4-Bromofluorobenzene (S)	%						98	98	61-130							
Dibromofluoromethane (S)	%						92	95	67-130							
Toluene-d8 (S)	%						91	93	70-130							

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

QC Batch: 270485 Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 40158427001, 40158427002, 40158427003, 40158427004, 40158427005, 40158427006, 40158427008, 40158427009, 40158427010, 40158427011, 40158427012, 40158427013

METHOD BLANK: 1589777 Matrix: Solid
Associated Lab Samples: 40158427001, 40158427002, 40158427003, 40158427004, 40158427005, 40158427006, 40158427008, 40158427009, 40158427010, 40158427011, 40158427012, 40158427013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<4.0	13.4	10/13/17 12:05	
2-Methylnaphthalene	ug/kg	<5.0	16.7	10/13/17 12:05	
Acenaphthene	ug/kg	<3.9	12.9	10/13/17 12:05	
Acenaphthylene	ug/kg	<3.3	11.0	10/13/17 12:05	
Anthracene	ug/kg	<5.7	19.0	10/13/17 12:05	
Benzo(a)anthracene	ug/kg	<3.2	10.6	10/13/17 12:05	
Benzo(a)pyrene	ug/kg	<2.5	8.4	10/13/17 12:05	
Benzo(b)fluoranthene	ug/kg	<2.8	9.4	10/13/17 12:05	
Benzo(g,h,i)perylene	ug/kg	<2.0	6.8	10/13/17 12:05	
Benzo(k)fluoranthene	ug/kg	<2.5	8.4	10/13/17 12:05	
Chrysene	ug/kg	<3.4	11.2	10/13/17 12:05	
Dibenz(a,h)anthracene	ug/kg	<2.2	7.5	10/13/17 12:05	
Fluoranthene	ug/kg	<5.2	17.4	10/13/17 12:05	
Fluorene	ug/kg	<4.1	13.8	10/13/17 12:05	
Indeno(1,2,3-cd)pyrene	ug/kg	<2.2	7.3	10/13/17 12:05	
Naphthalene	ug/kg	<8.4	28.1	10/13/17 12:05	
Phenanthrene	ug/kg	<11.7	38.9	10/13/17 12:05	
Pyrene	ug/kg	<4.5	15.0	10/13/17 12:05	
2-Fluorobiphenyl (S)	%	78	23-106	10/13/17 12:05	
Terphenyl-d14 (S)	%	80	29-106	10/13/17 12:05	

LABORATORY CONTROL SAMPLE: 1589778

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	254	76	49-102	
2-Methylnaphthalene	ug/kg	333	245	74	47-91	
Acenaphthene	ug/kg	333	258	78	52-97	
Acenaphthylene	ug/kg	333	257	77	49-97	
Anthracene	ug/kg	333	259	78	62-101	
Benzo(a)anthracene	ug/kg	333	254	76	53-95	
Benzo(a)pyrene	ug/kg	333	262	79	57-108	
Benzo(b)fluoranthene	ug/kg	333	265	80	53-113	
Benzo(g,h,i)perylene	ug/kg	333	248	74	43-114	
Benzo(k)fluoranthene	ug/kg	333	263	79	66-116	
Chrysene	ug/kg	333	258	77	64-109	
Dibenz(a,h)anthracene	ug/kg	333	256	77	50-105	
Fluoranthene	ug/kg	333	255	77	58-107	
Fluorene	ug/kg	333	266	80	52-99	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

LABORATORY CONTROL SAMPLE: 1589778

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Indeno(1,2,3-cd)pyrene	ug/kg	333	259	78	51-113	
Naphthalene	ug/kg	333	238	71	50-91	
Phenanthrene	ug/kg	333	256	77	57-101	
Pyrene	ug/kg	333	256	77	50-102	
2-Fluorobiphenyl (S)	%			84	23-106	
Terphenyl-d14 (S)	%			85	29-106	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1589779 1589780

Parameter	Units	40158339003		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
1-Methylnaphthalene	ug/kg	<15.5	386	386	247	269	63	68	37-102	8	29		
2-Methylnaphthalene	ug/kg	<19.4	386	386	244	260	61	65	44-91	6	36		
Acenaphthene	ug/kg	<0.015	386	386	238	265	61	69	46-97	11	26		
Acenaphthylene	ug/kg	<0.013	386	386	240	266	62	69	47-97	10	29		
Anthracene	ug/kg	<0.022	386	386	225	261	58	68	50-101	15	28		
Benzo(a)anthracene	ug/kg	<0.012	386	386	221	251	57	65	48-95	13	28		
Benzo(a)pyrene	ug/kg	<0.0097	386	386	222	256	57	66	47-108	14	36		
Benzo(b)fluoranthene	ug/kg	<0.011	386	386	219	251	57	65	42-113	14	34		
Benzo(g,h,i)perylene	ug/kg	<0.0079	386	386	210	240	54	62	18-114	14	30		
Benzo(k)fluoranthene	ug/kg	<0.0097	386	386	227	266	59	69	50-116	16	27		
Chrysene	ug/kg	<0.013	386	386	218	252	56	65	55-109	15	28		
Dibenz(a,h)anthracene	ug/kg	<0.0086	386	386	216	250	56	65	39-105	15	29		
Fluoranthene	ug/kg	<0.020	386	386	222	255	57	65	41-107	14	28		
Fluorene	ug/kg	<0.016	386	386	241	275	62	71	48-99	13	28		
Indeno(1,2,3-cd)pyrene	ug/kg	<0.0085	386	386	217	251	56	65	27-113	15	30		
Naphthalene	ug/kg	0.10	386	386	241	257	35	40	40-91	6	37	M1	
Phenanthrene	ug/kg	<0.045	386	386	226	259	57	66	46-101	14	40		
Pyrene	ug/kg	<0.017	386	386	224	256	57	66	50-102	13	31		
2-Fluorobiphenyl (S)	%						60	69	23-106				
Terphenyl-d14 (S)	%						57	65	29-106				

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

QC Batch: 270350 Analysis Method: EPA 8270 by HVI
QC Batch Method: EPA 3510 Analysis Description: 8270 Water PAH by HVI
Associated Lab Samples: 40158427014, 40158427015, 40158427016, 40158427017, 40158427018, 40158427019

METHOD BLANK: 1588883 Matrix: Water
Associated Lab Samples: 40158427014, 40158427015, 40158427016, 40158427017, 40158427018, 40158427019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	<0.0059	0.030	10/13/17 12:27	
2-Methylnaphthalene	ug/L	<0.0049	0.024	10/13/17 12:27	
Acenaphthene	ug/L	<0.0061	0.030	10/13/17 12:27	
Acenaphthylene	ug/L	<0.0050	0.025	10/13/17 12:27	
Anthracene	ug/L	<0.010	0.052	10/13/17 12:27	
Benzo(a)anthracene	ug/L	<0.0076	0.038	10/13/17 12:27	
Benzo(a)pyrene	ug/L	<0.011	0.053	10/13/17 12:27	
Benzo(b)fluoranthene	ug/L	<0.0057	0.029	10/13/17 12:27	
Benzo(g,h,i)perylene	ug/L	<0.0068	0.034	10/13/17 12:27	
Benzo(k)fluoranthene	ug/L	<0.0076	0.038	10/13/17 12:27	
Chrysene	ug/L	<0.013	0.065	10/13/17 12:27	
Dibenz(a,h)anthracene	ug/L	<0.010	0.050	10/13/17 12:27	
Fluoranthene	ug/L	<0.011	0.053	10/13/17 12:27	
Fluorene	ug/L	<0.0080	0.040	10/13/17 12:27	
Indeno(1,2,3-cd)pyrene	ug/L	<0.018	0.088	10/13/17 12:27	
Naphthalene	ug/L	<0.018	0.092	10/13/17 12:27	
Phenanthrene	ug/L	<0.014	0.069	10/13/17 12:27	
Pyrene	ug/L	<0.0076	0.038	10/13/17 12:27	
Total PAHs	ug/L	0.0078		10/13/17 12:27	
2-Fluorobiphenyl (S)	%	53	35-84	10/13/17 12:27	
Terphenyl-d14 (S)	%	84	10-129	10/13/17 12:27	

LABORATORY CONTROL SAMPLE: 1588884

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/L	2	1.5	74	39-83	
2-Methylnaphthalene	ug/L	2	1.5	73	38-86	
Acenaphthene	ug/L	2	1.3	66	35-85	
Acenaphthylene	ug/L	2	1.3	66	31-88	
Anthracene	ug/L	2	1.6	79	47-104	
Benzo(a)anthracene	ug/L	2	1.5	75	36-105	
Benzo(a)pyrene	ug/L	2	1.7	84	69-117	
Benzo(b)fluoranthene	ug/L	2	1.6	80	54-107	
Benzo(g,h,i)perylene	ug/L	2	0.98	49	13-86	
Benzo(k)fluoranthene	ug/L	2	1.8	92	63-128	
Chrysene	ug/L	2	2.2	112	69-150	
Dibenz(a,h)anthracene	ug/L	2	0.73	36	10-87	
Fluoranthene	ug/L	2	1.9	96	57-103	
Fluorene	ug/L	2	1.4	71	38-85	
Indeno(1,2,3-cd)pyrene	ug/L	2	1.5	74	40-111	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

LABORATORY CONTROL SAMPLE: 1588884

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/L	2	1.3	65	39-82	
Phenanthrene	ug/L	2	1.6	82	46-96	
Pyrene	ug/L	2	2.0	99	57-110	
Total PAHs	ug/L		27.5			
2-Fluorobiphenyl (S)	%			63	35-84	
Terphenyl-d14 (S)	%			93	10-129	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1588885 1588886

Parameter	Units	40158407016		1588886		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MS Spike Conc.	MSD Result	MSD Spike Conc.						
1-Methylnaphthalene	ug/L	4.7	2.1	2	6.1	66	90	27-86	7	29	M1
2-Methylnaphthalene	ug/L	0.033	2.1	2	1.6	74	83	30-86	8	35	
Acenaphthene	ug/L	0.49	2.1	2	1.8	61	66	28-85	3	29	
Acenaphthylene	ug/L	0.057	2.1	2	1.4	64	68	27-88	2	29	
Anthracene	ug/L	0.024J	2.1	2	1.6	74	75	38-104	3	35	
Benzo(a)anthracene	ug/L	<0.0079	2.1	2	1.5	70	71	10-105	2	28	
Benzo(a)pyrene	ug/L	<0.011	2.1	2	1.4	66	67	10-130	2	26	
Benzo(b)fluoranthene	ug/L	<0.0060	2.1	2	1.4	65	67	10-115	2	25	
Benzo(g,h,i)perylene	ug/L	<0.0071	2.1	2	0.63	29	29	10-87	4	42	
Benzo(k)fluoranthene	ug/L	<0.0079	2.1	2	1.3	61	62	10-133	3	25	
Chrysene	ug/L	<0.014	2.1	2	1.7	80	80	17-150	5	24	
Dibenz(a,h)anthracene	ug/L	<0.011	2.1	2	0.50	23	23	10-89	6	49	
Fluoranthene	ug/L	0.036J	2.1	2	1.8	81	81	41-103	4	32	
Fluorene	ug/L	0.34	2.1	2	1.8	67	71	32-85	2	28	
Indeno(1,2,3-cd)pyrene	ug/L	<0.019	2.1	2	1.0	47	48	10-111	3	37	
Naphthalene	ug/L	0.14	2.1	2	1.5	63	66	23-88	1	28	
Phenanthrene	ug/L	0.017J	2.1	2	1.6	75	75	33-96	4	25	
Pyrene	ug/L	0.044	2.1	2	1.8	83	83	38-110	5	28	
Total PAHs	ug/L	5.9			30.3	30.4				0	
2-Fluorobiphenyl (S)	%					59	62	35-84			
Terphenyl-d14 (S)	%					74	74	10-129			

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

QC Batch: 270684

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 40158427001, 40158427002, 40158427003, 40158427004

SAMPLE DUPLICATE: 1591555

Parameter	Units	40157957019 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	7.3	7.9	8	10	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

QC Batch:	270720	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	40158427005, 40158427009, 40158427010, 40158427011, 40158427012, 40158427013		

SAMPLE DUPLICATE: 1591644

Parameter	Units	40158509001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	<0.10	<0.10		10	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

QC Batch:	270737	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	40158427006, 40158427008		

SAMPLE DUPLICATE: 1591681

Parameter	Units	40158509002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	<0.10	<0.10		10	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

C4 Sample container did not meet EPA or method requirements.

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

HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.

LS Analyte recovery in the laboratory control sample (LCS) was outside QC limits for one or more of the constituent analytes used in the calculated result.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

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

MS Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.

W Non-detect results are reported on a wet weight basis.

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40158427001	B-2 (3-4')	EPA 3050	270418	EPA 6010	270576
40158427002	B-2 (12-13')	EPA 3050	270418	EPA 6010	270576
40158427003	B-1 (3-4')	EPA 3050	270418	EPA 6010	270576
40158427004	B-1 (11.5-12.5')	EPA 3050	270418	EPA 6010	270576
40158427005	B-4 (2-3')	EPA 3050	270418	EPA 6010	270576
40158427006	B-4 (10-11')	EPA 3050	270418	EPA 6010	270576
40158427008	B-3 (3-4')	EPA 3050	270418	EPA 6010	270576
40158427009	B-3 (11-12')	EPA 3050	270418	EPA 6010	270576
40158427010	B-5 (12.5-13.5')	EPA 3050	270418	EPA 6010	270576
40158427011	B-5 (14-15')	EPA 3050	270418	EPA 6010	270576
40158427012	B-6 (3-4')	EPA 3050	270418	EPA 6010	270576
40158427013	B-6 (11-12')	EPA 3050	270418	EPA 6010	270576
40158427014	TW-2	EPA 3010	270342	EPA 6010	270455
40158427015	TW-1	EPA 3010	270342	EPA 6010	270455
40158427016	TW-4	EPA 3010	270342	EPA 6010	270455
40158427017	TW-3	EPA 3010	270342	EPA 6010	270455
40158427018	TW-5	EPA 3010	270342	EPA 6010	270455
40158427019	TW-6	EPA 3010	270342	EPA 6010	270455
40158427014	TW-2	EPA 7470	270522	EPA 7470	270564
40158427015	TW-1	EPA 7470	270857	EPA 7470	270967
40158427016	TW-4	EPA 7470	270857	EPA 7470	270967
40158427017	TW-3	EPA 7470	270522	EPA 7470	270564
40158427018	TW-5	EPA 7470	270857	EPA 7470	270967
40158427019	TW-6	EPA 7470	270857	EPA 7470	270967
40158427001	B-2 (3-4')	EPA 7471	270711	EPA 7471	270796
40158427002	B-2 (12-13')	EPA 7471	270711	EPA 7471	270796
40158427003	B-1 (3-4')	EPA 7471	270711	EPA 7471	270796
40158427004	B-1 (11.5-12.5')	EPA 7471	270711	EPA 7471	270796
40158427005	B-4 (2-3')	EPA 7471	270711	EPA 7471	270796
40158427006	B-4 (10-11')	EPA 7471	270711	EPA 7471	270796
40158427008	B-3 (3-4')	EPA 7471	270711	EPA 7471	270796
40158427009	B-3 (11-12')	EPA 7471	270711	EPA 7471	270796
40158427010	B-5 (12.5-13.5')	EPA 7471	270711	EPA 7471	270796
40158427011	B-5 (14-15')	EPA 7471	270712	EPA 7471	270797
40158427012	B-6 (3-4')	EPA 7471	270712	EPA 7471	270797
40158427013	B-6 (11-12')	EPA 7471	270712	EPA 7471	270797
40158427001	B-2 (3-4')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427002	B-2 (12-13')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427003	B-1 (3-4')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427004	B-1 (11.5-12.5')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427005	B-4 (2-3')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427006	B-4 (10-11')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427008	B-3 (3-4')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427009	B-3 (11-12')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427010	B-5 (12.5-13.5')	EPA 3546	270485	EPA 8270 by SIM	270534

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40158427011	B-5 (14-15')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427012	B-6 (3-4')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427013	B-6 (11-12')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427014	TW-2	EPA 3510	270350	EPA 8270 by HVI	270442
40158427015	TW-1	EPA 3510	270350	EPA 8270 by HVI	270442
40158427016	TW-4	EPA 3510	270350	EPA 8270 by HVI	270442
40158427017	TW-3	EPA 3510	270350	EPA 8270 by HVI	270442
40158427018	TW-5	EPA 3510	270350	EPA 8270 by HVI	270442
40158427019	TW-6	EPA 3510	270350	EPA 8270 by HVI	270442
40158427001	B-2 (3-4')	EPA 5035/5030B	270424	EPA 8260	270427
40158427002	B-2 (12-13')	EPA 5035/5030B	270402	EPA 8260	270403
40158427003	B-1 (3-4')	EPA 5035/5030B	270402	EPA 8260	270403
40158427004	B-1 (11.5-12.5')	EPA 5035/5030B	270402	EPA 8260	270403
40158427005	B-4 (2-3')	EPA 5035/5030B	270402	EPA 8260	270403
40158427006	B-4 (10-11')	EPA 5035/5030B	270402	EPA 8260	270403
40158427007	TRIP BLANK	EPA 5035/5030B	270402	EPA 8260	270403
40158427008	B-3 (3-4')	EPA 5035/5030B	270402	EPA 8260	270403
40158427009	B-3 (11-12')	EPA 5035/5030B	270402	EPA 8260	270403
40158427010	B-5 (12.5-13.5')	EPA 5035/5030B	270402	EPA 8260	270403
40158427011	B-5 (14-15')	EPA 5035/5030B	270424	EPA 8260	270427
40158427012	B-6 (3-4')	EPA 5035/5030B	270424	EPA 8260	270427
40158427013	B-6 (11-12')	EPA 5035/5030B	270424	EPA 8260	270427
40158427014	TW-2	EPA 8260	270330		
40158427015	TW-1	EPA 8260	270330		
40158427016	TW-4	EPA 8260	270330		
40158427017	TW-3	EPA 8260	270330		
40158427018	TW-5	EPA 8260	270330		
40158427019	TW-6	EPA 8260	270330		
40158427001	B-2 (3-4')	ASTM D2974-87	270684		
40158427002	B-2 (12-13')	ASTM D2974-87	270684		
40158427003	B-1 (3-4')	ASTM D2974-87	270684		
40158427004	B-1 (11.5-12.5')	ASTM D2974-87	270684		
40158427005	B-4 (2-3')	ASTM D2974-87	270720		
40158427006	B-4 (10-11')	ASTM D2974-87	270737		
40158427008	B-3 (3-4')	ASTM D2974-87	270737		
40158427009	B-3 (11-12')	ASTM D2974-87	270720		
40158427010	B-5 (12.5-13.5')	ASTM D2974-87	270720		
40158427011	B-5 (14-15')	ASTM D2974-87	270720		
40158427012	B-6 (3-4')	ASTM D2974-87	270720		
40158427013	B-6 (11-12')	ASTM D2974-87	270720		

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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: **Ramboll Environ**
 Branch/Location: **Brookfield, WI**
 Project Contact: **Susan Petrofske**
 Phone: **(262) 901-3501**
 Project Number: **21-43145B**
 Project Name: **MW Phase II**
 Project State: **WI**
 Sampled By (Print): **Michelle Peters**
 Sampled By (Sign): *[Signature]*
 PO #: _____ Regulatory Program: _____

FILTERED?
(YES/NO)

PRESERVATION
(CODE)*

Y/N	N	N	N								
Analyses Requested	VOCs	PAHs	PCRA & METALS								
Pick Letter	F	A	A								
<i>[Signature]</i>											

Quote #:	
Mail To Contact:	Susan Petrofske
Mail To Company:	Ramboll Environ
Mail To Address:	75 N. Corporate Dr. Ste. 160 Brookfield, WI 53045
Invoice To Contact:	(same)
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	(262) 901-3501
CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)
	Profile #
1-40mL ^F	1-4oz ^A 1-4oz ^{g^A}

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		MATRIX
		DATE	TIME	
001	B-2 (3-4')	10/9/17	0915	S
002	B-2 (12-13')	10/9/17	0920	S
003	B-1 (3-4')	10/9/17	1000	S
004	B-1 (11.5-12.5')	10/9/17	1005	S
005	B-4 (2-3')	10/9/17	1050	S
006	B-4 (10-11')	10/9/17	1055	S
007	TRIP BLANK	10/9/17	—	—
008	B-3 (3-4')	10/9/17	1135	S
009	B-3 (11-12')	10/9/17	1140	S
010	B-5 (12.5-13.5')	10/9/17	1215	S
011	B-5 (14-15')	10/9/17	1220	S
012	B-6 (3-4')	10/9/17	1255	S
013	B-6 (11-12')	10/9/17	1300	S

Rush Turnaround Time Requested - Prelims
 (Rush TAT subject to approval/surcharge)
 Date Needed: **5-10AY TAT**

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: <i>[Signature]</i>	Date/Time: 10/10/17 2:30 PM	Received By: <i>[Signature]</i>	Date/Time: 10/10/17 1:50
Relinquished By: <i>[Signature]</i>	Date/Time: 10/10/17 1800	Received By: <i>[Signature]</i>	Date/Time: _____
Relinquished By: <i>[Signature]</i>	Date/Time: 10/11/17 0925	Received By: <i>[Signature]</i>	Date/Time: 10/11/17 0925
Relinquished By: _____	Date/Time: _____	Received By: _____	Date/Time: _____

PACE Project No.
40158427

Receipt Temp = **RO1** °C

Sample Receipt pH
OK Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

(Please Print Clearly)

UPPER MIDWEST REGION

MN: 612-607-1700 WI: 920-469-2436



40158427

Page 99 of 100

Company Name: **Ramboll Environ**
 Branch/Location: **Brookfield, WI**
 Project Contact: **Susan Petrofske**
 Phone: **262-901-3501**
 Project Number: **21-43145B**
 Project Name: **MU Phase II**
 Project State: **WI**
 Sampled By (Print): **Michelle Peter**
 Sampled By (Sign): *[Signature]*
 PO #: _____ Regulatory Program: _____

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

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

Y/N	N	N	Y						
Pick Letter	B	A	D						
Analyses Requested	VOCs	PAHs	RCRA 8 METALS						

[Handwritten signature across table]

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX
		DATE	TIME	
014	TW-2	10/10/17	0855	GW
015	TW-1	10/10/17	0940	GW
016	TW-4	10/10/17	1010	GW
017	TW-3	10/10/17	1030	GW
018	TW-5	10/10/17	1105	GW
019	TW-6	10/10/17	1135	GW

Quote #: _____
Mail To Contact: **Susan Petrofske**
Mail To Company: **Ramboll Environ**
Mail To Address: **175 N. Corporate Dr. Ste. 1100 Brookfield, WI 53045**
Invoice To Contact: (same)
Invoice To Company: _____
Invoice To Address: _____
Invoice To Phone: (262) 901-3501
CLIENT COMMENTS
LAB COMMENTS (Lab Use Only)
Profile #

3-40ml^B 2-100ml^A 1-250ml^D

[Handwritten signature]

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)
 Date Needed: **5-day TAT**

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: *[Signature]* Date/Time: 10/10/17 2:15PM
 Relinquished By: *[Signature]* Date/Time: 10/10/17 1800
 Relinquished By: *[Signature]* Date/Time: 10/11/17 0925

Received By: *[Signature]* Date/Time: 10/10/17 1505
 Received By: *[Signature]* Date/Time: _____
 Received By: *[Signature]* Date/Time: 0925
 Received By: *[Signature]* Date/Time: 10/11/17

PACE Project No. **40158427**
 Receipt Temp = **201 °C**
 Sample Receipt pH **OK / Adjusted**
 Cooler Custody Seal **Present / Not Present Intact / Not Intact**



Sample Condition Upon Receipt

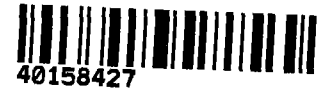
Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Project #: **WO# : 40158427**

Client Name: Ramboll Env

Courier: Fed Ex UPS Client Pace Other: CS Logistics

Tracking #: _____



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: NA Type of Ice: Wet Blue Dry None Samples on ice, cooling process has begun

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

Temp Blank Present: yes no

Person examining contents:
Date: 10/11/17
Initials: KA

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8. <u>no MS/MSD volume as 10/11/17</u>
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	9. <u>all soil vials tare weight covered by client</u>
- Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>004+006 no PAH containers</u>
- Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<u>KA 10/11/17</u>
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
- Includes date/time/ID/Analysis Matrix: <u>WTS</u>		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <input checked="" type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤ 2; NaOH+ZnAct ≥ 9, NaOH ≥ 12)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, Poliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed: <u>KA</u> Lab Std #/D of preservative: _____ Date/Time: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. <u>014x3 (all vials have excessive sediment)</u>
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15. <u>KA 10/11/17</u>
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>67-56-17/KA 10/11/17</u>		

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: 10/12/17

January 26, 2018

Jeanne Tarvin
Ramboll Environ
175 North Corporate Drive
Suite 160
Brookfield, WI 53045

RE: Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Dear Jeanne Tarvin:

Enclosed are the analytical results for sample(s) received by the laboratory on January 13, 2018. 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,



Steven Mleczo
steve.mleczo@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Jim Hutchens, Ramboll Environ
Jim Kane, Ramboll Environ
Snejana Karakis, Environ
David L. Markelz, Ramboll Environ
Michelle Murphy, Environ
Susan Petrofske, Ramboll Environ
Scott Tarmann, Ramboll Environ
Abigail M. Wedig, Environ International Corp



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40163468001	B-7-3	Solid	01/10/18 09:45	01/13/18 08:45
40163468002	B-7-7.5	Solid	01/10/18 09:55	01/13/18 08:45
40163468003	B-14-3	Solid	01/10/18 11:38	01/13/18 08:45
40163468004	B-14-8	Solid	01/10/18 11:42	01/13/18 08:45
40163468005	B-12-3	Solid	01/10/18 12:43	01/13/18 08:45
40163468006	B-12-8	Solid	01/10/18 12:45	01/13/18 08:45
40163468007	B-10-3	Solid	01/10/18 13:00	01/13/18 08:45
40163468008	B-10-8	Solid	01/10/18 13:05	01/13/18 08:45
40163468009	B-9-3	Solid	01/10/18 13:30	01/13/18 08:45
40163468010	B-9-8	Solid	01/10/18 13:35	01/13/18 08:45
40163468011	B-8-3	Solid	01/10/18 13:50	01/13/18 08:45
40163468012	B-8-8	Solid	01/10/18 13:55	01/13/18 08:45
40163468013	B-11-3	Solid	01/10/18 14:20	01/13/18 08:45
40163468014	B-11-8	Solid	01/10/18 14:25	01/13/18 08:45
40163468015	B-13-3	Solid	01/10/18 14:40	01/13/18 08:45
40163468016	B-13-8	Solid	01/10/18 14:45	01/13/18 08:45
40163468017	B-16-3	Solid	01/10/18 15:00	01/13/18 08:45
40163468018	B-16-8	Solid	01/10/18 15:05	01/13/18 08:45
40163468019	B-15-3	Solid	01/10/18 15:15	01/13/18 08:45
40163468020	B-15-8	Solid	01/10/18 15:20	01/13/18 08:45
40163468021	TW-7	Water	01/11/18 11:05	01/13/18 08:45
40163468022	TRIP BLANK	Water	01/11/18 00:00	01/13/18 08:45

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SAMPLE ANALYTE COUNT

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40163468001	B-7-3	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468002	B-7-7.5	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468003	B-14-3	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468004	B-14-8	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468005	B-12-3	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468006	B-12-8	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468007	B-10-3	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468008	B-10-8	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468009	B-9-3	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468010	B-9-8	EPA 6010	JLD	7	PASI-G

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SAMPLE ANALYTE COUNT

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40163468011	B-8-3	EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
40163468012	B-8-8	ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
40163468013	B-11-3	EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
40163468014	B-11-8	ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
40163468015	B-13-3	EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
40163468016	B-13-8	ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
40163468017	B-16-3	EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
40163468018	B-16-8	ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
40163468019	B-15-3	EPA 7471	AJT	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40163468020	B-15-8	EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
40163468021	TW-7	ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7470	AJT	1	PASI-G
40163468022	TRIP BLANK	EPA 8260	HNW	65	PASI-G
		EPA 8260	HNW	65	PASI-G

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40163468001	B-7-3					
EPA 6010	Arsenic	4.4J	mg/kg	5.9	01/19/18 00:06	
EPA 6010	Barium	335	mg/kg	0.59	01/19/18 00:06	
EPA 6010	Cadmium	0.31J	mg/kg	0.59	01/19/18 00:06	
EPA 6010	Chromium	12.4	mg/kg	1.2	01/19/18 00:06	
EPA 6010	Lead	491	mg/kg	1.5	01/19/18 00:06	
EPA 7471	Mercury	0.96	mg/kg	0.040	01/24/18 11:20	
ASTM D2974-87	Percent Moisture	16.9	%	0.10	01/15/18 11:00	
40163468002	B-7-7.5					
EPA 6010	Arsenic	3.0J	mg/kg	5.0	01/19/18 00:09	
EPA 6010	Barium	10.8	mg/kg	0.50	01/19/18 00:09	
EPA 6010	Chromium	6.2	mg/kg	1.0	01/19/18 00:09	
EPA 6010	Lead	5.2	mg/kg	1.3	01/19/18 00:09	
EPA 8260	Tetrachloroethene	29.5J	ug/kg	64.1	01/16/18 12:43	
ASTM D2974-87	Percent Moisture	6.5	%	0.10	01/15/18 11:00	
40163468003	B-14-3					
EPA 6010	Arsenic	5.5J	mg/kg	5.9	01/19/18 00:11	
EPA 6010	Barium	58.4	mg/kg	0.59	01/19/18 00:11	
EPA 6010	Cadmium	0.22J	mg/kg	0.59	01/19/18 00:11	
EPA 6010	Chromium	25.8	mg/kg	1.2	01/19/18 00:11	
EPA 6010	Lead	11.5	mg/kg	1.5	01/19/18 00:11	
EPA 7471	Mercury	0.020J	mg/kg	0.044	01/24/18 11:29	
ASTM D2974-87	Percent Moisture	17.1	%	0.10	01/15/18 11:00	
40163468004	B-14-8					
EPA 6010	Arsenic	4.8J	mg/kg	5.4	01/19/18 00:18	
EPA 6010	Barium	74.2	mg/kg	0.54	01/19/18 00:18	
EPA 6010	Cadmium	0.24J	mg/kg	0.54	01/19/18 00:18	
EPA 6010	Chromium	19.7	mg/kg	1.1	01/19/18 00:18	
EPA 6010	Lead	8.7	mg/kg	1.4	01/19/18 00:18	
EPA 7471	Mercury	0.014J	mg/kg	0.040	01/24/18 11:32	
ASTM D2974-87	Percent Moisture	17.0	%	0.10	01/15/18 11:34	
40163468005	B-12-3					
EPA 6010	Arsenic	4.5J	mg/kg	5.7	01/19/18 00:21	
EPA 6010	Barium	46.5	mg/kg	0.57	01/19/18 00:21	
EPA 6010	Cadmium	0.16J	mg/kg	0.57	01/19/18 00:21	
EPA 6010	Chromium	16.2	mg/kg	1.1	01/19/18 00:21	
EPA 6010	Lead	8.5	mg/kg	1.5	01/19/18 00:21	
EPA 6010	Selenium	1.4J	mg/kg	5.7	01/19/18 00:21	
EPA 7471	Mercury	0.018J	mg/kg	0.040	01/24/18 11:34	
ASTM D2974-87	Percent Moisture	15.0	%	0.10	01/15/18 11:34	
40163468006	B-12-8					
EPA 6010	Arsenic	3.8J	mg/kg	5.9	01/17/18 16:19	
EPA 6010	Barium	61.8	mg/kg	0.59	01/17/18 16:19	
EPA 6010	Cadmium	0.20J	mg/kg	0.59	01/17/18 16:19	
EPA 6010	Chromium	17.6	mg/kg	1.2	01/17/18 16:19	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40163468006	B-12-8					
EPA 6010	Lead	5.8	mg/kg	1.5	01/17/18 16:19	1q
EPA 8260	Tetrachloroethene	38.6J	ug/kg	71.5	01/16/18 14:36	
ASTM D2974-87	Percent Moisture	16.1	%	0.10	01/15/18 11:34	
40163468007	B-10-3					
EPA 6010	Arsenic	9.3	mg/kg	5.8	01/17/18 16:22	
EPA 6010	Barium	83.1	mg/kg	0.58	01/17/18 16:22	
EPA 6010	Cadmium	0.43J	mg/kg	0.58	01/17/18 16:22	
EPA 6010	Chromium	17.2	mg/kg	1.2	01/17/18 16:22	
EPA 6010	Lead	166	mg/kg	1.5	01/17/18 16:22	
EPA 7471	Mercury	0.32	mg/kg	0.042	01/24/18 11:39	
EPA 8260	Tetrachloroethene	19600	ug/kg	221	01/16/18 19:52	
EPA 8260	Trichloroethene	350	ug/kg	221	01/16/18 19:52	
ASTM D2974-87	Percent Moisture	15.1	%	0.10	01/15/18 11:34	
40163468008	B-10-8					
EPA 6010	Arsenic	5.3J	mg/kg	5.6	01/17/18 16:12	
EPA 6010	Barium	17.7	mg/kg	0.56	01/17/18 16:12	
EPA 6010	Cadmium	0.20J	mg/kg	0.56	01/17/18 16:12	
EPA 6010	Chromium	10.2	mg/kg	1.1	01/17/18 16:12	
EPA 6010	Lead	6.4	mg/kg	1.5	01/17/18 16:12	1q
EPA 7471	Mercury	0.019J	mg/kg	0.042	01/24/18 11:41	
EPA 8260	Tetrachloroethene	340	ug/kg	68.1	01/16/18 14:58	
ASTM D2974-87	Percent Moisture	11.9	%	0.10	01/15/18 11:34	
40163468009	B-9-3					
EPA 6010	Arsenic	4.2J	mg/kg	5.3	01/17/18 16:24	
EPA 6010	Barium	17.2	mg/kg	0.53	01/17/18 16:24	
EPA 6010	Chromium	8.2	mg/kg	1.1	01/17/18 16:24	
EPA 6010	Lead	5.2	mg/kg	1.4	01/17/18 16:24	1q
EPA 8260	Tetrachloroethene	80.7J	ug/kg	108	01/16/18 15:21	
ASTM D2974-87	Percent Moisture	15.5	%	0.10	01/15/18 11:34	
40163468010	B-9-8					
EPA 6010	Arsenic	4.6J	mg/kg	5.6	01/19/18 11:06	
EPA 6010	Barium	48.5	mg/kg	0.56	01/19/18 11:06	
EPA 6010	Cadmium	0.19J	mg/kg	0.56	01/19/18 11:06	
EPA 6010	Chromium	23.5	mg/kg	1.1	01/19/18 11:06	
EPA 6010	Lead	8.2	mg/kg	1.5	01/19/18 11:06	
EPA 8260	Tetrachloroethene	3650	ug/kg	95.2	01/16/18 15:44	
ASTM D2974-87	Percent Moisture	16.0	%	0.10	01/15/18 11:34	
40163468011	B-8-3					
EPA 6010	Arsenic	5.1J	mg/kg	5.4	01/17/18 16:29	
EPA 6010	Barium	80.4	mg/kg	0.54	01/17/18 16:29	
EPA 6010	Cadmium	0.18J	mg/kg	0.54	01/17/18 16:29	
EPA 6010	Chromium	29.0	mg/kg	1.1	01/17/18 16:29	
EPA 6010	Lead	12.5	mg/kg	1.4	01/17/18 16:29	
EPA 7471	Mercury	0.042	mg/kg	0.040	01/24/18 11:48	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
40163468011	B-8-3					
ASTM D2974-87	Percent Moisture	17.2	%	0.10	01/15/18 11:34	
40163468012	B-8-8					
EPA 6010	Arsenic	10.4	mg/kg	5.6	01/17/18 16:36	
EPA 6010	Barium	73.4	mg/kg	0.56	01/17/18 16:36	
EPA 6010	Cadmium	0.21J	mg/kg	0.56	01/17/18 16:36	
EPA 6010	Chromium	20.7	mg/kg	1.1	01/17/18 16:36	
EPA 6010	Lead	8.3	mg/kg	1.5	01/17/18 16:36	
EPA 7471	Mercury	0.016J	mg/kg	0.041	01/24/18 11:50	
ASTM D2974-87	Percent Moisture	18.1	%	0.10	01/15/18 11:35	
40163468013	B-11-3					
EPA 6010	Arsenic	5.1J	mg/kg	5.4	01/17/18 16:39	
EPA 6010	Barium	91.9	mg/kg	0.54	01/17/18 16:39	
EPA 6010	Cadmium	0.17J	mg/kg	0.54	01/17/18 16:39	
EPA 6010	Chromium	19.1	mg/kg	1.1	01/17/18 16:39	
EPA 6010	Lead	96.3	mg/kg	1.4	01/17/18 16:39	
EPA 7471	Mercury	0.38	mg/kg	0.039	01/24/18 11:57	
EPA 8260	Tetrachloroethene	50.6J	ug/kg	115	01/16/18 16:52	
ASTM D2974-87	Percent Moisture	15.7	%	0.10	01/15/18 11:35	
40163468014	B-11-8					
EPA 6010	Arsenic	6.9	mg/kg	5.8	01/17/18 16:41	
EPA 6010	Barium	71.9	mg/kg	0.58	01/17/18 16:41	
EPA 6010	Cadmium	0.24J	mg/kg	0.58	01/17/18 16:41	
EPA 6010	Chromium	26.4	mg/kg	1.2	01/17/18 16:41	
EPA 6010	Lead	8.1	mg/kg	1.5	01/17/18 16:41	
EPA 7471	Mercury	0.019J	mg/kg	0.044	01/24/18 11:59	
ASTM D2974-87	Percent Moisture	17.0	%	0.10	01/15/18 11:35	
40163468015	B-13-3					
EPA 6010	Arsenic	4.0J	mg/kg	5.6	01/17/18 16:44	
EPA 6010	Barium	21.8	mg/kg	0.56	01/17/18 16:44	
EPA 6010	Cadmium	0.28J	mg/kg	0.56	01/17/18 16:44	
EPA 6010	Chromium	10.1	mg/kg	1.1	01/17/18 16:44	
EPA 6010	Lead	7.6	mg/kg	1.5	01/17/18 16:44	
EPA 7471	Mercury	0.029J	mg/kg	0.041	01/24/18 12:02	
ASTM D2974-87	Percent Moisture	12.7	%	0.10	01/15/18 11:35	
40163468016	B-13-8					
EPA 6010	Arsenic	5.0J	mg/kg	5.6	01/17/18 16:46	
EPA 6010	Barium	49.5	mg/kg	0.56	01/17/18 16:46	
EPA 6010	Cadmium	0.23J	mg/kg	0.56	01/17/18 16:46	
EPA 6010	Chromium	20.6	mg/kg	1.1	01/17/18 16:46	
EPA 6010	Lead	7.6	mg/kg	1.5	01/17/18 16:46	
EPA 7471	Mercury	0.013J	mg/kg	0.042	01/24/18 12:04	
ASTM D2974-87	Percent Moisture	13.9	%	0.10	01/15/18 11:35	
40163468017	B-16-3					
EPA 6010	Arsenic	4.6J	mg/kg	6.0	01/17/18 16:49	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40163468017	B-16-3					
EPA 6010	Barium	59.8	mg/kg	0.60	01/17/18 16:49	
EPA 6010	Cadmium	0.18J	mg/kg	0.60	01/17/18 16:49	
EPA 6010	Chromium	26.1	mg/kg	1.2	01/17/18 16:49	
EPA 6010	Lead	10.3	mg/kg	1.6	01/17/18 16:49	
EPA 7471	Mercury	0.055	mg/kg	0.041	01/24/18 12:18	
ASTM D2974-87	Percent Moisture	18.2	%	0.10	01/15/18 11:35	
40163468018	B-16-8					
EPA 6010	Arsenic	5.6	mg/kg	5.2	01/17/18 16:51	
EPA 6010	Barium	61.2	mg/kg	0.52	01/17/18 16:51	
EPA 6010	Cadmium	0.15J	mg/kg	0.52	01/17/18 16:51	
EPA 6010	Chromium	18.0	mg/kg	1.0	01/17/18 16:51	
EPA 6010	Lead	7.1	mg/kg	1.4	01/17/18 16:51	
ASTM D2974-87	Percent Moisture	12.8	%	0.10	01/15/18 11:35	
40163468019	B-15-3					
EPA 6010	Arsenic	4.8J	mg/kg	5.9	01/17/18 16:54	
EPA 6010	Barium	71.1	mg/kg	0.59	01/17/18 16:54	
EPA 6010	Chromium	22.2	mg/kg	1.2	01/17/18 16:54	
EPA 6010	Lead	11.2	mg/kg	1.5	01/17/18 16:54	
EPA 7471	Mercury	0.016J	mg/kg	0.044	01/24/18 12:27	
ASTM D2974-87	Percent Moisture	17.2	%	0.10	01/15/18 11:35	
40163468020	B-15-8					
EPA 6010	Arsenic	6.5	mg/kg	6.0	01/19/18 11:08	
EPA 6010	Barium	67.3	mg/kg	0.60	01/19/18 11:08	
EPA 6010	Cadmium	0.29J	mg/kg	0.60	01/19/18 11:08	
EPA 6010	Chromium	27.3	mg/kg	1.2	01/19/18 11:08	
EPA 6010	Lead	9.8	mg/kg	1.6	01/19/18 11:08	
EPA 7471	Mercury	0.045	mg/kg	0.042	01/24/18 12:29	
ASTM D2974-87	Percent Moisture	18.6	%	0.10	01/15/18 11:35	
40163468021	TW-7					
EPA 6010	Barium, Dissolved	170	ug/L	5.0	01/16/18 15:46	
EPA 6010	Silver, Dissolved	3.4J	ug/L	10.0	01/16/18 15:46	
EPA 8260	Chloromethane	1.7	ug/L	1.0	01/15/18 19:02	
EPA 8260	cis-1,2-Dichloroethene	0.49J	ug/L	1.0	01/15/18 19:02	
EPA 8260	Tetrachloroethene	61.8	ug/L	1.0	01/15/18 19:02	
EPA 8260	Trichloroethene	1.7	ug/L	1.0	01/15/18 19:02	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-7-3 Lab ID: 40163468001 Collected: 01/10/18 09:45 Received: 01/13/18 08:45 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									
Arsenic	4.4J	mg/kg	5.9	1.2	1	01/17/18 13:10	01/19/18 00:06	7440-38-2	
Barium	335	mg/kg	0.59	0.18	1	01/17/18 13:10	01/19/18 00:06	7440-39-3	
Cadmium	0.31J	mg/kg	0.59	0.16	1	01/17/18 13:10	01/19/18 00:06	7440-43-9	
Chromium	12.4	mg/kg	1.2	0.33	1	01/17/18 13:10	01/19/18 00:06	7440-47-3	
Lead	491	mg/kg	1.5	0.51	1	01/17/18 13:10	01/19/18 00:06	7439-92-1	
Selenium	<1.3	mg/kg	5.9	1.3	1	01/17/18 13:10	01/19/18 00:06	7782-49-2	
Silver	<0.41	mg/kg	1.2	0.41	1	01/17/18 13:10	01/19/18 00:06	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.96	mg/kg	0.040	0.012	1	01/24/18 06:29	01/24/18 11:20	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	630-20-6	W
1,1,1-Trichloroethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	71-55-6	W
1,1,2,2-Tetrachloroethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	79-34-5	W
1,1,2-Trichloroethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	79-00-5	W
1,1-Dichloroethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-34-3	W
1,1-Dichloroethene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-35-4	W
1,1-Dichloropropene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	563-58-6	W
1,2,3-Trichlorobenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	87-61-6	W
1,2,3-Trichloropropane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	96-18-4	W
1,2,4-Trichlorobenzene	<53.4	ug/kg	281	53.4	1	01/16/18 08:45	01/16/18 13:05	120-82-1	L2,W
1,2,4-Trimethylbenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	95-63-6	W
1,2-Dibromo-3-chloropropane	<103	ug/kg	281	103	1	01/16/18 08:45	01/16/18 13:05	96-12-8	W
1,2-Dibromoethane (EDB)	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	106-93-4	W
1,2-Dichlorobenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	95-50-1	W
1,2-Dichloroethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	107-06-2	W
1,2-Dichloropropane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	78-87-5	W
1,3,5-Trimethylbenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	108-67-8	W
1,3-Dichlorobenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	541-73-1	W
1,3-Dichloropropane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	142-28-9	W
1,4-Dichlorobenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	106-46-7	W
2,2-Dichloropropane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	594-20-7	W
2-Chlorotoluene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	95-49-8	W
4-Chlorotoluene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	106-43-4	W
Benzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	71-43-2	W
Bromobenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	108-86-1	W
Bromochloromethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	74-97-5	W
Bromodichloromethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-27-4	W
Bromoform	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-25-2	W
Bromomethane	<78.5	ug/kg	281	78.5	1	01/16/18 08:45	01/16/18 13:05	74-83-9	W
Carbon tetrachloride	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	56-23-5	W
Chlorobenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	108-90-7	W
Chloroethane	<75.3	ug/kg	281	75.3	1	01/16/18 08:45	01/16/18 13:05	75-00-3	W
Chloroform	<52.2	ug/kg	281	52.2	1	01/16/18 08:45	01/16/18 13:05	67-66-3	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-7-3 **Lab ID: 40163468001** Collected: 01/10/18 09:45 Received: 01/13/18 08:45 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									
Chloromethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	74-87-3	W
Dibromochloromethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	124-48-1	W
Dibromomethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	74-95-3	W
Dichlorodifluoromethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-71-8	W
Diisopropyl ether	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	108-20-3	W
Ethylbenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	100-41-4	W
Hexachloro-1,3-butadiene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	87-68-3	W
Isopropylbenzene (Cumene)	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	98-82-8	W
Methyl-tert-butyl ether	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	1634-04-4	W
Methylene Chloride	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-09-2	W
Naphthalene	<45.0	ug/kg	281	45.0	1	01/16/18 08:45	01/16/18 13:05	91-20-3	W
Styrene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	100-42-5	W
Tetrachloroethene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	127-18-4	W
Toluene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	108-88-3	W
Trichloroethene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	79-01-6	W
Trichlorofluoromethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-69-4	W
Vinyl chloride	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-01-4	W
Xylene (Total)	<84.3	ug/kg	202	84.3	1	01/16/18 08:45	01/16/18 13:05	1330-20-7	W
cis-1,2-Dichloroethene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	156-59-2	W
cis-1,3-Dichloropropene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	10061-01-5	W
m&p-Xylene	<56.2	ug/kg	135	56.2	1	01/16/18 08:45	01/16/18 13:05	179601-23-1	W
n-Butylbenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	104-51-8	W
n-Propylbenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	103-65-1	W
o-Xylene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	95-47-6	W
p-Isopropyltoluene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	99-87-6	W
sec-Butylbenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	135-98-8	W
tert-Butylbenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	98-06-6	W
trans-1,2-Dichloroethene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	156-60-5	W
trans-1,3-Dichloropropene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	121	%	68-130		1	01/16/18 08:45	01/16/18 13:05	1868-53-7	
Toluene-d8 (S)	105	%	68-149		1	01/16/18 08:45	01/16/18 13:05	2037-26-5	
4-Bromofluorobenzene (S)	88	%	58-141		1	01/16/18 08:45	01/16/18 13:05	460-00-4	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	16.9	%	0.10	0.10	1		01/15/18 11:00		
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-7-7.5 **Lab ID: 40163468002** Collected: 01/10/18 09:55 Received: 01/13/18 08:45 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									
Arsenic	3.0J	mg/kg	5.0	1.0	1	01/17/18 13:10	01/19/18 00:09	7440-38-2	
Barium	10.8	mg/kg	0.50	0.15	1	01/17/18 13:10	01/19/18 00:09	7440-39-3	
Cadmium	<0.13	mg/kg	0.50	0.13	1	01/17/18 13:10	01/19/18 00:09	7440-43-9	
Chromium	6.2	mg/kg	1.0	0.28	1	01/17/18 13:10	01/19/18 00:09	7440-47-3	
Lead	5.2	mg/kg	1.3	0.43	1	01/17/18 13:10	01/19/18 00:09	7439-92-1	
Selenium	<1.1	mg/kg	5.0	1.1	1	01/17/18 13:10	01/19/18 00:09	7782-49-2	
Silver	<0.34	mg/kg	1.0	0.34	1	01/17/18 13:10	01/19/18 00:09	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.039	0.012	1	01/24/18 06:29	01/24/18 11:22	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 12:43	120-82-1	L2,W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 12:43	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 12:43	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 12:43	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 12:43	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-7-7.5 **Lab ID: 40163468002** Collected: 01/10/18 09:55 Received: 01/13/18 08:45 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									
Chloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 12:43	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	100-42-5	W
Tetrachloroethene	29.5J	ug/kg	64.1	26.7	1	01/16/18 08:45	01/16/18 12:43	127-18-4	
Toluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 12:43	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 12:43	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	125	%	68-130		1	01/16/18 08:45	01/16/18 12:43	1868-53-7	
Toluene-d8 (S)	106	%	68-149		1	01/16/18 08:45	01/16/18 12:43	2037-26-5	
4-Bromofluorobenzene (S)	90	%	58-141		1	01/16/18 08:45	01/16/18 12:43	460-00-4	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	6.5	%	0.10	0.10	1		01/15/18 11:00		
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-14-3 **Lab ID: 40163468003** Collected: 01/10/18 11:38 Received: 01/13/18 08:45 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									
Arsenic	5.5J	mg/kg	5.9	1.2	1	01/17/18 13:10	01/19/18 00:11	7440-38-2	
Barium	58.4	mg/kg	0.59	0.18	1	01/17/18 13:10	01/19/18 00:11	7440-39-3	
Cadmium	0.22J	mg/kg	0.59	0.16	1	01/17/18 13:10	01/19/18 00:11	7440-43-9	
Chromium	25.8	mg/kg	1.2	0.33	1	01/17/18 13:10	01/19/18 00:11	7440-47-3	
Lead	11.5	mg/kg	1.5	0.51	1	01/17/18 13:10	01/19/18 00:11	7439-92-1	
Selenium	<1.3	mg/kg	5.9	1.3	1	01/17/18 13:10	01/19/18 00:11	7782-49-2	
Silver	<0.41	mg/kg	1.2	0.41	1	01/17/18 13:10	01/19/18 00:11	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.020J	mg/kg	0.044	0.013	1	01/24/18 06:29	01/24/18 11:29	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	630-20-6	W
1,1,1-Trichloroethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	71-55-6	W
1,1,2,2-Tetrachloroethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	79-34-5	W
1,1,2-Trichloroethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	79-00-5	W
1,1-Dichloroethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-34-3	W
1,1-Dichloroethene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-35-4	W
1,1-Dichloropropene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	563-58-6	W
1,2,3-Trichlorobenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	87-61-6	W
1,2,3-Trichloropropane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	96-18-4	W
1,2,4-Trichlorobenzene	<61.8	ug/kg	325	61.8	1	01/16/18 08:45	01/16/18 13:28	120-82-1	L2,W
1,2,4-Trimethylbenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	95-63-6	W
1,2-Dibromo-3-chloropropane	<118	ug/kg	325	118	1	01/16/18 08:45	01/16/18 13:28	96-12-8	W
1,2-Dibromoethane (EDB)	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	106-93-4	W
1,2-Dichlorobenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	95-50-1	W
1,2-Dichloroethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	107-06-2	W
1,2-Dichloropropane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	78-87-5	W
1,3,5-Trimethylbenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	108-67-8	W
1,3-Dichlorobenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	541-73-1	W
1,3-Dichloropropane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	142-28-9	W
1,4-Dichlorobenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	106-46-7	W
2,2-Dichloropropane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	594-20-7	W
2-Chlorotoluene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	95-49-8	W
4-Chlorotoluene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	106-43-4	W
Benzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	71-43-2	W
Bromobenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	108-86-1	W
Bromochloromethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	74-97-5	W
Bromodichloromethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-27-4	W
Bromoform	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-25-2	W
Bromomethane	<90.8	ug/kg	325	90.8	1	01/16/18 08:45	01/16/18 13:28	74-83-9	W
Carbon tetrachloride	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	56-23-5	W
Chlorobenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	108-90-7	W
Chloroethane	<87.0	ug/kg	325	87.0	1	01/16/18 08:45	01/16/18 13:28	75-00-3	W
Chloroform	<60.3	ug/kg	325	60.3	1	01/16/18 08:45	01/16/18 13:28	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-14-3 **Lab ID: 40163468003** Collected: 01/10/18 11:38 Received: 01/13/18 08:45 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							
Chloromethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	74-87-3	W
Dibromochloromethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	124-48-1	W
Dibromomethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	74-95-3	W
Dichlorodifluoromethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-71-8	W
Diisopropyl ether	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	108-20-3	W
Ethylbenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	100-41-4	W
Hexachloro-1,3-butadiene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	87-68-3	W
Isopropylbenzene (Cumene)	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	98-82-8	W
Methyl-tert-butyl ether	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	1634-04-4	W
Methylene Chloride	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-09-2	W
Naphthalene	<52.0	ug/kg	325	52.0	1	01/16/18 08:45	01/16/18 13:28	91-20-3	W
Styrene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	100-42-5	W
Tetrachloroethene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	127-18-4	W
Toluene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	108-88-3	W
Trichloroethene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	79-01-6	W
Trichlorofluoromethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-69-4	W
Vinyl chloride	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-01-4	W
Xylene (Total)	<97.4	ug/kg	234	97.4	1	01/16/18 08:45	01/16/18 13:28	1330-20-7	W
cis-1,2-Dichloroethene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	156-59-2	W
cis-1,3-Dichloropropene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	10061-01-5	W
m&p-Xylene	<64.9	ug/kg	156	64.9	1	01/16/18 08:45	01/16/18 13:28	179601-23-1	W
n-Butylbenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	104-51-8	W
n-Propylbenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	103-65-1	W
o-Xylene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	95-47-6	W
p-Isopropyltoluene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	99-87-6	W
sec-Butylbenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	135-98-8	W
tert-Butylbenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	98-06-6	W
trans-1,2-Dichloroethene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	156-60-5	W
trans-1,3-Dichloropropene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	124	%	68-130		1	01/16/18 08:45	01/16/18 13:28	1868-53-7	
Toluene-d8 (S)	104	%	68-149		1	01/16/18 08:45	01/16/18 13:28	2037-26-5	
4-Bromofluorobenzene (S)	89	%	58-141		1	01/16/18 08:45	01/16/18 13:28	460-00-4	
Percent Moisture		Analytical Method: ASTM D2974-87							
Percent Moisture	17.1	%	0.10	0.10	1		01/15/18 11:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-14-8 Lab ID: 40163468004 Collected: 01/10/18 11:42 Received: 01/13/18 08:45 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									
Arsenic	4.8J	mg/kg	5.4	1.1	1	01/17/18 13:10	01/19/18 00:18	7440-38-2	
Barium	74.2	mg/kg	0.54	0.16	1	01/17/18 13:10	01/19/18 00:18	7440-39-3	
Cadmium	0.24J	mg/kg	0.54	0.14	1	01/17/18 13:10	01/19/18 00:18	7440-43-9	
Chromium	19.7	mg/kg	1.1	0.30	1	01/17/18 13:10	01/19/18 00:18	7440-47-3	
Lead	8.7	mg/kg	1.4	0.47	1	01/17/18 13:10	01/19/18 00:18	7439-92-1	
Selenium	<1.2	mg/kg	5.4	1.2	1	01/17/18 13:10	01/19/18 00:18	7782-49-2	
Silver	<0.37	mg/kg	1.1	0.37	1	01/17/18 13:10	01/19/18 00:18	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.014J	mg/kg	0.040	0.012	1	01/24/18 06:29	01/24/18 11:32	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 13:51	120-82-1	L2,W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 13:51	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 13:51	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 13:51	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 13:51	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-14-8 **Lab ID: 40163468004** Collected: 01/10/18 11:42 Received: 01/13/18 08:45 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									
Chloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 13:51	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 13:51	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 13:51	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	125	%	68-130		1	01/16/18 08:45	01/16/18 13:51	1868-53-7	
Toluene-d8 (S)	107	%	68-149		1	01/16/18 08:45	01/16/18 13:51	2037-26-5	
4-Bromofluorobenzene (S)	90	%	58-141		1	01/16/18 08:45	01/16/18 13:51	460-00-4	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	17.0	%	0.10	0.10	1		01/15/18 11:34		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-12-3 Lab ID: 40163468005 Collected: 01/10/18 12:43 Received: 01/13/18 08:45 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									
Arsenic	4.5J	mg/kg	5.7	1.2	1	01/17/18 13:10	01/19/18 00:21	7440-38-2	
Barium	46.5	mg/kg	0.57	0.17	1	01/17/18 13:10	01/19/18 00:21	7440-39-3	
Cadmium	0.16J	mg/kg	0.57	0.15	1	01/17/18 13:10	01/19/18 00:21	7440-43-9	
Chromium	16.2	mg/kg	1.1	0.32	1	01/17/18 13:10	01/19/18 00:21	7440-47-3	
Lead	8.5	mg/kg	1.5	0.50	1	01/17/18 13:10	01/19/18 00:21	7439-92-1	
Selenium	1.4J	mg/kg	5.7	1.3	1	01/17/18 13:10	01/19/18 00:21	7782-49-2	
Silver	<0.40	mg/kg	1.1	0.40	1	01/17/18 13:10	01/19/18 00:21	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.018J	mg/kg	0.040	0.012	1	01/24/18 06:29	01/24/18 11:34	7439-97-6	
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	630-20-6	W
1,1,1-Trichloroethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	71-55-6	W
1,1,2,2-Tetrachloroethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	79-34-5	W
1,1,2-Trichloroethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	79-00-5	W
1,1-Dichloroethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-34-3	W
1,1-Dichloroethene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-35-4	W
1,1-Dichloropropene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	563-58-6	W
1,2,3-Trichlorobenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	87-61-6	W
1,2,3-Trichloropropane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	96-18-4	W
1,2,4-Trichlorobenzene	<67.0	ug/kg	352	67.0	1	01/16/18 08:45	01/16/18 14:13	120-82-1	L2,W
1,2,4-Trimethylbenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	95-63-6	W
1,2-Dibromo-3-chloropropane	<129	ug/kg	352	129	1	01/16/18 08:45	01/16/18 14:13	96-12-8	W
1,2-Dibromoethane (EDB)	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	106-93-4	W
1,2-Dichlorobenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	95-50-1	W
1,2-Dichloroethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	107-06-2	W
1,2-Dichloropropane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	78-87-5	W
1,3,5-Trimethylbenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	108-67-8	W
1,3-Dichlorobenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	541-73-1	W
1,3-Dichloropropane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	142-28-9	W
1,4-Dichlorobenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	106-46-7	W
2,2-Dichloropropane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	594-20-7	W
2-Chlorotoluene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	95-49-8	W
4-Chlorotoluene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	106-43-4	W
Benzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	71-43-2	W
Bromobenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	108-86-1	W
Bromochloromethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	74-97-5	W
Bromodichloromethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-27-4	W
Bromoform	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-25-2	W
Bromomethane	<98.5	ug/kg	352	98.5	1	01/16/18 08:45	01/16/18 14:13	74-83-9	W
Carbon tetrachloride	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	56-23-5	W
Chlorobenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	108-90-7	W
Chloroethane	<94.4	ug/kg	352	94.4	1	01/16/18 08:45	01/16/18 14:13	75-00-3	W
Chloroform	<65.4	ug/kg	352	65.4	1	01/16/18 08:45	01/16/18 14:13	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-12-3 **Lab ID: 40163468005** Collected: 01/10/18 12:43 Received: 01/13/18 08:45 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							
Chloromethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	74-87-3	W
Dibromochloromethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	124-48-1	W
Dibromomethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	74-95-3	W
Dichlorodifluoromethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-71-8	W
Diisopropyl ether	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	108-20-3	W
Ethylbenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	100-41-4	W
Hexachloro-1,3-butadiene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	87-68-3	W
Isopropylbenzene (Cumene)	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	98-82-8	W
Methyl-tert-butyl ether	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	1634-04-4	W
Methylene Chloride	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-09-2	W
Naphthalene	<56.4	ug/kg	352	56.4	1	01/16/18 08:45	01/16/18 14:13	91-20-3	W
Styrene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	100-42-5	W
Tetrachloroethene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	127-18-4	W
Toluene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	108-88-3	W
Trichloroethene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	79-01-6	W
Trichlorofluoromethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-69-4	W
Vinyl chloride	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-01-4	W
Xylene (Total)	<106	ug/kg	254	106	1	01/16/18 08:45	01/16/18 14:13	1330-20-7	W
cis-1,2-Dichloroethene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	156-59-2	W
cis-1,3-Dichloropropene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	10061-01-5	W
m&p-Xylene	<70.4	ug/kg	169	70.4	1	01/16/18 08:45	01/16/18 14:13	179601-23-1	W
n-Butylbenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	104-51-8	W
n-Propylbenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	103-65-1	W
o-Xylene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	95-47-6	W
p-Isopropyltoluene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	99-87-6	W
sec-Butylbenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	135-98-8	W
tert-Butylbenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	98-06-6	W
trans-1,2-Dichloroethene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	156-60-5	W
trans-1,3-Dichloropropene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	130	%	68-130		1	01/16/18 08:45	01/16/18 14:13	1868-53-7	
Toluene-d8 (S)	106	%	68-149		1	01/16/18 08:45	01/16/18 14:13	2037-26-5	
4-Bromofluorobenzene (S)	89	%	58-141		1	01/16/18 08:45	01/16/18 14:13	460-00-4	
Percent Moisture		Analytical Method: ASTM D2974-87							
Percent Moisture	15.0	%	0.10	0.10	1		01/15/18 11:34		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-12-8 Lab ID: 40163468006 Collected: 01/10/18 12:45 Received: 01/13/18 08:45 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									
Arsenic	3.8J	mg/kg	5.9	1.2	1	01/16/18 13:32	01/17/18 16:19	7440-38-2	
Barium	61.8	mg/kg	0.59	0.18	1	01/16/18 13:32	01/17/18 16:19	7440-39-3	
Cadmium	0.20J	mg/kg	0.59	0.16	1	01/16/18 13:32	01/17/18 16:19	7440-43-9	
Chromium	17.6	mg/kg	1.2	0.33	1	01/16/18 13:32	01/17/18 16:19	7440-47-3	
Lead	5.8	mg/kg	1.5	0.51	1	01/16/18 13:32	01/17/18 16:19	7439-92-1	1q
Selenium	<1.3	mg/kg	5.9	1.3	1	01/16/18 13:32	01/17/18 16:19	7782-49-2	
Silver	<0.41	mg/kg	1.2	0.41	1	01/16/18 13:32	01/17/18 16:19	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.040	0.012	1	01/24/18 06:29	01/24/18 11:36	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 14:36	120-82-1	L2,W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 14:36	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 14:36	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 14:36	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 14:36	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-12-8 **Lab ID: 40163468006** Collected: 01/10/18 12:45 Received: 01/13/18 08:45 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									
Chloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 14:36	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	100-42-5	W
Tetrachloroethene	38.6J	ug/kg	71.5	29.8	1	01/16/18 08:45	01/16/18 14:36	127-18-4	
Toluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 14:36	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 14:36	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	138	%	68-130		1	01/16/18 08:45	01/16/18 14:36	1868-53-7	S3
Toluene-d8 (S)	115	%	68-149		1	01/16/18 08:45	01/16/18 14:36	2037-26-5	
4-Bromofluorobenzene (S)	94	%	58-141		1	01/16/18 08:45	01/16/18 14:36	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	16.1	%	0.10	0.10	1		01/15/18 11:34		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-10-3 Lab ID: 40163468007 Collected: 01/10/18 13:00 Received: 01/13/18 08:45 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									
Arsenic	9.3	mg/kg	5.8	1.2	1	01/16/18 13:32	01/17/18 16:22	7440-38-2	
Barium	83.1	mg/kg	0.58	0.17	1	01/16/18 13:32	01/17/18 16:22	7440-39-3	
Cadmium	0.43J	mg/kg	0.58	0.15	1	01/16/18 13:32	01/17/18 16:22	7440-43-9	
Chromium	17.2	mg/kg	1.2	0.32	1	01/16/18 13:32	01/17/18 16:22	7440-47-3	
Lead	166	mg/kg	1.5	0.50	1	01/16/18 13:32	01/17/18 16:22	7439-92-1	
Selenium	<1.3	mg/kg	5.8	1.3	1	01/16/18 13:32	01/17/18 16:22	7782-49-2	
Silver	<0.40	mg/kg	1.2	0.40	1	01/16/18 13:32	01/17/18 16:22	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.32	mg/kg	0.042	0.013	1	01/24/18 06:29	01/24/18 11:39	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	630-20-6	W
1,1,1-Trichloroethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	71-55-6	W
1,1,2,2-Tetrachloroethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	79-34-5	W
1,1,2-Trichloroethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	79-00-5	W
1,1-Dichloroethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-34-3	W
1,1-Dichloroethene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-35-4	W
1,1-Dichloropropene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	563-58-6	W
1,2,3-Trichlorobenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	87-61-6	W
1,2,3-Trichloropropane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	96-18-4	W
1,2,4-Trichlorobenzene	<149	ug/kg	781	149	2	01/16/18 08:45	01/16/18 19:52	120-82-1	L2,W
1,2,4-Trimethylbenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	95-63-6	W
1,2-Dibromo-3-chloropropane	<285	ug/kg	781	285	2	01/16/18 08:45	01/16/18 19:52	96-12-8	W
1,2-Dibromoethane (EDB)	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	106-93-4	W
1,2-Dichlorobenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	95-50-1	W
1,2-Dichloroethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	107-06-2	W
1,2-Dichloropropane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	78-87-5	W
1,3,5-Trimethylbenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	108-67-8	W
1,3-Dichlorobenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	541-73-1	W
1,3-Dichloropropane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	142-28-9	W
1,4-Dichlorobenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	106-46-7	W
2,2-Dichloropropane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	594-20-7	W
2-Chlorotoluene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	95-49-8	W
4-Chlorotoluene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	106-43-4	W
Benzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	71-43-2	W
Bromobenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	108-86-1	W
Bromochloromethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	74-97-5	W
Bromodichloromethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-27-4	W
Bromoform	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-25-2	W
Bromomethane	<218	ug/kg	781	218	2	01/16/18 08:45	01/16/18 19:52	74-83-9	W
Carbon tetrachloride	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	56-23-5	W
Chlorobenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	108-90-7	W
Chloroethane	<209	ug/kg	781	209	2	01/16/18 08:45	01/16/18 19:52	75-00-3	W
Chloroform	<145	ug/kg	781	145	2	01/16/18 08:45	01/16/18 19:52	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-10-3 **Lab ID: 40163468007** Collected: 01/10/18 13:00 Received: 01/13/18 08:45 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									
Chloromethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	74-87-3	W
Dibromochloromethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	124-48-1	W
Dibromomethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	74-95-3	W
Dichlorodifluoromethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-71-8	W
Diisopropyl ether	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	108-20-3	W
Ethylbenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	100-41-4	W
Hexachloro-1,3-butadiene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	87-68-3	W
Isopropylbenzene (Cumene)	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	98-82-8	W
Methyl-tert-butyl ether	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	1634-04-4	W
Methylene Chloride	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-09-2	W
Naphthalene	<125	ug/kg	781	125	2	01/16/18 08:45	01/16/18 19:52	91-20-3	W
Styrene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	100-42-5	W
Tetrachloroethene	19600	ug/kg	221	92.1	2	01/16/18 08:45	01/16/18 19:52	127-18-4	
Toluene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	108-88-3	W
Trichloroethene	350	ug/kg	221	92.1	2	01/16/18 08:45	01/16/18 19:52	79-01-6	
Trichlorofluoromethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-69-4	W
Vinyl chloride	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-01-4	W
Xylene (Total)	<234	ug/kg	562	234	2	01/16/18 08:45	01/16/18 19:52	1330-20-7	W
cis-1,2-Dichloroethene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	156-59-2	W
cis-1,3-Dichloropropene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	10061-01-5	W
m&p-Xylene	<156	ug/kg	375	156	2	01/16/18 08:45	01/16/18 19:52	179601-23-1	W
n-Butylbenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	104-51-8	W
n-Propylbenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	103-65-1	W
o-Xylene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	95-47-6	W
p-Isopropyltoluene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	99-87-6	W
sec-Butylbenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	135-98-8	W
tert-Butylbenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	98-06-6	W
trans-1,2-Dichloroethene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	156-60-5	W
trans-1,3-Dichloropropene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	123	%	68-130		2	01/16/18 08:45	01/16/18 19:52	1868-53-7	
Toluene-d8 (S)	96	%	68-149		2	01/16/18 08:45	01/16/18 19:52	2037-26-5	
4-Bromofluorobenzene (S)	76	%	58-141		2	01/16/18 08:45	01/16/18 19:52	460-00-4	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	15.1	%	0.10	0.10	1		01/15/18 11:34		
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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-10-8 **Lab ID: 40163468008** Collected: 01/10/18 13:05 Received: 01/13/18 08:45 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									
Arsenic	5.3J	mg/kg	5.6	1.2	1	01/16/18 13:32	01/17/18 16:12	7440-38-2	
Barium	17.7	mg/kg	0.56	0.17	1	01/16/18 13:32	01/17/18 16:12	7440-39-3	
Cadmium	0.20J	mg/kg	0.56	0.15	1	01/16/18 13:32	01/17/18 16:12	7440-43-9	
Chromium	10.2	mg/kg	1.1	0.31	1	01/16/18 13:32	01/17/18 16:12	7440-47-3	
Lead	6.4	mg/kg	1.5	0.49	1	01/16/18 13:32	01/17/18 16:12	7439-92-1	1q
Selenium	<1.3	mg/kg	5.6	1.3	1	01/16/18 13:32	01/17/18 16:12	7782-49-2	
Silver	<0.39	mg/kg	1.1	0.39	1	01/16/18 13:32	01/17/18 16:12	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.019J	mg/kg	0.042	0.012	1	01/24/18 06:29	01/24/18 11:41	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 14:58	120-82-1	L2,W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 14:58	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 14:58	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 14:58	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 14:58	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-10-8 **Lab ID: 40163468008** Collected: 01/10/18 13:05 Received: 01/13/18 08:45 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									
Chloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 14:58	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	100-42-5	W
Tetrachloroethene	340	ug/kg	68.1	28.4	1	01/16/18 08:45	01/16/18 14:58	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 14:58	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 14:58	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	126	%	68-130		1	01/16/18 08:45	01/16/18 14:58	1868-53-7	
Toluene-d8 (S)	104	%	68-149		1	01/16/18 08:45	01/16/18 14:58	2037-26-5	
4-Bromofluorobenzene (S)	87	%	58-141		1	01/16/18 08:45	01/16/18 14:58	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	11.9	%	0.10	0.10	1		01/15/18 11:34		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-9-3 Lab ID: 40163468009 Collected: 01/10/18 13:30 Received: 01/13/18 08:45 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									
Arsenic	4.2J	mg/kg	5.3	1.1	1	01/16/18 13:32	01/17/18 16:24	7440-38-2	
Barium	17.2	mg/kg	0.53	0.16	1	01/16/18 13:32	01/17/18 16:24	7440-39-3	
Cadmium	<0.14	mg/kg	0.53	0.14	1	01/16/18 13:32	01/17/18 16:24	7440-43-9	
Chromium	8.2	mg/kg	1.1	0.29	1	01/16/18 13:32	01/17/18 16:24	7440-47-3	
Lead	5.2	mg/kg	1.4	0.46	1	01/16/18 13:32	01/17/18 16:24	7439-92-1	1q
Selenium	<1.2	mg/kg	5.3	1.2	1	01/16/18 13:32	01/17/18 16:24	7782-49-2	
Silver	<0.36	mg/kg	1.1	0.36	1	01/16/18 13:32	01/17/18 16:24	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.039	0.012	1	01/24/18 06:29	01/24/18 11:43	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	630-20-6	W
1,1,1-Trichloroethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	71-55-6	W
1,1,2,2-Tetrachloroethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	79-34-5	W
1,1,2-Trichloroethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	79-00-5	W
1,1-Dichloroethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-34-3	W
1,1-Dichloroethene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-35-4	W
1,1-Dichloropropene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	563-58-6	W
1,2,3-Trichlorobenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	87-61-6	W
1,2,3-Trichloropropane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	96-18-4	W
1,2,4-Trichlorobenzene	<72.0	ug/kg	379	72.0	1	01/16/18 08:45	01/16/18 15:21	120-82-1	L2,W
1,2,4-Trimethylbenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	95-63-6	W
1,2-Dibromo-3-chloropropane	<138	ug/kg	379	138	1	01/16/18 08:45	01/16/18 15:21	96-12-8	W
1,2-Dibromoethane (EDB)	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	106-93-4	W
1,2-Dichlorobenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	95-50-1	W
1,2-Dichloroethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	107-06-2	W
1,2-Dichloropropane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	78-87-5	W
1,3,5-Trimethylbenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	108-67-8	W
1,3-Dichlorobenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	541-73-1	W
1,3-Dichloropropane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	142-28-9	W
1,4-Dichlorobenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	106-46-7	W
2,2-Dichloropropane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	594-20-7	W
2-Chlorotoluene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	95-49-8	W
4-Chlorotoluene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	106-43-4	W
Benzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	71-43-2	W
Bromobenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	108-86-1	W
Bromochloromethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	74-97-5	W
Bromodichloromethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-27-4	W
Bromoform	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-25-2	W
Bromomethane	<106	ug/kg	379	106	1	01/16/18 08:45	01/16/18 15:21	74-83-9	W
Carbon tetrachloride	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	56-23-5	W
Chlorobenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	108-90-7	W
Chloroethane	<102	ug/kg	379	102	1	01/16/18 08:45	01/16/18 15:21	75-00-3	W
Chloroform	<70.4	ug/kg	379	70.4	1	01/16/18 08:45	01/16/18 15:21	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-9-3 **Lab ID: 40163468009** Collected: 01/10/18 13:30 Received: 01/13/18 08:45 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							
Chloromethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	74-87-3	W
Dibromochloromethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	124-48-1	W
Dibromomethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	74-95-3	W
Dichlorodifluoromethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-71-8	W
Diisopropyl ether	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	108-20-3	W
Ethylbenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	100-41-4	W
Hexachloro-1,3-butadiene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	87-68-3	W
Isopropylbenzene (Cumene)	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	98-82-8	W
Methyl-tert-butyl ether	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	1634-04-4	W
Methylene Chloride	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-09-2	W
Naphthalene	<60.7	ug/kg	379	60.7	1	01/16/18 08:45	01/16/18 15:21	91-20-3	W
Styrene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	100-42-5	W
Tetrachloroethene	80.7J	ug/kg	108	44.8	1	01/16/18 08:45	01/16/18 15:21	127-18-4	
Toluene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	108-88-3	W
Trichloroethene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	79-01-6	W
Trichlorofluoromethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-69-4	W
Vinyl chloride	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-01-4	W
Xylene (Total)	<114	ug/kg	273	114	1	01/16/18 08:45	01/16/18 15:21	1330-20-7	W
cis-1,2-Dichloroethene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	156-59-2	W
cis-1,3-Dichloropropene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	10061-01-5	W
m&p-Xylene	<75.8	ug/kg	182	75.8	1	01/16/18 08:45	01/16/18 15:21	179601-23-1	W
n-Butylbenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	104-51-8	W
n-Propylbenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	103-65-1	W
o-Xylene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	95-47-6	W
p-Isopropyltoluene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	99-87-6	W
sec-Butylbenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	135-98-8	W
tert-Butylbenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	98-06-6	W
trans-1,2-Dichloroethene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	156-60-5	W
trans-1,3-Dichloropropene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	123	%	68-130		1	01/16/18 08:45	01/16/18 15:21	1868-53-7	
Toluene-d8 (S)	102	%	68-149		1	01/16/18 08:45	01/16/18 15:21	2037-26-5	
4-Bromofluorobenzene (S)	84	%	58-141		1	01/16/18 08:45	01/16/18 15:21	460-00-4	
Percent Moisture		Analytical Method: ASTM D2974-87							
Percent Moisture	15.5	%	0.10	0.10	1		01/15/18 11:34		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-9-8 **Lab ID: 40163468010** Collected: 01/10/18 13:35 Received: 01/13/18 08:45 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									
Arsenic	4.6J	mg/kg	5.6	1.2	1	01/16/18 13:32	01/19/18 11:06	7440-38-2	
Barium	48.5	mg/kg	0.56	0.17	1	01/16/18 13:32	01/19/18 11:06	7440-39-3	
Cadmium	0.19J	mg/kg	0.56	0.15	1	01/16/18 13:32	01/19/18 11:06	7440-43-9	
Chromium	23.5	mg/kg	1.1	0.31	1	01/16/18 13:32	01/19/18 11:06	7440-47-3	
Lead	8.2	mg/kg	1.5	0.49	1	01/16/18 13:32	01/19/18 11:06	7439-92-1	
Selenium	<1.3	mg/kg	5.6	1.3	1	01/16/18 13:32	01/19/18 11:06	7782-49-2	
Silver	<0.39	mg/kg	1.1	0.39	1	01/16/18 13:32	01/19/18 11:06	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.013	mg/kg	0.044	0.013	1	01/24/18 06:29	01/24/18 11:45	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	630-20-6	W
1,1,1-Trichloroethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	71-55-6	W
1,1,2,2-Tetrachloroethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	79-34-5	W
1,1,2-Trichloroethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	79-00-5	W
1,1-Dichloroethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-34-3	W
1,1-Dichloroethene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-35-4	W
1,1-Dichloropropene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	563-58-6	W
1,2,3-Trichlorobenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	87-61-6	W
1,2,3-Trichloropropane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	96-18-4	W
1,2,4-Trichlorobenzene	<63.4	ug/kg	333	63.4	1	01/16/18 08:45	01/16/18 15:44	120-82-1	L2,W
1,2,4-Trimethylbenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	95-63-6	W
1,2-Dibromo-3-chloropropane	<122	ug/kg	333	122	1	01/16/18 08:45	01/16/18 15:44	96-12-8	W
1,2-Dibromoethane (EDB)	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	106-93-4	W
1,2-Dichlorobenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	95-50-1	W
1,2-Dichloroethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	107-06-2	W
1,2-Dichloropropane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	78-87-5	W
1,3,5-Trimethylbenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	108-67-8	W
1,3-Dichlorobenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	541-73-1	W
1,3-Dichloropropane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	142-28-9	W
1,4-Dichlorobenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	106-46-7	W
2,2-Dichloropropane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	594-20-7	W
2-Chlorotoluene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	95-49-8	W
4-Chlorotoluene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	106-43-4	W
Benzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	71-43-2	W
Bromobenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	108-86-1	W
Bromochloromethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	74-97-5	W
Bromodichloromethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-27-4	W
Bromoform	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-25-2	W
Bromomethane	<93.2	ug/kg	333	93.2	1	01/16/18 08:45	01/16/18 15:44	74-83-9	W
Carbon tetrachloride	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	56-23-5	W
Chlorobenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	108-90-7	W
Chloroethane	<89.4	ug/kg	333	89.4	1	01/16/18 08:45	01/16/18 15:44	75-00-3	W
Chloroform	<61.9	ug/kg	333	61.9	1	01/16/18 08:45	01/16/18 15:44	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
 Pace Project No.: 40163468

Sample: B-9-8 **Lab ID: 40163468010** Collected: 01/10/18 13:35 Received: 01/13/18 08:45 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									
Chloromethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	74-87-3	W
Dibromochloromethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	124-48-1	W
Dibromomethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	74-95-3	W
Dichlorodifluoromethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-71-8	W
Diisopropyl ether	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	108-20-3	W
Ethylbenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	100-41-4	W
Hexachloro-1,3-butadiene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	87-68-3	W
Isopropylbenzene (Cumene)	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	98-82-8	W
Methyl-tert-butyl ether	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	1634-04-4	W
Methylene Chloride	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-09-2	W
Naphthalene	<53.4	ug/kg	333	53.4	1	01/16/18 08:45	01/16/18 15:44	91-20-3	W
Styrene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	100-42-5	W
Tetrachloroethene	3650	ug/kg	95.2	39.7	1	01/16/18 08:45	01/16/18 15:44	127-18-4	
Toluene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	108-88-3	W
Trichloroethene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	79-01-6	W
Trichlorofluoromethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-69-4	W
Vinyl chloride	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-01-4	W
Xylene (Total)	<100	ug/kg	240	100	1	01/16/18 08:45	01/16/18 15:44	1330-20-7	W
cis-1,2-Dichloroethene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	156-59-2	W
cis-1,3-Dichloropropene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	10061-01-5	W
m&p-Xylene	<66.7	ug/kg	160	66.7	1	01/16/18 08:45	01/16/18 15:44	179601-23-1	W
n-Butylbenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	104-51-8	W
n-Propylbenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	103-65-1	W
o-Xylene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	95-47-6	W
p-Isopropyltoluene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	99-87-6	W
sec-Butylbenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	135-98-8	W
tert-Butylbenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	98-06-6	W
trans-1,2-Dichloroethene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	156-60-5	W
trans-1,3-Dichloropropene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	125	%	68-130		1	01/16/18 08:45	01/16/18 15:44	1868-53-7	
Toluene-d8 (S)	105	%	68-149		1	01/16/18 08:45	01/16/18 15:44	2037-26-5	
4-Bromofluorobenzene (S)	85	%	58-141		1	01/16/18 08:45	01/16/18 15:44	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	16.0	%	0.10	0.10	1		01/15/18 11:34		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-8-3 **Lab ID: 40163468011** Collected: 01/10/18 13:50 Received: 01/13/18 08:45 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									
Arsenic	5.1J	mg/kg	5.4	1.1	1	01/16/18 13:32	01/17/18 16:29	7440-38-2	
Barium	80.4	mg/kg	0.54	0.16	1	01/16/18 13:32	01/17/18 16:29	7440-39-3	
Cadmium	0.18J	mg/kg	0.54	0.14	1	01/16/18 13:32	01/17/18 16:29	7440-43-9	
Chromium	29.0	mg/kg	1.1	0.30	1	01/16/18 13:32	01/17/18 16:29	7440-47-3	
Lead	12.5	mg/kg	1.4	0.46	1	01/16/18 13:32	01/17/18 16:29	7439-92-1	
Selenium	<1.2	mg/kg	5.4	1.2	1	01/16/18 13:32	01/17/18 16:29	7782-49-2	
Silver	<0.37	mg/kg	1.1	0.37	1	01/16/18 13:32	01/17/18 16:29	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.042	mg/kg	0.040	0.012	1	01/24/18 06:29	01/24/18 11:48	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	630-20-6	W
1,1,1-Trichloroethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	71-55-6	W
1,1,2,2-Tetrachloroethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	79-34-5	W
1,1,2-Trichloroethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	79-00-5	W
1,1-Dichloroethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-34-3	W
1,1-Dichloroethene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-35-4	W
1,1-Dichloropropene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	563-58-6	W
1,2,3-Trichlorobenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	87-61-6	W
1,2,3-Trichloropropane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	96-18-4	W
1,2,4-Trichlorobenzene	<52.3	ug/kg	275	52.3	1	01/16/18 08:45	01/16/18 16:06	120-82-1	L2,W
1,2,4-Trimethylbenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	95-63-6	W
1,2-Dibromo-3-chloropropane	<100	ug/kg	275	100	1	01/16/18 08:45	01/16/18 16:06	96-12-8	W
1,2-Dibromoethane (EDB)	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	106-93-4	W
1,2-Dichlorobenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	95-50-1	W
1,2-Dichloroethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	107-06-2	W
1,2-Dichloropropane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	78-87-5	W
1,3,5-Trimethylbenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	108-67-8	W
1,3-Dichlorobenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	541-73-1	W
1,3-Dichloropropane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	142-28-9	W
1,4-Dichlorobenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	106-46-7	W
2,2-Dichloropropane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	594-20-7	W
2-Chlorotoluene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	95-49-8	W
4-Chlorotoluene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	106-43-4	W
Benzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	71-43-2	W
Bromobenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	108-86-1	W
Bromochloromethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	74-97-5	W
Bromodichloromethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-27-4	W
Bromoform	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-25-2	W
Bromomethane	<76.8	ug/kg	275	76.8	1	01/16/18 08:45	01/16/18 16:06	74-83-9	W
Carbon tetrachloride	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	56-23-5	W
Chlorobenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	108-90-7	W
Chloroethane	<73.6	ug/kg	275	73.6	1	01/16/18 08:45	01/16/18 16:06	75-00-3	W
Chloroform	<51.0	ug/kg	275	51.0	1	01/16/18 08:45	01/16/18 16:06	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-8-3 **Lab ID: 40163468011** Collected: 01/10/18 13:50 Received: 01/13/18 08:45 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									
Chloromethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	74-87-3	W
Dibromochloromethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	124-48-1	W
Dibromomethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	74-95-3	W
Dichlorodifluoromethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-71-8	W
Diisopropyl ether	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	108-20-3	W
Ethylbenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	100-41-4	W
Hexachloro-1,3-butadiene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	87-68-3	W
Isopropylbenzene (Cumene)	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	98-82-8	W
Methyl-tert-butyl ether	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	1634-04-4	W
Methylene Chloride	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-09-2	W
Naphthalene	<44.0	ug/kg	275	44.0	1	01/16/18 08:45	01/16/18 16:06	91-20-3	W
Styrene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	100-42-5	W
Tetrachloroethene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	127-18-4	W
Toluene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	108-88-3	W
Trichloroethene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	79-01-6	W
Trichlorofluoromethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-69-4	W
Vinyl chloride	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-01-4	W
Xylene (Total)	<82.4	ug/kg	198	82.4	1	01/16/18 08:45	01/16/18 16:06	1330-20-7	W
cis-1,2-Dichloroethene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	156-59-2	W
cis-1,3-Dichloropropene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	10061-01-5	W
m&p-Xylene	<54.9	ug/kg	132	54.9	1	01/16/18 08:45	01/16/18 16:06	179601-23-1	W
n-Butylbenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	104-51-8	W
n-Propylbenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	103-65-1	W
o-Xylene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	95-47-6	W
p-Isopropyltoluene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	99-87-6	W
sec-Butylbenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	135-98-8	W
tert-Butylbenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	98-06-6	W
trans-1,2-Dichloroethene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	156-60-5	W
trans-1,3-Dichloropropene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	121	%	68-130		1	01/16/18 08:45	01/16/18 16:06	1868-53-7	
Toluene-d8 (S)	98	%	68-149		1	01/16/18 08:45	01/16/18 16:06	2037-26-5	
4-Bromofluorobenzene (S)	81	%	58-141		1	01/16/18 08:45	01/16/18 16:06	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	17.2	%	0.10	0.10	1		01/15/18 11:34		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-8-8 **Lab ID: 40163468012** Collected: 01/10/18 13:55 Received: 01/13/18 08:45 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									
Arsenic	10.4	mg/kg	5.6	1.2	1	01/16/18 13:32	01/17/18 16:36	7440-38-2	
Barium	73.4	mg/kg	0.56	0.17	1	01/16/18 13:32	01/17/18 16:36	7440-39-3	
Cadmium	0.21J	mg/kg	0.56	0.15	1	01/16/18 13:32	01/17/18 16:36	7440-43-9	
Chromium	20.7	mg/kg	1.1	0.31	1	01/16/18 13:32	01/17/18 16:36	7440-47-3	
Lead	8.3	mg/kg	1.5	0.49	1	01/16/18 13:32	01/17/18 16:36	7439-92-1	
Selenium	<1.2	mg/kg	5.6	1.2	1	01/16/18 13:32	01/17/18 16:36	7782-49-2	
Silver	<0.39	mg/kg	1.1	0.39	1	01/16/18 13:32	01/17/18 16:36	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.016J	mg/kg	0.041	0.012	1	01/24/18 06:29	01/24/18 11:50	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 16:29	120-82-1	L2,W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 16:29	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 16:29	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 16:29	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 16:29	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-8-8 **Lab ID: 40163468012** Collected: 01/10/18 13:55 Received: 01/13/18 08:45 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									
Chloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 16:29	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 16:29	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 16:29	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	127	%	68-130		1	01/16/18 08:45	01/16/18 16:29	1868-53-7	
Toluene-d8 (S)	106	%	68-149		1	01/16/18 08:45	01/16/18 16:29	2037-26-5	
4-Bromofluorobenzene (S)	88	%	58-141		1	01/16/18 08:45	01/16/18 16:29	460-00-4	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	18.1	%	0.10	0.10	1		01/15/18 11:35		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-11-3 **Lab ID:** 40163468013 Collected: 01/10/18 14:20 Received: 01/13/18 08:45 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									
Arsenic	5.1J	mg/kg	5.4	1.1	1	01/16/18 13:32	01/17/18 16:39	7440-38-2	
Barium	91.9	mg/kg	0.54	0.16	1	01/16/18 13:32	01/17/18 16:39	7440-39-3	
Cadmium	0.17J	mg/kg	0.54	0.14	1	01/16/18 13:32	01/17/18 16:39	7440-43-9	
Chromium	19.1	mg/kg	1.1	0.30	1	01/16/18 13:32	01/17/18 16:39	7440-47-3	
Lead	96.3	mg/kg	1.4	0.47	1	01/16/18 13:32	01/17/18 16:39	7439-92-1	
Selenium	<1.2	mg/kg	5.4	1.2	1	01/16/18 13:32	01/17/18 16:39	7782-49-2	
Silver	<0.37	mg/kg	1.1	0.37	1	01/16/18 13:32	01/17/18 16:39	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.38	mg/kg	0.039	0.012	1	01/24/18 06:29	01/24/18 11:57	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	630-20-6	W
1,1,1-Trichloroethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	71-55-6	W
1,1,2,2-Tetrachloroethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	79-34-5	W
1,1,2-Trichloroethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	79-00-5	W
1,1-Dichloroethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-34-3	W
1,1-Dichloroethene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-35-4	W
1,1-Dichloropropene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	563-58-6	W
1,2,3-Trichlorobenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	87-61-6	W
1,2,3-Trichloropropane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	96-18-4	W
1,2,4-Trichlorobenzene	<76.7	ug/kg	403	76.7	1	01/16/18 08:45	01/16/18 16:52	120-82-1	L2,W
1,2,4-Trimethylbenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	95-63-6	W
1,2-Dibromo-3-chloropropane	<147	ug/kg	403	147	1	01/16/18 08:45	01/16/18 16:52	96-12-8	W
1,2-Dibromoethane (EDB)	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	106-93-4	W
1,2-Dichlorobenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	95-50-1	W
1,2-Dichloroethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	107-06-2	W
1,2-Dichloropropane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	78-87-5	W
1,3,5-Trimethylbenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	108-67-8	W
1,3-Dichlorobenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	541-73-1	W
1,3-Dichloropropane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	142-28-9	W
1,4-Dichlorobenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	106-46-7	W
2,2-Dichloropropane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	594-20-7	W
2-Chlorotoluene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	95-49-8	W
4-Chlorotoluene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	106-43-4	W
Benzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	71-43-2	W
Bromobenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	108-86-1	W
Bromochloromethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	74-97-5	W
Bromodichloromethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-27-4	W
Bromoform	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-25-2	W
Bromomethane	<113	ug/kg	403	113	1	01/16/18 08:45	01/16/18 16:52	74-83-9	W
Carbon tetrachloride	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	56-23-5	W
Chlorobenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	108-90-7	W
Chloroethane	<108	ug/kg	403	108	1	01/16/18 08:45	01/16/18 16:52	75-00-3	W
Chloroform	<74.9	ug/kg	403	74.9	1	01/16/18 08:45	01/16/18 16:52	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-11-3 **Lab ID: 40163468013** Collected: 01/10/18 14:20 Received: 01/13/18 08:45 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									
Chloromethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	74-87-3	W
Dibromochloromethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	124-48-1	W
Dibromomethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	74-95-3	W
Dichlorodifluoromethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-71-8	W
Diisopropyl ether	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	108-20-3	W
Ethylbenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	100-41-4	W
Hexachloro-1,3-butadiene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	87-68-3	W
Isopropylbenzene (Cumene)	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	98-82-8	W
Methyl-tert-butyl ether	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	1634-04-4	W
Methylene Chloride	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-09-2	W
Naphthalene	<64.6	ug/kg	403	64.6	1	01/16/18 08:45	01/16/18 16:52	91-20-3	W
Styrene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	100-42-5	W
Tetrachloroethene	50.6J	ug/kg	115	47.8	1	01/16/18 08:45	01/16/18 16:52	127-18-4	
Toluene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	108-88-3	W
Trichloroethene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	79-01-6	W
Trichlorofluoromethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-69-4	W
Vinyl chloride	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-01-4	W
Xylene (Total)	<121	ug/kg	290	121	1	01/16/18 08:45	01/16/18 16:52	1330-20-7	W
cis-1,2-Dichloroethene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	156-59-2	W
cis-1,3-Dichloropropene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	10061-01-5	W
m&p-Xylene	<80.6	ug/kg	194	80.6	1	01/16/18 08:45	01/16/18 16:52	179601-23-1	W
n-Butylbenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	104-51-8	W
n-Propylbenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	103-65-1	W
o-Xylene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	95-47-6	W
p-Isopropyltoluene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	99-87-6	W
sec-Butylbenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	135-98-8	W
tert-Butylbenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	98-06-6	W
trans-1,2-Dichloroethene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	156-60-5	W
trans-1,3-Dichloropropene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	130	%	68-130		1	01/16/18 08:45	01/16/18 16:52	1868-53-7	
Toluene-d8 (S)	106	%	68-149		1	01/16/18 08:45	01/16/18 16:52	2037-26-5	
4-Bromofluorobenzene (S)	89	%	58-141		1	01/16/18 08:45	01/16/18 16:52	460-00-4	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	15.7	%	0.10	0.10	1		01/15/18 11:35		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-11-8 Lab ID: 40163468014 Collected: 01/10/18 14:25 Received: 01/13/18 08:45 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							
Arsenic	6.9	mg/kg	5.8	1.2	1	01/16/18 13:32	01/17/18 16:41	7440-38-2	
Barium	71.9	mg/kg	0.58	0.17	1	01/16/18 13:32	01/17/18 16:41	7440-39-3	
Cadmium	0.24J	mg/kg	0.58	0.15	1	01/16/18 13:32	01/17/18 16:41	7440-43-9	
Chromium	26.4	mg/kg	1.2	0.32	1	01/16/18 13:32	01/17/18 16:41	7440-47-3	
Lead	8.1	mg/kg	1.5	0.50	1	01/16/18 13:32	01/17/18 16:41	7439-92-1	
Selenium	<1.3	mg/kg	5.8	1.3	1	01/16/18 13:32	01/17/18 16:41	7782-49-2	
Silver	<0.40	mg/kg	1.2	0.40	1	01/16/18 13:32	01/17/18 16:41	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	0.019J	mg/kg	0.044	0.013	1	01/24/18 06:29	01/24/18 11:59	7439-97-6	
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
1,1,1,2-Tetrachloroethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	630-20-6	W
1,1,1-Trichloroethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	71-55-6	W
1,1,2,2-Tetrachloroethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	79-34-5	W
1,1,2-Trichloroethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	79-00-5	W
1,1-Dichloroethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-34-3	W
1,1-Dichloroethene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-35-4	W
1,1-Dichloropropene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	563-58-6	W
1,2,3-Trichlorobenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	87-61-6	W
1,2,3-Trichloropropane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	96-18-4	W
1,2,4-Trichlorobenzene	<54.0	ug/kg	284	54.0	1	01/16/18 08:45	01/16/18 17:14	120-82-1	L2,W
1,2,4-Trimethylbenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	95-63-6	W
1,2-Dibromo-3-chloropropane	<104	ug/kg	284	104	1	01/16/18 08:45	01/16/18 17:14	96-12-8	W
1,2-Dibromoethane (EDB)	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	106-93-4	W
1,2-Dichlorobenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	95-50-1	W
1,2-Dichloroethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	107-06-2	W
1,2-Dichloropropane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	78-87-5	W
1,3,5-Trimethylbenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	108-67-8	W
1,3-Dichlorobenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	541-73-1	W
1,3-Dichloropropane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	142-28-9	W
1,4-Dichlorobenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	106-46-7	W
2,2-Dichloropropane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	594-20-7	W
2-Chlorotoluene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	95-49-8	W
4-Chlorotoluene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	106-43-4	W
Benzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	71-43-2	W
Bromobenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	108-86-1	W
Bromochloromethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	74-97-5	W
Bromodichloromethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-27-4	W
Bromoform	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-25-2	W
Bromomethane	<79.4	ug/kg	284	79.4	1	01/16/18 08:45	01/16/18 17:14	74-83-9	W
Carbon tetrachloride	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	56-23-5	W
Chlorobenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	108-90-7	W
Chloroethane	<76.2	ug/kg	284	76.2	1	01/16/18 08:45	01/16/18 17:14	75-00-3	W
Chloroform	<52.8	ug/kg	284	52.8	1	01/16/18 08:45	01/16/18 17:14	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Sample Project No.: 40163468

Sample: B-11-8 Lab ID: 40163468014 Collected: 01/10/18 14:25 Received: 01/13/18 08:45 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									
Chloromethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	74-87-3	W
Dibromochloromethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	124-48-1	W
Dibromomethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	74-95-3	W
Dichlorodifluoromethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-71-8	W
Diisopropyl ether	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	108-20-3	W
Ethylbenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	100-41-4	W
Hexachloro-1,3-butadiene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	87-68-3	W
Isopropylbenzene (Cumene)	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	98-82-8	W
Methyl-tert-butyl ether	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	1634-04-4	W
Methylene Chloride	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-09-2	W
Naphthalene	<45.5	ug/kg	284	45.5	1	01/16/18 08:45	01/16/18 17:14	91-20-3	W
Styrene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	100-42-5	W
Tetrachloroethene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	127-18-4	W
Toluene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	108-88-3	W
Trichloroethene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	79-01-6	W
Trichlorofluoromethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-69-4	W
Vinyl chloride	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-01-4	W
Xylene (Total)	<85.2	ug/kg	205	85.2	1	01/16/18 08:45	01/16/18 17:14	1330-20-7	W
cis-1,2-Dichloroethene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	156-59-2	W
cis-1,3-Dichloropropene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	10061-01-5	W
m&p-Xylene	<56.8	ug/kg	136	56.8	1	01/16/18 08:45	01/16/18 17:14	179601-23-1	W
n-Butylbenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	104-51-8	W
n-Propylbenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	103-65-1	W
o-Xylene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	95-47-6	W
p-Isopropyltoluene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	99-87-6	W
sec-Butylbenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	135-98-8	W
tert-Butylbenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	98-06-6	W
trans-1,2-Dichloroethene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	156-60-5	W
trans-1,3-Dichloropropene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	120	%	68-130		1	01/16/18 08:45	01/16/18 17:14	1868-53-7	
Toluene-d8 (S)	96	%	68-149		1	01/16/18 08:45	01/16/18 17:14	2037-26-5	
4-Bromofluorobenzene (S)	81	%	58-141		1	01/16/18 08:45	01/16/18 17:14	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	17.0	%	0.10	0.10	1		01/15/18 11:35		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-13-3 **Lab ID: 40163468015** Collected: 01/10/18 14:40 Received: 01/13/18 08:45 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									
Arsenic	4.0J	mg/kg	5.6	1.2	1	01/16/18 13:32	01/17/18 16:44	7440-38-2	
Barium	21.8	mg/kg	0.56	0.17	1	01/16/18 13:32	01/17/18 16:44	7440-39-3	
Cadmium	0.28J	mg/kg	0.56	0.15	1	01/16/18 13:32	01/17/18 16:44	7440-43-9	
Chromium	10.1	mg/kg	1.1	0.31	1	01/16/18 13:32	01/17/18 16:44	7440-47-3	
Lead	7.6	mg/kg	1.5	0.49	1	01/16/18 13:32	01/17/18 16:44	7439-92-1	
Selenium	<1.3	mg/kg	5.6	1.3	1	01/16/18 13:32	01/17/18 16:44	7782-49-2	
Silver	<0.39	mg/kg	1.1	0.39	1	01/16/18 13:32	01/17/18 16:44	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.029J	mg/kg	0.041	0.012	1	01/24/18 06:29	01/24/18 12:02	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	630-20-6	W
1,1,1-Trichloroethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	71-55-6	W
1,1,2,2-Tetrachloroethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	79-34-5	W
1,1,2-Trichloroethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	79-00-5	W
1,1-Dichloroethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-34-3	W
1,1-Dichloroethene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-35-4	W
1,1-Dichloropropene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	563-58-6	W
1,2,3-Trichlorobenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	87-61-6	W
1,2,3-Trichloropropane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	96-18-4	W
1,2,4-Trichlorobenzene	<51.7	ug/kg	272	51.7	1	01/16/18 08:45	01/16/18 17:37	120-82-1	L2,W
1,2,4-Trimethylbenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	95-63-6	W
1,2-Dibromo-3-chloropropane	<99.2	ug/kg	272	99.2	1	01/16/18 08:45	01/16/18 17:37	96-12-8	W
1,2-Dibromoethane (EDB)	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	106-93-4	W
1,2-Dichlorobenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	95-50-1	W
1,2-Dichloroethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	107-06-2	W
1,2-Dichloropropane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	78-87-5	W
1,3,5-Trimethylbenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	108-67-8	W
1,3-Dichlorobenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	541-73-1	W
1,3-Dichloropropane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	142-28-9	W
1,4-Dichlorobenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	106-46-7	W
2,2-Dichloropropane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	594-20-7	W
2-Chlorotoluene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	95-49-8	W
4-Chlorotoluene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	106-43-4	W
Benzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	71-43-2	W
Bromobenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	108-86-1	W
Bromochloromethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	74-97-5	W
Bromodichloromethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-27-4	W
Bromoform	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-25-2	W
Bromomethane	<76.0	ug/kg	272	76.0	1	01/16/18 08:45	01/16/18 17:37	74-83-9	W
Carbon tetrachloride	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	56-23-5	W
Chlorobenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	108-90-7	W
Chloroethane	<72.8	ug/kg	272	72.8	1	01/16/18 08:45	01/16/18 17:37	75-00-3	W
Chloroform	<50.5	ug/kg	272	50.5	1	01/16/18 08:45	01/16/18 17:37	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-13-3 **Lab ID: 40163468015** Collected: 01/10/18 14:40 Received: 01/13/18 08:45 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									
Chloromethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	74-87-3	W
Dibromochloromethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	124-48-1	W
Dibromomethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	74-95-3	W
Dichlorodifluoromethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-71-8	W
Diisopropyl ether	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	108-20-3	W
Ethylbenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	100-41-4	W
Hexachloro-1,3-butadiene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	87-68-3	W
Isopropylbenzene (Cumene)	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	98-82-8	W
Methyl-tert-butyl ether	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	1634-04-4	W
Methylene Chloride	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-09-2	W
Naphthalene	<43.5	ug/kg	272	43.5	1	01/16/18 08:45	01/16/18 17:37	91-20-3	W
Styrene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	100-42-5	W
Tetrachloroethene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	127-18-4	W
Toluene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	108-88-3	W
Trichloroethene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	79-01-6	W
Trichlorofluoromethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-69-4	W
Vinyl chloride	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-01-4	W
Xylene (Total)	<81.5	ug/kg	196	81.5	1	01/16/18 08:45	01/16/18 17:37	1330-20-7	W
cis-1,2-Dichloroethene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	156-59-2	W
cis-1,3-Dichloropropene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	10061-01-5	W
m&p-Xylene	<54.3	ug/kg	130	54.3	1	01/16/18 08:45	01/16/18 17:37	179601-23-1	W
n-Butylbenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	104-51-8	W
n-Propylbenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	103-65-1	W
o-Xylene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	95-47-6	W
p-Isopropyltoluene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	99-87-6	W
sec-Butylbenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	135-98-8	W
tert-Butylbenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	98-06-6	W
trans-1,2-Dichloroethene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	156-60-5	W
trans-1,3-Dichloropropene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	128	%	68-130		1	01/16/18 08:45	01/16/18 17:37	1868-53-7	
Toluene-d8 (S)	105	%	68-149		1	01/16/18 08:45	01/16/18 17:37	2037-26-5	
4-Bromofluorobenzene (S)	90	%	58-141		1	01/16/18 08:45	01/16/18 17:37	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	12.7	%	0.10	0.10	1		01/15/18 11:35		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-13-8 Lab ID: 40163468016 Collected: 01/10/18 14:45 Received: 01/13/18 08:45 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									
Arsenic	5.0J	mg/kg	5.6	1.2	1	01/16/18 13:32	01/17/18 16:46	7440-38-2	
Barium	49.5	mg/kg	0.56	0.17	1	01/16/18 13:32	01/17/18 16:46	7440-39-3	
Cadmium	0.23J	mg/kg	0.56	0.15	1	01/16/18 13:32	01/17/18 16:46	7440-43-9	
Chromium	20.6	mg/kg	1.1	0.31	1	01/16/18 13:32	01/17/18 16:46	7440-47-3	
Lead	7.6	mg/kg	1.5	0.49	1	01/16/18 13:32	01/17/18 16:46	7439-92-1	
Selenium	<1.2	mg/kg	5.6	1.2	1	01/16/18 13:32	01/17/18 16:46	7782-49-2	
Silver	<0.39	mg/kg	1.1	0.39	1	01/16/18 13:32	01/17/18 16:46	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.013J	mg/kg	0.042	0.012	1	01/24/18 06:29	01/24/18 12:04	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 17:59	120-82-1	L2,W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 17:59	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 17:59	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 17:59	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 17:59	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-13-8 **Lab ID: 40163468016** Collected: 01/10/18 14:45 Received: 01/13/18 08:45 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									
Chloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 17:59	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 17:59	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 17:59	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	128	%	68-130		1	01/16/18 08:45	01/16/18 17:59	1868-53-7	
Toluene-d8 (S)	102	%	68-149		1	01/16/18 08:45	01/16/18 17:59	2037-26-5	
4-Bromofluorobenzene (S)	85	%	58-141		1	01/16/18 08:45	01/16/18 17:59	460-00-4	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	13.9	%	0.10	0.10	1		01/15/18 11:35		
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-16-3 Lab ID: 40163468017 Collected: 01/10/18 15:00 Received: 01/13/18 08:45 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									
Arsenic	4.6J	mg/kg	6.0	1.3	1	01/16/18 13:32	01/17/18 16:49	7440-38-2	
Barium	59.8	mg/kg	0.60	0.18	1	01/16/18 13:32	01/17/18 16:49	7440-39-3	
Cadmium	0.18J	mg/kg	0.60	0.16	1	01/16/18 13:32	01/17/18 16:49	7440-43-9	
Chromium	26.1	mg/kg	1.2	0.34	1	01/16/18 13:32	01/17/18 16:49	7440-47-3	
Lead	10.3	mg/kg	1.6	0.52	1	01/16/18 13:32	01/17/18 16:49	7439-92-1	
Selenium	<1.3	mg/kg	6.0	1.3	1	01/16/18 13:32	01/17/18 16:49	7782-49-2	
Silver	<0.41	mg/kg	1.2	0.41	1	01/16/18 13:32	01/17/18 16:49	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.055	mg/kg	0.041	0.012	1	01/24/18 06:29	01/24/18 12:18	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 18:22	120-82-1	L2,W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 18:22	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 18:22	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 18:22	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 18:22	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-16-3 **Lab ID: 40163468017** Collected: 01/10/18 15:00 Received: 01/13/18 08:45 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									
Chloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 18:22	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 18:22	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 18:22	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	118	%	68-130		1	01/16/18 08:45	01/16/18 18:22	1868-53-7	
Toluene-d8 (S)	92	%	68-149		1	01/16/18 08:45	01/16/18 18:22	2037-26-5	
4-Bromofluorobenzene (S)	74	%	58-141		1	01/16/18 08:45	01/16/18 18:22	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	18.2	%	0.10	0.10	1		01/15/18 11:35		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-16-8 **Lab ID: 40163468018** Collected: 01/10/18 15:05 Received: 01/13/18 08:45 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									
Arsenic	5.6	mg/kg	5.2	1.1	1	01/16/18 13:32	01/17/18 16:51	7440-38-2	
Barium	61.2	mg/kg	0.52	0.16	1	01/16/18 13:32	01/17/18 16:51	7440-39-3	
Cadmium	0.15J	mg/kg	0.52	0.14	1	01/16/18 13:32	01/17/18 16:51	7440-43-9	
Chromium	18.0	mg/kg	1.0	0.29	1	01/16/18 13:32	01/17/18 16:51	7440-47-3	
Lead	7.1	mg/kg	1.4	0.45	1	01/16/18 13:32	01/17/18 16:51	7439-92-1	
Selenium	<1.2	mg/kg	5.2	1.2	1	01/16/18 13:32	01/17/18 16:51	7782-49-2	
Silver	<0.36	mg/kg	1.0	0.36	1	01/16/18 13:32	01/17/18 16:51	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.041	0.012	1	01/24/18 06:29	01/24/18 12:25	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 18:45	120-82-1	L2,W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 18:45	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 18:45	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 18:45	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 18:45	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-16-8 **Lab ID: 40163468018** Collected: 01/10/18 15:05 Received: 01/13/18 08:45 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									
Chloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 18:45	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 18:45	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 18:45	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	131	%	68-130		1	01/16/18 08:45	01/16/18 18:45	1868-53-7	S3
Toluene-d8 (S)	107	%	68-149		1	01/16/18 08:45	01/16/18 18:45	2037-26-5	
4-Bromofluorobenzene (S)	88	%	58-141		1	01/16/18 08:45	01/16/18 18:45	460-00-4	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	12.8	%	0.10	0.10	1		01/15/18 11:35		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-15-3 **Lab ID:** 40163468019 Collected: 01/10/18 15:15 Received: 01/13/18 08:45 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									
Arsenic	4.8J	mg/kg	5.9	1.2	1	01/16/18 13:32	01/17/18 16:54	7440-38-2	
Barium	71.1	mg/kg	0.59	0.18	1	01/16/18 13:32	01/17/18 16:54	7440-39-3	
Cadmium	<0.16	mg/kg	0.59	0.16	1	01/16/18 13:32	01/17/18 16:54	7440-43-9	
Chromium	22.2	mg/kg	1.2	0.33	1	01/16/18 13:32	01/17/18 16:54	7440-47-3	
Lead	11.2	mg/kg	1.5	0.51	1	01/16/18 13:32	01/17/18 16:54	7439-92-1	
Selenium	<1.3	mg/kg	5.9	1.3	1	01/16/18 13:32	01/17/18 16:54	7782-49-2	
Silver	<0.40	mg/kg	1.2	0.40	1	01/16/18 13:32	01/17/18 16:54	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.016J	mg/kg	0.044	0.013	1	01/24/18 06:29	01/24/18 12:27	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	630-20-6	W
1,1,1-Trichloroethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	71-55-6	W
1,1,2,2-Tetrachloroethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	79-34-5	W
1,1,2-Trichloroethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	79-00-5	W
1,1-Dichloroethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-34-3	W
1,1-Dichloroethene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-35-4	W
1,1-Dichloropropene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	563-58-6	W
1,2,3-Trichlorobenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	87-61-6	W
1,2,3-Trichloropropane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	96-18-4	W
1,2,4-Trichlorobenzene	<52.8	ug/kg	278	52.8	1	01/16/18 08:45	01/16/18 19:07	120-82-1	L2,W
1,2,4-Trimethylbenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	95-63-6	W
1,2-Dibromo-3-chloropropane	<101	ug/kg	278	101	1	01/16/18 08:45	01/16/18 19:07	96-12-8	W
1,2-Dibromoethane (EDB)	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	106-93-4	W
1,2-Dichlorobenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	95-50-1	W
1,2-Dichloroethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	107-06-2	W
1,2-Dichloropropane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	78-87-5	W
1,3,5-Trimethylbenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	108-67-8	W
1,3-Dichlorobenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	541-73-1	W
1,3-Dichloropropane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	142-28-9	W
1,4-Dichlorobenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	106-46-7	W
2,2-Dichloropropane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	594-20-7	W
2-Chlorotoluene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	95-49-8	W
4-Chlorotoluene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	106-43-4	W
Benzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	71-43-2	W
Bromobenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	108-86-1	W
Bromochloromethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	74-97-5	W
Bromodichloromethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-27-4	W
Bromoform	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-25-2	W
Bromomethane	<77.7	ug/kg	278	77.7	1	01/16/18 08:45	01/16/18 19:07	74-83-9	W
Carbon tetrachloride	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	56-23-5	W
Chlorobenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	108-90-7	W
Chloroethane	<74.5	ug/kg	278	74.5	1	01/16/18 08:45	01/16/18 19:07	75-00-3	W
Chloroform	<51.6	ug/kg	278	51.6	1	01/16/18 08:45	01/16/18 19:07	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-15-3 **Lab ID: 40163468019** Collected: 01/10/18 15:15 Received: 01/13/18 08:45 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									
Chloromethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	74-87-3	W
Dibromochloromethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	124-48-1	W
Dibromomethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	74-95-3	W
Dichlorodifluoromethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-71-8	W
Diisopropyl ether	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	108-20-3	W
Ethylbenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	100-41-4	W
Hexachloro-1,3-butadiene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	87-68-3	W
Isopropylbenzene (Cumene)	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	98-82-8	W
Methyl-tert-butyl ether	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	1634-04-4	W
Methylene Chloride	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-09-2	W
Naphthalene	<44.5	ug/kg	278	44.5	1	01/16/18 08:45	01/16/18 19:07	91-20-3	W
Styrene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	100-42-5	W
Tetrachloroethene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	127-18-4	W
Toluene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	108-88-3	W
Trichloroethene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	79-01-6	W
Trichlorofluoromethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-69-4	W
Vinyl chloride	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-01-4	W
Xylene (Total)	<83.3	ug/kg	200	83.3	1	01/16/18 08:45	01/16/18 19:07	1330-20-7	W
cis-1,2-Dichloroethene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	156-59-2	W
cis-1,3-Dichloropropene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	10061-01-5	W
m&p-Xylene	<55.6	ug/kg	133	55.6	1	01/16/18 08:45	01/16/18 19:07	179601-23-1	W
n-Butylbenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	104-51-8	W
n-Propylbenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	103-65-1	W
o-Xylene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	95-47-6	W
p-Isopropyltoluene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	99-87-6	W
sec-Butylbenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	135-98-8	W
tert-Butylbenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	98-06-6	W
trans-1,2-Dichloroethene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	156-60-5	W
trans-1,3-Dichloropropene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	136	%	68-130		1	01/16/18 08:45	01/16/18 19:07	1868-53-7	S3
Toluene-d8 (S)	109	%	68-149		1	01/16/18 08:45	01/16/18 19:07	2037-26-5	
4-Bromofluorobenzene (S)	93	%	58-141		1	01/16/18 08:45	01/16/18 19:07	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	17.2	%	0.10	0.10	1		01/15/18 11:35		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-15-8 **Lab ID: 40163468020** Collected: 01/10/18 15:20 Received: 01/13/18 08:45 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									
Arsenic	6.5	mg/kg	6.0	1.3	1	01/16/18 13:32	01/19/18 11:08	7440-38-2	
Barium	67.3	mg/kg	0.60	0.18	1	01/16/18 13:32	01/19/18 11:08	7440-39-3	
Cadmium	0.29J	mg/kg	0.60	0.16	1	01/16/18 13:32	01/19/18 11:08	7440-43-9	
Chromium	27.3	mg/kg	1.2	0.33	1	01/16/18 13:32	01/19/18 11:08	7440-47-3	
Lead	9.8	mg/kg	1.6	0.52	1	01/16/18 13:32	01/19/18 11:08	7439-92-1	
Selenium	<1.3	mg/kg	6.0	1.3	1	01/16/18 13:32	01/19/18 11:08	7782-49-2	
Silver	<0.41	mg/kg	1.2	0.41	1	01/16/18 13:32	01/19/18 11:08	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.045	mg/kg	0.042	0.013	1	01/24/18 06:29	01/24/18 12:29	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	630-20-6	W
1,1,1-Trichloroethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	71-55-6	W
1,1,2,2-Tetrachloroethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	79-34-5	W
1,1,2-Trichloroethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	79-00-5	W
1,1-Dichloroethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-34-3	W
1,1-Dichloroethene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-35-4	W
1,1-Dichloropropene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	563-58-6	W
1,2,3-Trichlorobenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	87-61-6	W
1,2,3-Trichloropropane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	96-18-4	W
1,2,4-Trichlorobenzene	<57.3	ug/kg	301	57.3	1	01/16/18 08:45	01/16/18 19:30	120-82-1	L2,W
1,2,4-Trimethylbenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	95-63-6	W
1,2-Dibromo-3-chloropropane	<110	ug/kg	301	110	1	01/16/18 08:45	01/16/18 19:30	96-12-8	W
1,2-Dibromoethane (EDB)	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	106-93-4	W
1,2-Dichlorobenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	95-50-1	W
1,2-Dichloroethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	107-06-2	W
1,2-Dichloropropane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	78-87-5	W
1,3,5-Trimethylbenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	108-67-8	W
1,3-Dichlorobenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	541-73-1	W
1,3-Dichloropropane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	142-28-9	W
1,4-Dichlorobenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	106-46-7	W
2,2-Dichloropropane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	594-20-7	W
2-Chlorotoluene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	95-49-8	W
4-Chlorotoluene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	106-43-4	W
Benzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	71-43-2	W
Bromobenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	108-86-1	W
Bromochloromethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	74-97-5	W
Bromodichloromethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-27-4	W
Bromoform	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-25-2	W
Bromomethane	<84.2	ug/kg	301	84.2	1	01/16/18 08:45	01/16/18 19:30	74-83-9	W
Carbon tetrachloride	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	56-23-5	W
Chlorobenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	108-90-7	W
Chloroethane	<80.7	ug/kg	301	80.7	1	01/16/18 08:45	01/16/18 19:30	75-00-3	W
Chloroform	<56.0	ug/kg	301	56.0	1	01/16/18 08:45	01/16/18 19:30	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-15-8 **Lab ID: 40163468020** Collected: 01/10/18 15:20 Received: 01/13/18 08:45 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									
Chloromethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	74-87-3	W
Dibromochloromethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	124-48-1	W
Dibromomethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	74-95-3	W
Dichlorodifluoromethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-71-8	W
Diisopropyl ether	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	108-20-3	W
Ethylbenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	100-41-4	W
Hexachloro-1,3-butadiene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	87-68-3	W
Isopropylbenzene (Cumene)	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	98-82-8	W
Methyl-tert-butyl ether	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	1634-04-4	W
Methylene Chloride	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-09-2	W
Naphthalene	<48.2	ug/kg	301	48.2	1	01/16/18 08:45	01/16/18 19:30	91-20-3	W
Styrene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	100-42-5	W
Tetrachloroethene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	127-18-4	W
Toluene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	108-88-3	W
Trichloroethene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	79-01-6	W
Trichlorofluoromethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-69-4	W
Vinyl chloride	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-01-4	W
Xylene (Total)	<90.4	ug/kg	217	90.4	1	01/16/18 08:45	01/16/18 19:30	1330-20-7	W
cis-1,2-Dichloroethene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	156-59-2	W
cis-1,3-Dichloropropene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	10061-01-5	W
m&p-Xylene	<60.2	ug/kg	145	60.2	1	01/16/18 08:45	01/16/18 19:30	179601-23-1	W
n-Butylbenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	104-51-8	W
n-Propylbenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	103-65-1	W
o-Xylene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	95-47-6	W
p-Isopropyltoluene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	99-87-6	W
sec-Butylbenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	135-98-8	W
tert-Butylbenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	98-06-6	W
trans-1,2-Dichloroethene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	156-60-5	W
trans-1,3-Dichloropropene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	119	%	68-130		1	01/16/18 08:45	01/16/18 19:30	1868-53-7	
Toluene-d8 (S)	93	%	68-149		1	01/16/18 08:45	01/16/18 19:30	2037-26-5	
4-Bromofluorobenzene (S)	78	%	58-141		1	01/16/18 08:45	01/16/18 19:30	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	18.6	%	0.10	0.10	1		01/15/18 11:35		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: TW-7 **Lab ID: 40163468021** Collected: 01/11/18 11:05 Received: 01/13/18 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved Analytical Method: EPA 6010									
Arsenic, Dissolved	<5.4	ug/L	20.0	5.4	1		01/16/18 15:46	7440-38-2	2q
Barium, Dissolved	170	ug/L	5.0	1.5	1		01/16/18 15:46	7440-39-3	
Cadmium, Dissolved	<1.3	ug/L	5.0	1.3	1		01/16/18 15:46	7440-43-9	
Chromium, Dissolved	<2.5	ug/L	10.0	2.5	1		01/16/18 15:46	7440-47-3	
Lead, Dissolved	<4.3	ug/L	13.0	4.3	1		01/16/18 15:46	7439-92-1	
Selenium, Dissolved	<5.6	ug/L	20.0	5.6	1		01/16/18 15:46	7782-49-2	3q
Silver, Dissolved	3.4J	ug/L	10.0	3.2	1		01/16/18 15:46	7440-22-4	
7470 Mercury, Dissolved Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury, Dissolved	<0.50	ug/L	1.7	0.50	1	01/23/18 11:10	01/24/18 09:40	7439-97-6	D3,P4
8260 MSV Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		01/15/18 19:02	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		01/15/18 19:02	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		01/15/18 19:02	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		01/15/18 19:02	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		01/15/18 19:02	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		01/15/18 19:02	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		01/15/18 19:02	67-66-3	
Chloromethane	1.7	ug/L	1.0	0.50	1		01/15/18 19:02	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		01/15/18 19:02	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		01/15/18 19:02	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		01/15/18 19:02	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		01/15/18 19:02	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		01/15/18 19:02	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		01/15/18 19:02	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		01/15/18 19:02	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		01/15/18 19:02	75-35-4	
cis-1,2-Dichloroethene	0.49J	ug/L	1.0	0.26	1		01/15/18 19:02	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/15/18 19:02	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		01/15/18 19:02	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		01/15/18 19:02	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		01/15/18 19:02	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	10061-01-5	

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: TW-7 **Lab ID: 40163468021** Collected: 01/11/18 11:05 Received: 01/13/18 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		01/15/18 19:02	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		01/15/18 19:02	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		01/15/18 19:02	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		01/15/18 19:02	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		01/15/18 19:02	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		01/15/18 19:02	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		01/15/18 19:02	630-20-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		01/15/18 19:02	79-34-5	
Tetrachloroethene	61.8	ug/L	1.0	0.50	1		01/15/18 19:02	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		01/15/18 19:02	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		01/15/18 19:02	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		01/15/18 19:02	79-00-5	
Trichloroethene	1.7	ug/L	1.0	0.33	1		01/15/18 19:02	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		01/15/18 19:02	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		01/15/18 19:02	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		01/15/18 19:02	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		01/15/18 19:02	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	83	%	61-130		1		01/15/18 19:02	460-00-4	
Dibromofluoromethane (S)	105	%	67-130		1		01/15/18 19:02	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		01/15/18 19:02	2037-26-5	

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: TRIP BLANK **Lab ID: 40163468022** Collected: 01/11/18 00:00 Received: 01/13/18 08:45 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		01/15/18 20:31	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		01/15/18 20:31	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		01/15/18 20:31	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		01/15/18 20:31	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		01/15/18 20:31	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		01/15/18 20:31	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		01/15/18 20:31	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		01/15/18 20:31	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		01/15/18 20:31	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		01/15/18 20:31	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		01/15/18 20:31	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		01/15/18 20:31	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		01/15/18 20:31	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		01/15/18 20:31	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		01/15/18 20:31	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		01/15/18 20:31	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/15/18 20:31	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/15/18 20:31	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		01/15/18 20:31	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		01/15/18 20:31	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		01/15/18 20:31	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		01/15/18 20:31	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		01/15/18 20:31	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		01/15/18 20:31	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		01/15/18 20:31	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		01/15/18 20:31	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		01/15/18 20:31	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		01/15/18 20:31	630-20-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: TRIP BLANK **Lab ID: 40163468022** Collected: 01/11/18 00:00 Received: 01/13/18 08:45 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		01/15/18 20:31	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		01/15/18 20:31	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		01/15/18 20:31	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		01/15/18 20:31	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		01/15/18 20:31	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		01/15/18 20:31	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		01/15/18 20:31	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		01/15/18 20:31	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		01/15/18 20:31	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	81	%	61-130		1		01/15/18 20:31	460-00-4	
Dibromofluoromethane (S)	106	%	67-130		1		01/15/18 20:31	1868-53-7	
Toluene-d8 (S)	91	%	70-130		1		01/15/18 20:31	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

QC Batch: 279176 Analysis Method: EPA 6010
QC Batch Method: EPA 6010 Analysis Description: ICP Metals, Trace, Dissolved
Associated Lab Samples: 40163468021

METHOD BLANK: 1639105 Matrix: Water
Associated Lab Samples: 40163468021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<5.4	20.0	01/16/18 14:57	
Barium, Dissolved	ug/L	<1.5	5.0	01/16/18 14:57	
Cadmium, Dissolved	ug/L	<1.3	5.0	01/16/18 14:57	
Chromium, Dissolved	ug/L	<2.5	10.0	01/16/18 14:57	
Lead, Dissolved	ug/L	<4.3	13.0	01/16/18 14:57	
Selenium, Dissolved	ug/L	<5.6	20.0	01/16/18 14:57	
Silver, Dissolved	ug/L	<3.2	10.0	01/16/18 14:57	

LABORATORY CONTROL SAMPLE: 1639106

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	500	490	98	80-120	
Barium, Dissolved	ug/L	500	519	104	80-120	
Cadmium, Dissolved	ug/L	500	497	99	80-120	
Chromium, Dissolved	ug/L	500	500	100	80-120	
Lead, Dissolved	ug/L	500	495	99	80-120	
Selenium, Dissolved	ug/L	500	515	103	80-120	
Silver, Dissolved	ug/L	250	254	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1639107 1639108

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40163434003 Result	Spike Conc.	Spike Conc.	MS Result						
Arsenic, Dissolved	ug/L	<5.4	500	500	514	529	103	106	75-125	3	20
Barium, Dissolved	ug/L	146	500	500	658	666	102	104	75-125	1	20
Cadmium, Dissolved	ug/L	<1.3	500	500	507	516	101	103	75-125	2	20
Chromium, Dissolved	ug/L	<2.5	500	500	505	511	101	102	75-125	1	20
Lead, Dissolved	ug/L	<4.3	500	500	496	505	99	101	75-125	2	20
Selenium, Dissolved	ug/L	7.4J	500	500	580	594	115	117	75-125	2	20
Silver, Dissolved	ug/L	<3.2	250	250	253	255	101	102	75-125	1	20

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

QC Batch: 279605 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury Dissolved
Associated Lab Samples: 40163468021

METHOD BLANK: 1641124 Matrix: Water
Associated Lab Samples: 40163468021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.13	0.42	01/24/18 08:51	

LABORATORY CONTROL SAMPLE: 1641125

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.0	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1641126 1641127

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		40163543008	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Mercury, Dissolved	ug/L	<0.13	5	5	4.8	4.9	96	97	85-115	1	20		

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

QC Batch: 279631 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005, 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016

METHOD BLANK: 1641289 Matrix: Solid
Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005, 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.011	0.037	01/24/18 11:02	

LABORATORY CONTROL SAMPLE: 1641290

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.83	0.86	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1641291 1641292

Parameter	Units	40163452011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	<0.011	.86	.86	0.89	0.87	103	101	85-115	2	20	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

QC Batch: 279632 Analysis Method: EPA 7471
 QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
 Associated Lab Samples: 40163468017, 40163468018, 40163468019, 40163468020

METHOD BLANK: 1641294 Matrix: Solid
 Associated Lab Samples: 40163468017, 40163468018, 40163468019, 40163468020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.011	0.037	01/24/18 12:06	

LABORATORY CONTROL SAMPLE: 1641295

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.83	0.85	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1641296 1641297

Parameter	Units	1641296		1641297		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		40163617001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result					
Mercury	mg/kg	<0.013	1	.99	1.0	1.0	101	101	85-115	2 20

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

QC Batch: 279186 Analysis Method: EPA 6010
 QC Batch Method: EPA 3050 Analysis Description: 6010 MET
 Associated Lab Samples: 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016, 40163468017, 40163468018, 40163468019, 40163468020

METHOD BLANK: 1639170 Matrix: Solid

Associated Lab Samples: 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016, 40163468017, 40163468018, 40163468019, 40163468020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<1.0	5.0	01/17/18 16:07	
Barium	mg/kg	<0.15	0.50	01/17/18 16:07	
Cadmium	mg/kg	<0.13	0.50	01/17/18 16:07	
Chromium	mg/kg	<0.28	1.0	01/17/18 16:07	
Lead	mg/kg	<0.43	1.3	01/17/18 16:07	
Selenium	mg/kg	<1.1	5.0	01/17/18 16:07	
Silver	mg/kg	<0.34	1.0	01/17/18 16:07	

LABORATORY CONTROL SAMPLE: 1639171

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	50.8	102	80-120	
Barium	mg/kg	50	50.6	101	80-120	
Cadmium	mg/kg	50	51.0	102	80-120	
Chromium	mg/kg	50	51.4	103	80-120	
Lead	mg/kg	50	50.7	101	80-120	
Selenium	mg/kg	50	50.4	101	80-120	
Silver	mg/kg	25	24.5	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1639172 1639173

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual	
		40163468008 Result	Spike Conc.	Spike Conc.	MS Result						MSD Result
Arsenic	mg/kg	5.3J	56.3	56.5	56.5	56.9	91	91	75-125	1	20
Barium	mg/kg	17.7	56.3	56.5	79.2	77.0	109	105	75-125	3	20
Cadmium	mg/kg	0.20J	56.3	56.5	56.1	56.1	99	99	75-125	0	20
Chromium	mg/kg	10.2	56.3	56.5	64.8	64.7	97	96	75-125	0	20
Lead	mg/kg	6.4	56.3	56.5	59.3	57.8	94	91	75-125	3	20
Selenium	mg/kg	<1.3	56.3	56.5	53.1	52.2	94	92	75-125	2	20
Silver	mg/kg	<0.39	28.1	28.3	27.6	27.9	98	99	75-125	1	20

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

QC Batch: 279315 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005

METHOD BLANK: 1639610 Matrix: Solid
Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<1.0	5.0	01/19/18 11:21	
Barium	mg/kg	<0.15	0.50	01/19/18 11:21	
Cadmium	mg/kg	<0.13	0.50	01/19/18 11:21	
Chromium	mg/kg	<0.28	1.0	01/19/18 11:21	
Lead	mg/kg	<0.43	1.3	01/19/18 11:21	
Selenium	mg/kg	<1.1	5.0	01/19/18 11:21	
Silver	mg/kg	<0.34	1.0	01/19/18 11:21	

LABORATORY CONTROL SAMPLE: 1639611

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	49.6	99	80-120	
Barium	mg/kg	50	49.8	100	80-120	
Cadmium	mg/kg	50	50.5	101	80-120	
Chromium	mg/kg	50	51.3	103	80-120	
Lead	mg/kg	50	50.9	102	80-120	
Selenium	mg/kg	50	51.7	103	80-120	
Silver	mg/kg	25	25.4	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1639612 1639613

Parameter	Units	40163515001		1639612		1639613		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Arsenic	mg/kg	5.3J	62.6	62.8	62.8	62.8	62.6	92	91	75-125	0	20	
Barium	mg/kg	166	62.6	62.8	62.8	228	222	99	89	75-125	2	20	
Cadmium	mg/kg	0.24J	62.6	62.8	62.8	58.7	59.3	93	94	75-125	1	20	
Chromium	mg/kg	19.9	62.6	62.8	62.8	80.3	85.2	97	104	75-125	6	20	
Lead	mg/kg	17.1	62.6	62.8	62.8	72.9	72.3	89	88	75-125	1	20	
Selenium	mg/kg	<1.4	62.6	62.8	62.8	59.0	59.2	94	94	75-125	0	20	
Silver	mg/kg	<0.43	31.3	31.4	31.4	28.3	29.8	91	95	75-125	5	20	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

QC Batch: 279205 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005, 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016, 40163468017, 40163468018, 40163468019, 40163468020

METHOD BLANK: 1639215 Matrix: Solid
Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005, 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016, 40163468017, 40163468018, 40163468019, 40163468020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	01/16/18 09:34	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	01/16/18 09:34	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	01/16/18 09:34	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	01/16/18 09:34	
1,1-Dichloroethane	ug/kg	<17.6	50.0	01/16/18 09:34	
1,1-Dichloroethene	ug/kg	<17.6	50.0	01/16/18 09:34	
1,1-Dichloropropene	ug/kg	<14.0	50.0	01/16/18 09:34	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	01/16/18 09:34	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	01/16/18 09:34	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	01/16/18 09:34	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	01/16/18 09:34	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	01/16/18 09:34	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	01/16/18 09:34	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	01/16/18 09:34	
1,2-Dichloroethane	ug/kg	<15.0	50.0	01/16/18 09:34	
1,2-Dichloropropane	ug/kg	<16.8	50.0	01/16/18 09:34	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	01/16/18 09:34	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	01/16/18 09:34	
1,3-Dichloropropane	ug/kg	<12.0	50.0	01/16/18 09:34	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	01/16/18 09:34	
2,2-Dichloropropane	ug/kg	<12.6	50.0	01/16/18 09:34	
2-Chlorotoluene	ug/kg	<15.8	50.0	01/16/18 09:34	
4-Chlorotoluene	ug/kg	<13.0	50.0	01/16/18 09:34	
Benzene	ug/kg	<9.2	20.0	01/16/18 09:34	
Bromobenzene	ug/kg	<20.6	50.0	01/16/18 09:34	
Bromochloromethane	ug/kg	<21.4	50.0	01/16/18 09:34	
Bromodichloromethane	ug/kg	<9.8	50.0	01/16/18 09:34	
Bromoform	ug/kg	<19.8	50.0	01/16/18 09:34	
Bromomethane	ug/kg	<69.9	250	01/16/18 09:34	
Carbon tetrachloride	ug/kg	<12.1	50.0	01/16/18 09:34	
Chlorobenzene	ug/kg	<14.8	50.0	01/16/18 09:34	
Chloroethane	ug/kg	<67.0	250	01/16/18 09:34	
Chloroform	ug/kg	<46.4	250	01/16/18 09:34	
Chloromethane	ug/kg	<20.4	50.0	01/16/18 09:34	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	01/16/18 09:34	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	01/16/18 09:34	
Dibromochloromethane	ug/kg	<17.9	50.0	01/16/18 09:34	
Dibromomethane	ug/kg	<19.3	50.0	01/16/18 09:34	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

METHOD BLANK: 1639215

Matrix: Solid

Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005, 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016, 40163468017, 40163468018, 40163468019, 40163468020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/kg	<12.3	50.0	01/16/18 09:34	
Diisopropyl ether	ug/kg	<17.7	50.0	01/16/18 09:34	
Ethylbenzene	ug/kg	<12.4	50.0	01/16/18 09:34	
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	01/16/18 09:34	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	01/16/18 09:34	
m&p-Xylene	ug/kg	<34.4	100	01/16/18 09:34	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	01/16/18 09:34	
Methylene Chloride	ug/kg	<16.2	50.0	01/16/18 09:34	
n-Butylbenzene	ug/kg	<10.5	50.0	01/16/18 09:34	
n-Propylbenzene	ug/kg	<11.6	50.0	01/16/18 09:34	
Naphthalene	ug/kg	<40.0	250	01/16/18 09:34	
o-Xylene	ug/kg	<14.0	50.0	01/16/18 09:34	
p-Isopropyltoluene	ug/kg	<12.0	50.0	01/16/18 09:34	
sec-Butylbenzene	ug/kg	<11.9	50.0	01/16/18 09:34	
Styrene	ug/kg	<9.0	50.0	01/16/18 09:34	
tert-Butylbenzene	ug/kg	<9.5	50.0	01/16/18 09:34	
Tetrachloroethene	ug/kg	<12.9	50.0	01/16/18 09:34	
Toluene	ug/kg	<11.2	50.0	01/16/18 09:34	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	01/16/18 09:34	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	01/16/18 09:34	
Trichloroethene	ug/kg	<23.6	50.0	01/16/18 09:34	
Trichlorofluoromethane	ug/kg	<24.7	50.0	01/16/18 09:34	
Vinyl chloride	ug/kg	<21.1	50.0	01/16/18 09:34	
Xylene (Total)	ug/kg	<48.4	150	01/16/18 09:34	
4-Bromofluorobenzene (S)	%	85	58-141	01/16/18 09:34	
Dibromofluoromethane (S)	%	117	68-130	01/16/18 09:34	
Toluene-d8 (S)	%	101	68-149	01/16/18 09:34	

LABORATORY CONTROL SAMPLE: 1639216

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2480	99	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2120	85	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2360	94	70-130	
1,1-Dichloroethane	ug/kg	2500	2360	94	63-124	
1,1-Dichloroethene	ug/kg	2500	2500	100	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	1900	76	78-130 L2	
1,2-Dibromo-3-chloropropane	ug/kg	2500	1910	76	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2350	94	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2310	93	70-130	
1,2-Dichloroethane	ug/kg	2500	2590	104	56-135	
1,2-Dichloropropane	ug/kg	2500	2490	100	77-122	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

LABORATORY CONTROL SAMPLE: 1639216

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3-Dichlorobenzene	ug/kg	2500	2230	89	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2380	95	70-130	
Benzene	ug/kg	2500	2420	97	66-130	
Bromodichloromethane	ug/kg	2500	2670	107	62-135	
Bromoform	ug/kg	2500	2180	87	68-130	
Bromomethane	ug/kg	2500	2230	89	29-137	
Carbon tetrachloride	ug/kg	2500	2750	110	57-130	
Chlorobenzene	ug/kg	2500	2460	98	70-130	
Chloroethane	ug/kg	2500	2360	94	36-144	
Chloroform	ug/kg	2500	2470	99	69-115	
Chloromethane	ug/kg	2500	1510	60	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2260	90	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	2250	90	70-130	
Dibromochloromethane	ug/kg	2500	2540	102	70-130	
Dichlorodifluoromethane	ug/kg	2500	1130	45	10-99	
Ethylbenzene	ug/kg	2500	2330	93	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2430	97	70-130	
m&p-Xylene	ug/kg	5000	5050	101	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2260	90	63-134	
Methylene Chloride	ug/kg	2500	2600	104	56-123	
o-Xylene	ug/kg	2500	2400	96	70-130	
Styrene	ug/kg	2500	2460	98	70-130	
Tetrachloroethene	ug/kg	2500	2480	99	70-131	
Toluene	ug/kg	2500	2350	94	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2530	101	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	2310	93	68-130	
Trichloroethene	ug/kg	2500	2510	101	70-130	
Trichlorofluoromethane	ug/kg	2500	2620	105	37-149	
Vinyl chloride	ug/kg	2500	1960	78	43-128	
Xylene (Total)	ug/kg	7500	7450	99	70-130	
4-Bromofluorobenzene (S)	%			91	58-141	
Dibromofluoromethane (S)	%			107	68-130	
Toluene-d8 (S)	%			96	68-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1639217 1639218

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40163468002 Result	Spike Conc.	Spike Conc.	MSD Result								
1,1,1-Trichloroethane	ug/kg	<25.0	1340	1340	1310	1340	98	101	57-123	3	20		
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1340	1340	1230	1160	92	87	73-135	6	20		
1,1,2-Trichloroethane	ug/kg	<25.0	1340	1340	1130	1210	84	91	70-130	7	20		
1,1-Dichloroethane	ug/kg	<25.0	1340	1340	1270	1270	95	95	63-124	0	20		
1,1-Dichloroethene	ug/kg	<25.0	1340	1340	1410	1290	106	96	48-117	9	23		
1,2,4-Trichlorobenzene	ug/kg	<47.6	1340	1340	1150	1100	84	80	78-145	5	20		

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1639217			1639218								
Parameter	Units	40163468002 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	1340	1340	1010	1040	76	78	38-168	2	22
1,2-Dibromoethane (EDB)	ug/kg	<25.0	1340	1340	1140	1200	85	90	70-130	5	20
1,2-Dichlorobenzene	ug/kg	<25.0	1340	1340	1320	1310	99	98	70-130	0	20
1,2-Dichloroethane	ug/kg	<25.0	1340	1340	1370	1450	102	109	56-145	6	20
1,2-Dichloropropane	ug/kg	<25.0	1340	1340	1400	1380	105	103	77-123	2	20
1,3-Dichlorobenzene	ug/kg	<25.0	1340	1340	1220	1240	91	93	70-130	2	20
1,4-Dichlorobenzene	ug/kg	<25.0	1340	1340	1320	1250	99	94	70-130	5	20
Benzene	ug/kg	<25.0	1340	1340	1180	1300	88	97	65-130	10	20
Bromodichloromethane	ug/kg	<25.0	1340	1340	1490	1430	112	107	59-141	5	20
Bromoform	ug/kg	<25.0	1340	1340	1240	1250	93	93	59-141	0	20
Bromomethane	ug/kg	<69.9	1340	1340	1230	1250	92	94	28-139	2	20
Carbon tetrachloride	ug/kg	<25.0	1340	1340	1470	1440	110	107	50-130	2	20
Chlorobenzene	ug/kg	<25.0	1340	1340	1330	1340	100	100	70-130	0	20
Chloroethane	ug/kg	<67.0	1340	1340	1320	1370	99	103	36-144	4	20
Chloroform	ug/kg	<46.4	1340	1340	1350	1340	101	100	68-122	1	20
Chloromethane	ug/kg	<25.0	1340	1340	894	844	67	63	30-126	6	20
cis-1,2-Dichloroethene	ug/kg	<25.0	1340	1340	1240	1280	93	96	63-130	3	20
cis-1,3-Dichloropropene	ug/kg	<25.0	1340	1340	1220	1190	91	89	70-130	2	20
Dibromochloromethane	ug/kg	<25.0	1340	1340	1190	1280	89	96	66-136	7	20
Dichlorodifluoromethane	ug/kg	<25.0	1340	1340	533	568	40	42	10-99	6	33
Ethylbenzene	ug/kg	<25.0	1340	1340	1180	1160	89	87	80-122	2	20
Isopropylbenzene (Cumene)	ug/kg	<25.0	1340	1340	1230	1190	92	89	70-130	4	20
m&p-Xylene	ug/kg	<50.0	2670	2670	2560	2570	96	96	70-130	0	20
Methyl-tert-butyl ether	ug/kg	<25.0	1340	1340	1170	1170	88	87	63-134	1	20
Methylene Chloride	ug/kg	<25.0	1340	1340	1470	1440	110	107	56-127	2	20
o-Xylene	ug/kg	<25.0	1340	1340	1220	1210	91	91	70-130	0	20
Styrene	ug/kg	<25.0	1340	1340	1270	1210	95	91	70-130	4	20
Tetrachloroethene	ug/kg	29.5J	1340	1340	1220	1310	89	96	70-131	7	20
Toluene	ug/kg	<25.0	1340	1340	1160	1240	87	93	80-120	6	20
trans-1,2-Dichloroethene	ug/kg	<25.0	1340	1340	1450	1450	108	108	60-130	0	20
trans-1,3-Dichloropropene	ug/kg	<25.0	1340	1340	1020	1090	76	81	68-130	6	20
Trichloroethene	ug/kg	<25.0	1340	1340	1390	1350	104	101	70-130	3	20
Trichlorofluoromethane	ug/kg	<25.0	1340	1340	1690	1620	126	121	37-149	4	24
Vinyl chloride	ug/kg	<25.0	1340	1340	1080	1040	80	78	39-128	4	20
Xylene (Total)	ug/kg	<75.0	4010	4010	3770	3780	94	94	70-130	0	20
4-Bromofluorobenzene (S)	%						103	100	58-141		
Dibromofluoromethane (S)	%						121	124	68-130		
Toluene-d8 (S)	%						100	105	68-149		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

QC Batch: 279069 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40163468021, 40163468022

METHOD BLANK: 1638744 Matrix: Water

Associated Lab Samples: 40163468021, 40163468022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	01/15/18 12:41	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	01/15/18 12:41	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	01/15/18 12:41	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	01/15/18 12:41	
1,1-Dichloroethane	ug/L	<0.24	1.0	01/15/18 12:41	
1,1-Dichloroethene	ug/L	<0.41	1.0	01/15/18 12:41	
1,1-Dichloropropene	ug/L	<0.44	1.0	01/15/18 12:41	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	01/15/18 12:41	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	01/15/18 12:41	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	01/15/18 12:41	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	01/15/18 12:41	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	01/15/18 12:41	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,2-Dichloroethane	ug/L	<0.17	1.0	01/15/18 12:41	
1,2-Dichloropropane	ug/L	<0.23	1.0	01/15/18 12:41	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,3-Dichloropropane	ug/L	<0.50	1.0	01/15/18 12:41	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
2,2-Dichloropropane	ug/L	<0.48	1.0	01/15/18 12:41	
2-Chlorotoluene	ug/L	<0.50	1.0	01/15/18 12:41	
4-Chlorotoluene	ug/L	<0.21	1.0	01/15/18 12:41	
Benzene	ug/L	<0.50	1.0	01/15/18 12:41	
Bromobenzene	ug/L	<0.23	1.0	01/15/18 12:41	
Bromochloromethane	ug/L	<0.34	1.0	01/15/18 12:41	
Bromodichloromethane	ug/L	<0.50	1.0	01/15/18 12:41	
Bromoform	ug/L	<0.50	1.0	01/15/18 12:41	
Bromomethane	ug/L	<2.4	5.0	01/15/18 12:41	
Carbon tetrachloride	ug/L	<0.50	1.0	01/15/18 12:41	
Chlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
Chloroethane	ug/L	<0.37	1.0	01/15/18 12:41	
Chloroform	ug/L	<2.5	5.0	01/15/18 12:41	
Chloromethane	ug/L	<0.50	1.0	01/15/18 12:41	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	01/15/18 12:41	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	01/15/18 12:41	
Dibromochloromethane	ug/L	<0.50	1.0	01/15/18 12:41	
Dibromomethane	ug/L	<0.43	1.0	01/15/18 12:41	
Dichlorodifluoromethane	ug/L	<0.22	1.0	01/15/18 12:41	
Diisopropyl ether	ug/L	<0.50	1.0	01/15/18 12:41	
Ethylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

METHOD BLANK: 1638744

Matrix: Water

Associated Lab Samples: 40163468021, 40163468022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	01/15/18 12:41	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	01/15/18 12:41	
m&p-Xylene	ug/L	<1.0	2.0	01/15/18 12:41	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	01/15/18 12:41	
Methylene Chloride	ug/L	<0.23	1.0	01/15/18 12:41	
n-Butylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
n-Propylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
Naphthalene	ug/L	<2.5	5.0	01/15/18 12:41	
o-Xylene	ug/L	<0.50	1.0	01/15/18 12:41	
p-Isopropyltoluene	ug/L	<0.50	1.0	01/15/18 12:41	
sec-Butylbenzene	ug/L	<2.2	5.0	01/15/18 12:41	
Styrene	ug/L	<0.50	1.0	01/15/18 12:41	
tert-Butylbenzene	ug/L	<0.18	1.0	01/15/18 12:41	
Tetrachloroethene	ug/L	<0.50	1.0	01/15/18 12:41	
Toluene	ug/L	<0.50	1.0	01/15/18 12:41	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	01/15/18 12:41	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	01/15/18 12:41	
Trichloroethene	ug/L	<0.33	1.0	01/15/18 12:41	
Trichlorofluoromethane	ug/L	<0.18	1.0	01/15/18 12:41	
Vinyl chloride	ug/L	<0.18	1.0	01/15/18 12:41	
Xylene (Total)	ug/L	<1.5	3.0	01/15/18 12:41	
4-Bromofluorobenzene (S)	%	86	61-130	01/15/18 12:41	
Dibromofluoromethane (S)	%	105	67-130	01/15/18 12:41	
Toluene-d8 (S)	%	93	70-130	01/15/18 12:41	

LABORATORY CONTROL SAMPLE: 1638745

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	48.0	96	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	42.1	84	70-130	
1,1,2-Trichloroethane	ug/L	50	47.2	94	70-130	
1,1-Dichloroethane	ug/L	50	42.6	85	71-132	
1,1-Dichloroethene	ug/L	50	41.1	82	75-130	
1,2,4-Trichlorobenzene	ug/L	50	44.2	88	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	34.6	69	63-123	
1,2-Dibromoethane (EDB)	ug/L	50	46.0	92	70-130	
1,2-Dichlorobenzene	ug/L	50	48.9	98	70-130	
1,2-Dichloroethane	ug/L	50	41.4	83	70-131	
1,2-Dichloropropane	ug/L	50	43.9	88	80-120	
1,3-Dichlorobenzene	ug/L	50	48.2	96	70-130	
1,4-Dichlorobenzene	ug/L	50	49.4	99	70-130	
Benzene	ug/L	50	44.8	90	73-145	
Bromodichloromethane	ug/L	50	47.7	95	70-130	
Bromoform	ug/L	50	56.4	113	67-130	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

LABORATORY CONTROL SAMPLE: 1638745

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	50	31.6	63	26-128	
Carbon tetrachloride	ug/L	50	51.8	104	70-133	
Chlorobenzene	ug/L	50	54.0	108	70-130	
Chloroethane	ug/L	50	36.2	72	58-120	
Chloroform	ug/L	50	50.0	100	80-121	
Chloromethane	ug/L	50	23.3	47	40-127	
cis-1,2-Dichloroethene	ug/L	50	42.0	84	70-130	
cis-1,3-Dichloropropene	ug/L	50	42.6	85	70-130	
Dibromochloromethane	ug/L	50	55.8	112	70-130	
Dichlorodifluoromethane	ug/L	50	15.5	31	20-135	
Ethylbenzene	ug/L	50	50.5	101	87-129	
Isopropylbenzene (Cumene)	ug/L	50	54.7	109	70-130	
m&p-Xylene	ug/L	100	107	107	70-130	
Methyl-tert-butyl ether	ug/L	50	38.1	76	66-143	
Methylene Chloride	ug/L	50	37.8	76	70-130	
o-Xylene	ug/L	50	52.7	105	70-130	
Styrene	ug/L	50	54.0	108	70-130	
Tetrachloroethene	ug/L	50	51.3	103	70-130	
Toluene	ug/L	50	48.9	98	82-130	
trans-1,2-Dichloroethene	ug/L	50	41.1	82	75-132	
trans-1,3-Dichloropropene	ug/L	50	44.0	88	70-130	
Trichloroethene	ug/L	50	50.6	101	70-130	
Trichlorofluoromethane	ug/L	50	45.2	90	76-133	
Vinyl chloride	ug/L	50	28.5	57	57-136	
Xylene (Total)	ug/L	150	160	107	70-130	
4-Bromofluorobenzene (S)	%			96	61-130	
Dibromofluoromethane (S)	%			103	67-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638896 1638897

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40163465004	Spike Conc.	Spike Conc.	Result							Result
1,1,1-Trichloroethane	ug/L	<0.50	50	50	52.0	53.2	104	106	70-134	2	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	44.1	42.4	88	85	70-130	4	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	49.2	50.4	98	101	70-130	2	20	
1,1-Dichloroethane	ug/L	<0.24	50	50	44.9	45.1	90	90	71-133	1	20	
1,1-Dichloroethene	ug/L	<0.41	50	50	48.5	50.3	97	101	75-136	4	20	
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	47.6	46.1	94	91	70-130	3	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	34.5	35.0	69	70	63-123	1	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	46.7	49.8	93	100	70-130	6	20	
1,2-Dichlorobenzene	ug/L	<0.50	50	50	49.4	50.0	99	100	70-130	1	20	
1,2-Dichloroethane	ug/L	<0.17	50	50	43.8	44.7	88	89	70-131	2	20	
1,2-Dichloropropane	ug/L	<0.23	50	50	43.9	45.7	88	91	80-120	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638896		1638897		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		40163465004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
1,3-Dichlorobenzene	ug/L	<0.50	50	50	49.9	50.9	100	102	70-130	2	20		
1,4-Dichlorobenzene	ug/L	<0.50	50	50	53.3	52.4	107	105	70-130	2	20		
Benzene	ug/L	<0.50	50	50	45.7	48.0	91	96	73-145	5	20		
Bromodichloromethane	ug/L	<0.50	50	50	47.0	47.7	94	95	70-130	1	20		
Bromoform	ug/L	<0.50	50	50	56.5	57.9	113	116	67-130	2	20		
Bromomethane	ug/L	<2.4	50	50	42.6	51.2	85	102	26-129	18	20		
Carbon tetrachloride	ug/L	<0.50	50	50	55.3	56.4	111	113	70-134	2	20		
Chlorobenzene	ug/L	<0.50	50	50	53.7	57.5	107	115	70-130	7	20		
Chloroethane	ug/L	<0.37	50	50	42.2	46.4	84	93	58-120	9	20		
Chloroform	ug/L	<2.5	50	50	51.8	52.4	104	105	80-121	1	20		
Chloromethane	ug/L	<0.50	50	50	34.7	36.6	69	73	40-128	5	20		
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	44.6	45.9	89	91	70-130	3	20		
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	44.9	44.4	90	89	70-130	1	20		
Dibromochloromethane	ug/L	<0.50	50	50	56.7	60.4	113	121	70-130	6	20		
Dichlorodifluoromethane	ug/L	<0.22	50	50	42.1	42.9	84	86	20-146	2	20		
Ethylbenzene	ug/L	<0.50	50	50	50.1	53.8	100	108	87-129	7	20		
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	55.3	58.2	111	116	70-130	5	20		
m&p-Xylene	ug/L	<1.0	100	100	106	113	106	113	70-130	6	20		
Methyl-tert-butyl ether	ug/L	<0.17	50	50	40.0	40.2	80	80	66-143	0	20		
Methylene Chloride	ug/L	<0.23	50	50	40.1	40.4	80	81	70-130	1	20		
o-Xylene	ug/L	<0.50	50	50	53.8	56.4	108	113	70-130	5	20		
Styrene	ug/L	<0.50	50	50	53.9	56.2	108	112	70-130	4	20		
Tetrachloroethene	ug/L	<0.50	50	50	54.3	57.4	109	115	70-130	6	20		
Toluene	ug/L	<0.50	50	50	51.9	55.2	104	110	82-131	6	20		
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	46.7	46.1	93	92	75-135	1	20		
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	45.5	46.8	91	94	70-130	3	20		
Trichloroethene	ug/L	1.4	50	50	53.4	54.8	104	107	70-130	3	20		
Trichlorofluoromethane	ug/L	<0.18	50	50	57.2	57.1	114	114	76-150	0	20		
Vinyl chloride	ug/L	<0.18	50	50	43.6	45.8	87	92	56-143	5	20		
Xylene (Total)	ug/L	<1.5	150	150	160	169	106	113	70-130	6	20		
4-Bromofluorobenzene (S)	%						96	95	61-130				
Dibromofluoromethane (S)	%						100	100	67-130				
Toluene-d8 (S)	%						91	94	70-130				

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

QC Batch: 279082 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40163468001, 40163468002, 40163468003

SAMPLE DUPLICATE: 1638820

Parameter	Units	40163466001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.1	17.5	8	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

QC Batch:	279095	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	40163468004, 40163468005, 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016, 40163468017, 40163468018, 40163468019, 40163468020		

SAMPLE DUPLICATE: 1638858

Parameter	Units	40163468004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	17.0	16.9	1	10	

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QUALIFIERS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above LOD.
J - Estimated concentration at or above the LOD and below the LOQ.
LOD - Limit of Detection adjusted for dilution factor and percent moisture.
LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

1q Analyte was detected in the associated method blank at a concentration of -0.66 mg/kg.
2q Analyte was detected in the associated method blank at a concentration of -7.65 ug/L.
3q Analyte was detected in the associated method blank at a concentration of -9.13 ug/L.
D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.
P4 Sample field preservation does not meet EPA or method recommendations for this analysis.
S3 Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.
W Non-detect results are reported on a wet weight basis.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40163468001	B-7-3	EPA 3050	279315	EPA 6010	279400
40163468002	B-7-7.5	EPA 3050	279315	EPA 6010	279400
40163468003	B-14-3	EPA 3050	279315	EPA 6010	279400
40163468004	B-14-8	EPA 3050	279315	EPA 6010	279400
40163468005	B-12-3	EPA 3050	279315	EPA 6010	279400
40163468006	B-12-8	EPA 3050	279186	EPA 6010	279321
40163468007	B-10-3	EPA 3050	279186	EPA 6010	279321
40163468008	B-10-8	EPA 3050	279186	EPA 6010	279321
40163468009	B-9-3	EPA 3050	279186	EPA 6010	279321
40163468010	B-9-8	EPA 3050	279186	EPA 6010	279321
40163468011	B-8-3	EPA 3050	279186	EPA 6010	279321
40163468012	B-8-8	EPA 3050	279186	EPA 6010	279321
40163468013	B-11-3	EPA 3050	279186	EPA 6010	279321
40163468014	B-11-8	EPA 3050	279186	EPA 6010	279321
40163468015	B-13-3	EPA 3050	279186	EPA 6010	279321
40163468016	B-13-8	EPA 3050	279186	EPA 6010	279321
40163468017	B-16-3	EPA 3050	279186	EPA 6010	279321
40163468018	B-16-8	EPA 3050	279186	EPA 6010	279321
40163468019	B-15-3	EPA 3050	279186	EPA 6010	279321
40163468020	B-15-8	EPA 3050	279186	EPA 6010	279321
40163468021	TW-7	EPA 6010	279176		
40163468021	TW-7	EPA 7470	279605	EPA 7470	279673
40163468001	B-7-3	EPA 7471	279631	EPA 7471	279690
40163468002	B-7-7.5	EPA 7471	279631	EPA 7471	279690
40163468003	B-14-3	EPA 7471	279631	EPA 7471	279690
40163468004	B-14-8	EPA 7471	279631	EPA 7471	279690
40163468005	B-12-3	EPA 7471	279631	EPA 7471	279690
40163468006	B-12-8	EPA 7471	279631	EPA 7471	279690
40163468007	B-10-3	EPA 7471	279631	EPA 7471	279690
40163468008	B-10-8	EPA 7471	279631	EPA 7471	279690
40163468009	B-9-3	EPA 7471	279631	EPA 7471	279690
40163468010	B-9-8	EPA 7471	279631	EPA 7471	279690
40163468011	B-8-3	EPA 7471	279631	EPA 7471	279690
40163468012	B-8-8	EPA 7471	279631	EPA 7471	279690
40163468013	B-11-3	EPA 7471	279631	EPA 7471	279690
40163468014	B-11-8	EPA 7471	279631	EPA 7471	279690
40163468015	B-13-3	EPA 7471	279631	EPA 7471	279690
40163468016	B-13-8	EPA 7471	279631	EPA 7471	279690
40163468017	B-16-3	EPA 7471	279632	EPA 7471	279691
40163468018	B-16-8	EPA 7471	279632	EPA 7471	279691
40163468019	B-15-3	EPA 7471	279632	EPA 7471	279691
40163468020	B-15-8	EPA 7471	279632	EPA 7471	279691
40163468001	B-7-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468002	B-7-7.5	EPA 5035/5030B	279205	EPA 8260	279206
40163468003	B-14-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468004	B-14-8	EPA 5035/5030B	279205	EPA 8260	279206

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40163468005	B-12-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468006	B-12-8	EPA 5035/5030B	279205	EPA 8260	279206
40163468007	B-10-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468008	B-10-8	EPA 5035/5030B	279205	EPA 8260	279206
40163468009	B-9-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468010	B-9-8	EPA 5035/5030B	279205	EPA 8260	279206
40163468011	B-8-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468012	B-8-8	EPA 5035/5030B	279205	EPA 8260	279206
40163468013	B-11-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468014	B-11-8	EPA 5035/5030B	279205	EPA 8260	279206
40163468015	B-13-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468016	B-13-8	EPA 5035/5030B	279205	EPA 8260	279206
40163468017	B-16-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468018	B-16-8	EPA 5035/5030B	279205	EPA 8260	279206
40163468019	B-15-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468020	B-15-8	EPA 5035/5030B	279205	EPA 8260	279206
40163468021	TW-7	EPA 8260	279069		
40163468022	TRIP BLANK	EPA 8260	279069		
40163468001	B-7-3	ASTM D2974-87	279082		
40163468002	B-7-7.5	ASTM D2974-87	279082		
40163468003	B-14-3	ASTM D2974-87	279082		
40163468004	B-14-8	ASTM D2974-87	279095		
40163468005	B-12-3	ASTM D2974-87	279095		
40163468006	B-12-8	ASTM D2974-87	279095		
40163468007	B-10-3	ASTM D2974-87	279095		
40163468008	B-10-8	ASTM D2974-87	279095		
40163468009	B-9-3	ASTM D2974-87	279095		
40163468010	B-9-8	ASTM D2974-87	279095		
40163468011	B-8-3	ASTM D2974-87	279095		
40163468012	B-8-8	ASTM D2974-87	279095		
40163468013	B-11-3	ASTM D2974-87	279095		
40163468014	B-11-8	ASTM D2974-87	279095		
40163468015	B-13-3	ASTM D2974-87	279095		
40163468016	B-13-8	ASTM D2974-87	279095		
40163468017	B-16-3	ASTM D2974-87	279095		
40163468018	B-16-8	ASTM D2974-87	279095		
40163468019	B-15-3	ASTM D2974-87	279095		
40163468020	B-15-8	ASTM D2974-87	279095		

REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name: **Ramboll**

Branch/Location:

Project Contact: **Susan Percefske**

Phone: **262-391-5990**

Project Number: **1690005255-001**

Project Name: **MU APRC SITE**

Project State: **WI**

Sampled By (Print): **Brian Marschke**

Sampled By (Sign): *[Signature]*

PO #:

Regulatory Program:



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

40163468

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

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

Y/N	Pick Letter	Analysis Requested	
N	A	RUR & METALS VOLs	
N	F		

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		MATRIX
		DATE	TIME	
001	B-7-3	1-10-18	0945	S
002	B-7-7.5		0955	
003	B-14-3		1138	
004	B-14-8		1142	
005	B-12-3		1213	
006	B-12-8		1245	
007	B-10-3		1306	
008	B-10-8		1305	
009	B-9-3		1330	
010	B-9-8		1335	
011	B-8-3		1350	
012	B-8-8		1355	
013	B-11-3		1426	

Quote #:

Mail To Contact:

Mail To Company:

Mail To Address:

Invoice To Contact:

Invoice To Company:

Invoice To Address:

Invoice To Phone:

CLIENT COMMENTS

LAB COMMENTS (Lab Use Only)

Profile #

1-40zp A 1-40ulv F

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: *[Signature]* Date/Time: 1-12-18 9:10

Relinquished By: *[Signature]* Date/Time: 1/12/18 1300

Relinquished By: *[Signature]* Date/Time: 1-13-18 0845

Relinquished By: _____ Date/Time: _____

Received By: *[Signature]* Date/Time: 1/12/18 9:10

Received By: *[Signature]* Date/Time: _____

Received By: *[Signature]* Date/Time: 1-13-18 0845

Received By: _____ Date/Time: _____

PACE Project No.
40163468

Receipt Temp = ROT °C

Sample Receipt pH
OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

Sample Condition Upon Receipt

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



Client Name: Ramboll
 Courier: Fed Ex UPS Client Pace Other: CSLogistics
 Tracking #: _____

Project #: _____

WO#: **40163468**



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: ROT / Corr: _____ Biological Tissue is Frozen: Yes No
 Temp Blank Present: Yes No

Person examining contents:
 Date: 1/13/18
 Initials: SW

Temp should be above freezing to 6°C.
 Biota Samples may be received at ≤ 0°C.

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8. <u>No MS/MSD Volume</u>
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10. <u>OOI - Client covered tared</u>
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11. <u>weight on 40ml vial</u>
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>Lab added 1-250ml p for filtering</u>
-Includes date/time/ID/Analysis Matrix: <u>S+W</u>		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 <2; NaOH+ZnAct ≥9, NaOH ≥12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: <u>VOA</u> coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
		Lab Std #ID of preservative
		Date/Time:
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>388</u>		

Client Notification/ Resolution: _____ If checked, see attached form for additional comments
 Person Contacted: _____ Date/Time: _____
 Comments/ Resolution: _____

Project Manager Review: _____ Date: 1/10/18

Intended for:

Marquette University
517 North 14th Street
Milwaukee, Wisconsin 53233

Date:

March 2018

Project Number:

1690005255-001

NR 718 SOIL MANAGEMENT PLAN

MARQUETTE UNIVERSITY AHPRC SITE

**1201 – 1221 WEST WELLS STREET
MILWAUKEE, WISCONSIN**

BRRTS NO. 02-41-580746

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1. INTRODUCTION

This Soil Management Plan (SMP) has been prepared by Ramboll US Corporation (Ramboll) on behalf of Marquette University (Marquette) to satisfy the requirements specified in Wisconsin Administrative Code (WAC) Chapter NR 718.12(2) and for use during the proposed building construction and site redevelopment activities at the Athletic and Human Performance Research Center (AHPRC) Site located at 1201 to 1221 West Wells Street, City of Milwaukee, Milwaukee County, Wisconsin (the "site"). Site construction activities are planned to commence in March 2018.

1.1 Project Description

The primary objective of this SMP is to identify the procedures to be used to safely store, manage and dispose of environmentally-impacted soil generated within the boundaries of the construction site. The planned AHPRC construction includes a slab-on-grade two-story space on the northern portion and a full basement on the southern portion of the building. Parking areas will be constructed immediately adjacent to the AHPRC building and in the green space area to the west. On-site soils and fill soils (herein referred to collectively as "soil") will be excavated during building construction, and contaminated soil will be encountered. Based on subsurface investigation activities, subsurface impacts have been identified across the site at varying depths, as described in Section 1.2. It is anticipated that on-site soils will be excavated to a maximum depth of 16 feet below ground surface (bgs) during the proposed redevelopment project.

An estimated 12,500 cubic yards (cy) of soil will be excavated to primarily facilitate construction of the basement portion of the building and associated footings for the slab-on-grade portion of the building. Although most of the impacted soil will be excavated and disposed of off-site at a licensed solid waste facility, a small portion of the soil (less than 2,500 cy) removed during excavation benching will be temporarily stored off-site at the temporary soil storage site, described in Section 2.1. The soil removed during excavation benching will be temporarily stored off-site and then replaced following basement wall construction in accordance with WAC NR 718.

A SMP is required prior to the start of excavation of soils at the site because regulated contaminants/compounds have been identified at the site at concentrations above regulatory standards during previous environmental investigations. Soils in portions of the site were found to contain detectable volatile organic compounds (VOCs), metals, and certain polynuclear aromatic hydrocarbons (PAHs). Several of these contaminants were detected at concentrations exceeding their respective WAC NR 720 residual contaminant levels (RCLs). Groundwater impacts include the presence of VOCs, PAHs, and arsenic above the respective WAC NR 140 Enforcement Standard (ES) and/or Preventive Action Limit (PAL).

This SMP describes measures for appropriate soil handling practices during intrusive activities proposed for the Site involving contaminated soil excavation, storage/management, and off-site disposal. In addition, this SMP includes the specific elements required under WAC NR 718 for the off-site temporary storage and replacement of low-level impacted soil removed during the excavation benching activities. Contact information for the Responsible Party, Contractors, and Consultant involved in this project is provided in Table 1.

1.2 Site Location, Description and General History

The site is located on West Wells Street between North 12th Street and North 13th Street (Figure 1). The address used for the site is listed as 1201 to 1221 West Wells Street in Milwaukee (SW ¼ of NW ¼ Section 29, Township 07N, Range 22E, Milwaukee County with a WTM of X 688812, Y 297325). It is anticipated that a new address will be issued for the AHPRC location. The site is located on the

Marquette University campus and has been utilized as a parking lot since approximately 1970. Prior to 1970, historic operations at the site included filling station/automobile service and dry cleaning. The site's current parcel number is 3910011110, which includes both the parking lot area where the referenced historic operations took place and the green space to the west.

In anticipation of planned redevelopment, a Phase I Environmental Site Assessment (ESA) was completed by GRAEF in September 2017, and the historic use of the property as a service station and dry cleaner was identified as a recognized environmental condition. A Phase II ESA was performed by Ramboll in October 2017, which identified soil and groundwater impacts related to historic site operations. The historic release was reported to the Wisconsin Department of Natural Resources (WDNR), and the WDNR assigned Bureau for Remediation and Redevelopment Tracking System (BRRTS) Activity Number 02-41-580746 and FID No. 341293920 to the site.

Site investigation activities are being conducted in a phased approach. Pre-construction subsurface conditions were evaluated during the January 2018 site investigation sampling, and post-construction site investigation activities, including the groundwater portion of the investigation, will be completed following construction of the AHPRC building. Although the soil management and disposal activities discussed herein are being driven by site development, the removal of soil impacts encountered during construction will reduce overall contaminant mass that may remain on-site following site development. The extent of residual impacts that will remain will be documented in the WAC NR 716 Site Investigation report that will be prepared following completion of the post-construction site investigation activities. Any residual impacts that remain at the site, including those soils managed under WAC NR 718 during the site construction activities, will be incorporated into future GIS registry listings as part of the eventual WAC NR 726 Case Closure.

1.3 General Subsurface Conditions

Following a Phase I ESA completed by GRAEF in September 2017, Ramboll completed a Phase II ESA in October 2017. The results of the Phase II activities are documented in the Phase II ESA report (Ramboll Environ, November 10, 2017), which was previously submitted to Marquette. Additional pre-construction site investigation activities were conducted in January 2018 to further define the extent of soil impacts. The results of the pre-construction activities are documented in Ramboll's Summary of Pre-Construction Site Investigation Activities report (Ramboll, February 20, 2018), previously provided to Marquette and WDNR.

Professional Services Industries (PSI)'s November 2017 Geotechnical Engineering Services Report (the "2017 PSI report") indicated that surface materials encountered at the Site included approximately 4 to 6 inches of topsoil fill or asphalt pavement with underlying aggregate base. The surface pavement or topsoil fill is underlain by varying thicknesses of granular fill soil that generally ranged from 4.5 to 10.5 feet. In the northeast corner of the site (at geotechnical soil boring location 6, as shown on Figure 2), granular fill soils were observed to a depth of 18 feet bgs, and this deeper extent of fill was confirmed by PSI to be confined to an area extending not more than 40 feet west or 40 feet south of geotechnical boring location 6 (Figure 2). The 2017 PSI report indicated that the existing fill materials were comprised of sand, sandy silt/silt, lean clay/silty clay, or brick and concrete fragments. A limited amount of non-soil fill material (concrete, stone, brick) was only encountered in select PSI borings located along the northern and eastern perimeter of the site. The predominant unit immediately below the fill is generally silty clay with traces of sand and gravel (Ramboll Environ, 2017), with deeper soils encountered by PSI recorded as brown or gray sandy silt, silt, lean clay, silty clay, fine to medium sand, or silty fine sand, with varying gravel content (PSI, 2017).

Odors and/or elevated readings from a photoionization detector (PID) were also observed during the geotechnical and Phase II ESA activities. Petroleum odors were noted by PSI in a sample collected

from 13.5 to 15 feet bgs during the completion of geotechnical soil boring 6 (PSI, 2017). Elevated PID readings, as well as visual and olfactory evidence of contamination were encountered by Ramboll during the soil sampling activities at the B-5/TW-5 and B-6/TW-6 locations. The locations of geotechnical soil boring 6 and Phase II ESA borings B-5/TW-5 and B-6/TW-6 are shown on Figure 2. All three of these boring locations are within or approximately within the area of deeper fill observed by PSI in the northeast corner of the Site, which corresponds with the location of a former filling/automobile service station at the Site.

Groundwater was encountered at approximately 9 to 13 feet bgs. Based on groundwater information available from nearby properties, shallow groundwater in the vicinity of the site likely flows to the southeast towards the confluence of the Milwaukee and Menomonee Rivers. Soil and groundwater samples were collected during the Phase II ESA in October 2017 and during the pre-construction site investigation in January 2018.

Soil Impacts

Soil samples collected at the site revealed tetrachloroethene (PCE) impacts in the northern and eastern portions of the site in areas generally consistent with the historic dry cleaning operations reported to have taken place at the site as early as 1920 until the late 1960s. Historical cleaner operations were conducted at 1201, 1205, 1209, and 1221 West Wells Street, with a dry cleaner located at 1201 West Wells Street (GRAEF, 2017). The highest concentration of PCE in soil was detected in the shallow soil sample collected from the fill soil at boring B-10 (19,600 ug/kg at 3 feet bgs), which is generally within the area of historic dry cleaning operations. Trichloroethene (TCE) was also detected at boring B-10 (350 ug/kg at 3 feet bgs).

Several other contaminants were detected in soil during the Phase II and pre-construction site investigation activities. Arsenic was the only metal detected in soil above WAC NR 720 non-industrial direct contact RCL, and additional metals (cadmium, lead, mercury, and selenium) were detected in select shallow fill soil samples at concentrations above the WAC NR 720 groundwater pathway RCL. Low concentrations of polynuclear aromatic hydrocarbons (PAHs) were also detected in soil samples collected at the site; however, none of the PAH concentrations exceeded the WAC NR 720 RCLs. The extent of WAC NR 720 RCL exceedances is presented on Figure 2, and laboratory analytical results are included in Appendix A.

Groundwater Impacts

Groundwater impacts were also assessed as part of the Phase II and pre-construction site investigation activities. PCE was detected above the WAC NR 140 ES in the groundwater sample collected from temporary wells TW-3 and TW-7, located adjacent to and hydraulically downgradient of the former dry cleaning operations. TCE was also detected above the WAC NR 140 ES in the groundwater sample collected from TW-3 and above the WAC NR 140 PAL in the groundwater sample collected from TW-7. Vinyl chloride, a breakdown product of PCE, was also reported at a concentration above the WAC NR 140 ES in the groundwater sample collected from TW-5, located within the former dry cleaning operations area. TW-5 also contained PCE and 1,2-DCA above their respective WAC NR 140 PALs.

Petroleum-related volatile organic compounds (VOCs; benzene, ethylbenzene, and/or 1,2,4 – trimethylbenzene) were also detected in groundwater samples collected from temporary wells TW-5 and TW-6, located on the northeast corner of the site, in the area of former filling/automobile service station operations. Arsenic was also present in groundwater in two temporary wells (TW-1 and TW-6) at or just above its WAC NR 140 ES. Several individual PAHs were detected in groundwater above their respective WAC NR 140 PALs, but below their ESs. Laboratory analytical results are included in Appendix A.

1.4 Health and Safety Considerations

The purpose of the Health and Safety considerations described herein is to provide guidance to site workers to reduce the potential for exposure to contaminants.

All site workers whose job functions pose a risk of exposure to site contaminants shall be trained in the general and specific hazards unique to the job and, as applicable, meet recommended medical examination requirements. All site workers and visitors shall follow a Health and Safety Plan (HASP) prepared for them by their respective employers. Such employer HASPs shall be consistent with the information provided in this Soil Management Plan, where applicable. At a minimum, such HASPs shall comply with Occupational Safety and Health Administration (OSHA) 40 CFR 1910 and 1926 standards.

2. SOIL MANAGEMENT APPROACH

Based on the proposed site development plan and the results of the investigation activities conducted to date, soils excavated from specific areas of the site are to be managed as described in the following sections. Due to the large volume of soil that will be generated during excavation of the basement portion of the building, the proposed soil management approach includes a combination of both temporary off-site storage, on-site placement, and off-site landfill disposal. The excavation areas are depicted on Figure 3.

2.1 Temporary Off-Site Soil Storage Approach (WAC NR 718)

To facilitate construction of the basement on the southern portion of the proposed AHPRC building, the excavation walls on the north, south and west will be benched to provide the necessary excavation protection measures, as required by OSHA. Sheet piling will be utilized for the eastern wall that is adjacent to North 12th Street. Soils excavated for benching will be temporarily stored off-site at a temporary off-site soil storage site, which is further described in Section 2.1.1. Within 3 days of the first day that contaminated soil is transported to this designated temporary off-site soil storage site, notification will be provided to the WDNR in accordance with WAC NR 718.05(2)(h). Following construction of the basement walls, the previously removed soils will be transported from the temporary off-site soil storage site, returned to the Site, and replaced. All efforts will be made to place soil back to the same area from which it was originally excavated.

Based on the site investigation data collected to date, benching along the northern and western walls will be in areas with documented soil impacts that exceed WAC NR 720 RCLs; however, the concentrations are such that the additive cost for off-site disposal is not beneficial. As such, the soil will be temporarily stored off-site in accordance with WAC NR 718.05 and managed/replaced in accordance with WAC NR 718.12. Sampling results collected along the southern wall did not document any RCL exceedances other than arsenic which was below its established Background Threshold Value (BTV). These soils will also be temporarily staged off-site for replacement in a similar fashion. The approximate location of the benching area is shown on the Figure 3. The area identified for temporary storage of the soil is shown on Figure 4 and further described below.

2.1.1 Temporary Off-Site Soil Storage Site

The soils excavated for benching will be temporarily stored off-site at the Former One-Hour Valet Cleaners property, located directly north of the Site at 1214-1222 West Wells Street. (SW ¼ of NW ¼, Section 29, Township 07N, Range 22E, Milwaukee County, with a WTM of X 688795, Y 287401). The Former One-Hour Valet Cleaners site is also owned by Marquette, and it has been assigned BRRTS No. 02-41-152248 (FID No. 241086120). The soils will be transported from the Site to the temporary off-site soil storage site via trucks.

2.1.2 Storage of Excavated Contaminated Soil (WAC NR 718.05)

The temporary off-site storage of impacted soil will be managed as follows:

- Less than 2,500 cubic yards of soil will be temporarily stored on-site between mid-March to June 1, 2018.
- Soil will be stored off-site within the two designated stockpile areas at the Former One-Hour Valet Cleaners property (Figure 4), which meets the locational requirements specified in WAC NR 718.05 (2)(a). This area is currently paved and remediation activities are scheduled to take place during the summer of 2018.
- Impacted soil will be placed on an impervious surface such as the existing pavement, plastic sheeting or an impervious construction fabric. A stockpile record will be maintained by Ramboll or the Contractor regarding the source of the excavated material to allow for eventual replacement of soil to same area that it was originally removed from.
- Stored soil will be covered when the soil is not being transferred. The cover will consist of plastic sheeting or other impervious material. The cover will be anchored in place by means of weights, ropes, etc. to prevent the impacted soil from being exposed.
- Signs shall be posted near the temporary storage pile that identify that the staged soil is impacted. Ramboll will secure these signs from the local WDNR office and provide to the Contractor.
- The temporary storage piles shall be inspected at least once every 30 days by a Ramboll representative. Records of the inspection will be maintained. Any areas requiring repair will be immediately communicated to the Contractor. The repair activity will also be documented on the inspection log.
- In the event that construction activities are delayed, the WDNR will be notified of any storage activities that extend beyond 90-days as required in WAC NR 718.05(2)(i).

2.1.3 Management of Contaminated Soil (WAC NR 718.12)

Following construction of the basement walls, the temporarily-staged soil will be transported back to the Site and returned to its original source location to fill the void created by the original benching. Records maintained during excavation wall benching and stockpiling activities described previously will be utilized during these soil replacement activities. All reasonable efforts will be employed to return the soil to its original location. The approximate benching locations are shown on Figure 3.

The area where the low-level impacted soil will be replaced meets the locational requirements specified in WAC NR 718.12 (1)(c). Depending on the timing of construction sequencing, a portion of these materials may also be utilized to backfill the void created during the removal of soil in the area of boring B-10, which is further described in Section 2.2. The impacted soil will not be placed at a depth greater than the depth from which it was originally excavated. However, because the basement excavation extends to a depth of approximately 16 feet bgs, the excavated and subsequently replaced benching soils will be located within 3 feet of the water table. As such, an exemption from WAC NR 718.12(1)(c)5 is being requested from the WDNR as part of this submittal.

In addition, soil samples previously collected at the Site are considered representative of the soil that will be replaced along the excavation benching locations. A total of 30 discrete soil samples and three composite soil samples have been collected at the Site to characterize the extent of pre-construction impacts within the primary AHPRC building construction area. Laboratory analytical results are included in Appendix A.

Samples collected from borings B-3 (3-4 ft and 11 -12 ft), B-7 (3 ft and 7.5 ft), B-11 (3 ft and 8 ft), B-13 (3 ft and 8 ft) and B-14 (3 ft and 8 ft) are considered representative of the soil that will be removed during excavation benching, temporarily stored off-site, and subsequently replaced. All ten soil samples were analyzed for VOCs and RCRA metals, and soil samples collected from boring B-3 (3-4 ft and 11-12 ft) were also analyzed for PAHs. Although the number of samples collected (10 samples) is slightly lower than the approximate number of required samples (12 samples) under NR 718.12(1)(e), they are considered representative of the material that will be replaced. Additionally, the soils will be replaced to an area where the surrounding soils have a similar level of residual impacts. As such, an exemption from the sampling requirements specified in WAC NR 718.12(1)(e) is being requested from WDNR as part of this submittal. If additional sampling of this material is required by WDNR, the samples will be collected from the staged soils, and the results will be provided to WDNR prior to replacement of the soil.

2.2 Off-Site Soil Disposal Approach (Landfilling)

Soils will be excavated from areas with minor or no known impacts, potential impacts, or known (or confirmed) impacts during building construction, with the primary excavation area being the basement portion of the AHPRC building. In addition, a small area of soil near B-10 (location of elevated PCE impacts) has been identified for removal prior to construction of the slab-on-grade portion of the building. The excavation zones are described in the following sections and are depicted on Figure 3.

Minor or No Known Impacts

Certain excavation areas at the site have been observed to have minor or no known impacts, and the soils generated from these excavations will be disposed off-site for potential use as daily cover soils at a designated licensed solid waste landfill. Based on the soil sampling results obtained from the investigation activities, excavation areas with minor or no known impacts are located predominantly on the southernmost portion of the proposed building footprint. The soils to be excavated for potential use as daily cover soils are designated as "Zone A," and the location of these soils is shown on Figure 3.

Potential Impacts

It is possible that soils with unusual visual, olfactory, or other characteristics may be encountered during the excavation activities. If potentially impacted soils are identified, these soils should either be segregated for waste characterization testing or disposed off-site at the designated licensed solid waste landfill. The Ramboll representative listed in Table 1 should be contacted to assist in the evaluation, screening, and sampling of the questionable material.

Soil segregated on-site should be placed on and covered with plastic to avoid contaminant migration onto surrounding soil. The temporary storage of potentially impacted soil shall comply with the requirements specified in NR 718.05 and as previously described in Section 2.1.2. Roll-off boxes and/or drums may be used depending on the quantity of material in question.

Known (or Confirmed) Impacts

Soils with known (or confirmed) impacts will be directly loaded onto trucks for disposal off-site at a designated licensed solid waste landfill. Prior to conducting excavation activities in areas with known impacts, the Contractor shall notify the Ramboll contact (Table 1) a minimum of 48-hours in advance so that appropriate samples can be collected from the excavation walls to document whether residual impacts are present. The Contractor shall assist Ramboll in the collection of the samples from the excavator bucket or by alternate means.

Soils, identified to date, as having known impacts include:

- Soils to be excavated for the construction of the northern portion the proposed building basement.
- Soils to be excavated in conjunction with the construction of the slab-on-grade portion of the proposed building (including, but not limited to, soils from frost footing excavations, grading, or the installation of aggregate geopiers).
- Soils to be excavated from an approximately 20-foot by 20-foot excavation around boring B-10, to a depth of approximately 8 feet. The soils generated from this excavation are known to be impacted with PCE (19,600 ug/kg at 3 feet bgs and 340 ug/kg at 8 feet bgs), TCE (350 ug/kg at 3 feet bgs), arsenic (9.3 mg/kg at 3 feet bgs), lead (166 mg/kg at 3 feet bgs), and mercury (0.32 mg/kg at 3 feet bgs).

The location of these soils with known impacts are designated as "Zone B" on Figure 3.

During the January 2018 pre-construction site investigation activities, a composite sample (COMP-1) was collected by taking aliquots from borings B-7 through B-14 and was submitted for landfill Protocol B analysis, which includes toxicity characteristic leaching procedure (TCLP) VOCs, TCLP RCRA 8 metals, free liquids, flashpoint, polychlorinated biphenyls (PCBs), reactive sulfide, and reactive cyanide. Additional composite samples were collected from each boring location (B-7 through B-14) for potential laboratory compositing, if needed. These additional composite samples were collected for each soil boring location by taking aliquots from each depth-specific sample collected to form the composite sample (i.e., Composite sample B-10-COMP was comprised of remaining sample volume for soil samples B-10 [3'] and B-10 [8']). Based on the results received, the B-10-COMP sample was submitted for TCLP VPC and TCLP lead analysis. In addition, the B-7-COMP and B-11-COMP sample were lab composited, named COMP-2, and analyzed for TCLP lead. The laboratory analytical results from COMP-1, COMP-2, and B-10-COMP confirmed that there were no hazardous characteristics in the soil that would prohibit acceptance at a solid waste landfill. The waste characterization sampling results are included in Appendix B, and have been submitted to the designated licensed solid waste landfill for waste profiling.

3. EROSION AND SEDIMENT CONTROL DURING SOIL MANAGEMENT PLAN

Soil erosion due to runoff from soil excavation and/or stockpiles shall be prevented using berms or other surface water controls such as bales of straw or other appropriate measures. Soil erosion measures shall comply with the construction site erosion control permit obtained by Contractor and construction storm water permit, as applicable.

4. SOIL TRANSPORT AND DISPOSAL

Contaminated soil identified for off-site disposal will be transported to a designated licensed solid waste landfill facility. For all soils transported off-site for disposal, truck tickets and solid waste manifests will be used. Trucks transporting impacted soil from the site shall cover the load until unloading at the designated disposal facility. The transporter will be responsible for any materials spilled from the truck bed during transport to the disposal facility.

4.1 Solid Waste Landfill Facility

Marquette has selected Waste Management's Metro and Orchard Ridge facilities for the disposal location for impacted soil removed from the AHPRC site.

Zone A – Daily Cover
Waste Management – Metro RDF
10712 S. 124th Street
Franklin, WI 53132

Zone B – Direct Landfilling
Waste Management – Orchard Ridge RDF
W124 N9355 Boundary Road
Menomonee Falls, WI 53051

The landfills generally operate weekdays between 7:00 am and 4:30 pm and Saturdays between 7:00 am and 11:00 pm. The Contractor shall coordinate directly with the landfill to make the necessary arrangements. Ramboll shall be notified at least 72 hours in advance of any planned Saturday work to ensure that the appropriate personnel are available to assist.

4.2 Waste Profiles

Zone A (daily cover) and Zone B (direct landfilling) will be disposed of utilizing the following waste profile approved by Waste Management:

- WM Profile: 128879WI (Daily Cover)
- WM Profile: 128809WI (Direct Landfilling)

Following issuance of the final waste profiles, an amendment to this plan will be prepared and copies of the approved waste profiles are included in Appendix C.

5. EXCAVATION WATER AND STORM WATER CONTROL

The Contractor's excavation water management activities (including but not limited to collecting, storing, testing, treating, and discharging/disposing of water impacted by or generated during excavation activities) in areas known to have groundwater impacted by PCE or other VOCs shall be performed in accordance with all applicable rules and regulations. The Contractor shall obtain all necessary permits and approvals for the proper disposal of potentially impacted groundwater during the performance of any excavation dewatering activities. Groundwater analytical results collected during performance of the Phase II and pre-construction investigation activities were provided to the Contractor via e-mail on February 7, 2018.

In addition, due to the large excavation area, storm water may flow into the construction trenches from the surrounding surface areas during snow melt and rainfall events. Shallow berms may need to be placed around the open excavation by the Contractor to divert surface water away from the excavation.

Discharge of storm water (if necessary) is presumed to be to the ground surface or a pre-approved discharge basin and is subject to analytical testing should the water be located near potential sources of contamination. If necessary, effluent limitations and monitoring requirements for contaminated groundwater may be necessary under the National Pollutant Discharge Elimination System (NPDES) Program and/or City of Milwaukee requirements.

Based on the investigation activities completed to date, groundwater in portions of the site is impacted with VOCs, metals, and/or PAHs. The contaminants listed below were detected at concentrations above their respective WAC NR 140 ES at each of the following temporary wells:

- TW-3: PCE and TCE
- TW-5: Vinyl chloride and benzene
- TW-6: Benzene and arsenic
- TW-7: PCE

In addition to exceedances of the WAC NR 140 ES, several contaminants were detected in groundwater at concentrations exceeding their respective WAC NR 140 PALs. These contaminants include 1,2-dichloroethane (TW-5); ethylbenzene (TW-6); 1,2,4-trimethylbenzene (TW-6); PCE (TW-5); TCE (TW-7); arsenic (TW-1); benzo(a)pyrene (TW-1 and TW-4); benzo(b)fluoranthene (TW-1 through TW-4); and chrysene (TW-1 through TW-5).

6. CONSTRUCTION DOCUMENTATION

The Contractor shall maintain and provide Marquette with copies of all truck tickets and manifests for any soil and or groundwater that is removed from the site as part of the construction activities. The volume of soil transported off-site will be evaluated based on truck tickets and manifests. Following the completion of soil excavation and off-site disposal at designated solid waste landfill, a construction documentation report will be prepared in accordance with WAC NR 724. The report will also document the temporary soil management and subsequent replacement activities performed in accordance with WAC NR 718.

TABLES

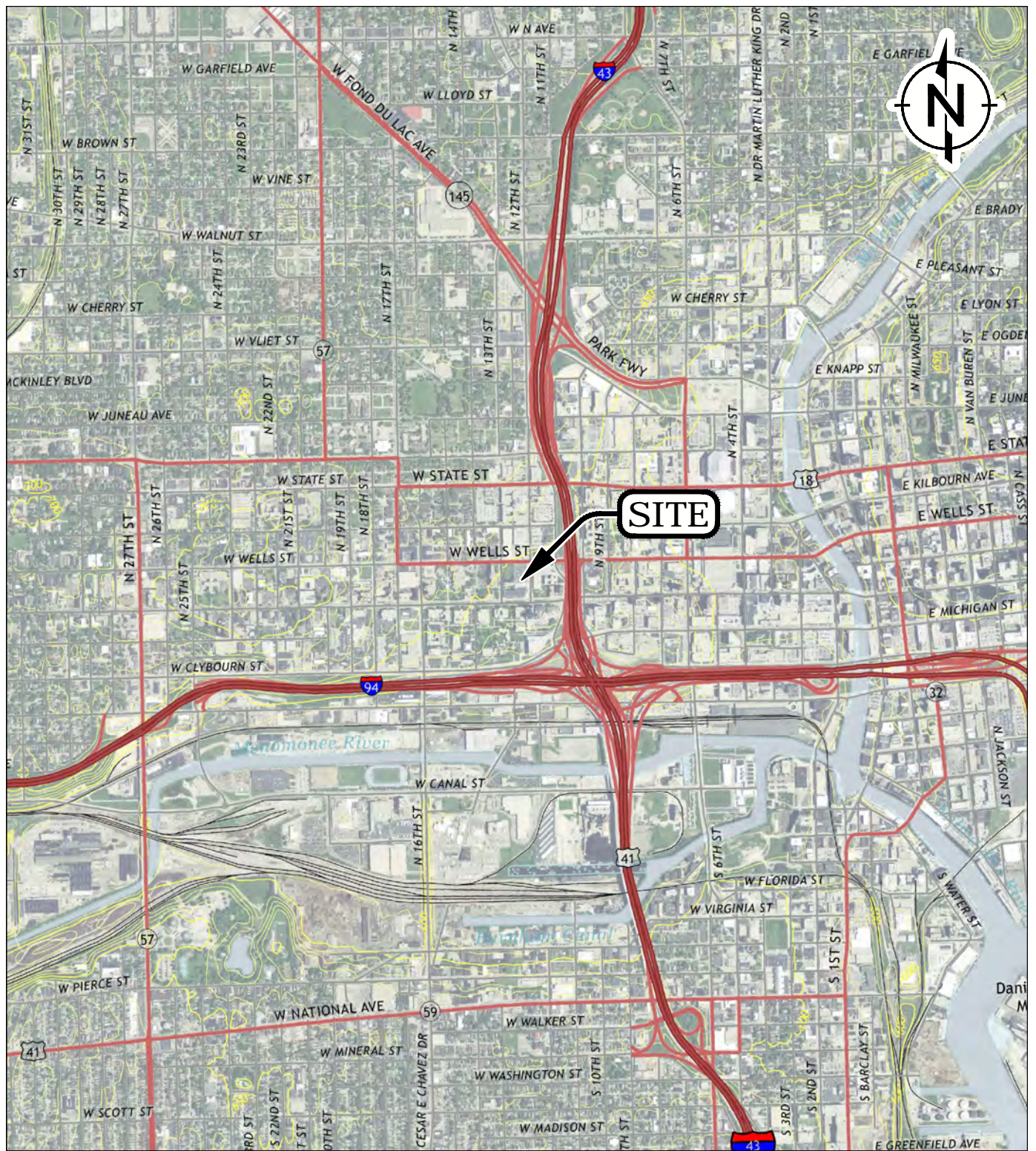
Table 1. Soil Management Plan Contact List

Marquette University APRC Site
Milwaukee, Wisconsin
Ramboll Project No. 1690005255-001

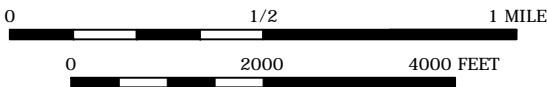
Party	Contact Information
Property Owner and Responsible Party: Marquette University	Mr. Joel Smullen, AIA Project Manager, Facilities Planning and Management 517 North 14 th Street Milwaukee, WI 53233 Office Phone: 414-288-4620 Cell Phone: 414-840-9911 Email: joel.smullen@marquette.edu
General Contractor: Mortenson	Mr. Chad Labucki Project Manager 17975 West Sarah Lane Brookfield, WI 53045 Office Phone: 262-792-2928 Cell Phone: 262-443-5673 Email: chad.labucki@mortenson.com
Excavation Contractor: Edgerton	Mr. Daniel Urbanek, PE Regional Vice President 545 West Ryan Road Oak Creek, WI 53154 Office Phone: 414-764-4443 Cell Phone: 414-477-1896 Email: du@edgerton.us
Environmental: Ramboll	Ms. Susan Petrofske Project Manager 175 North Corporate Drive, Suite 160 Brookfield, WI 53045 Office Phone: 262-901-3501 Cell Phone: 262-391-5990 Email: spetrofske@ramboll.com

FIGURES


E:\00_CAD_FILES\212143145_MU Wells Street\PH2_Record Files\01_Site Location Map.dwg



CONTOUR INTERVAL 10 FEET



LEGEND:

 PROPERTY BOUNDARY (APPROXIMATE)

SOURCE:

2016 USGS 7.5 Minute Series Milwaukee, Wisconsin Topographic Quadrangle.
Site Location: N: 43.039581° W: -87.927909° WGS84



QUADRANGLE LOCATION



SITE LOCATION MAP
 AHPRC SITE
 MARQUETTE UNIVERSITY
 1201 WEST WELLS STREET
 MILWAUKEE, WISCONSIN

FIGURE
 1

DRAFTED BY: APR

DATE: 2/2/2018

PROJECT: 1690005255-001



WELLS STREET

B-8 (3') (1/10/18)
NE
B-8 (8') (1/10/18)
Arsenic 10.4 mg/kg A,B,C,D

B-5 (12.5-13.5') (10/09/17)
Chloroform 151 J ug/kg C
B-5 (14-15') (10/09/17)
Chloroform 133 J ug/kg C

B-6 (3-4') (10/09/17)
PCE 109 ug/kg C
B-6 (11-12') (10/09/17)
PCE 39.1 J ug/kg C

B-10 (3') (1/10/18)
PCE 19,600 ug/kg C
TCE 350 ug/kg C
Arsenic 9.3 mg/kg A,B,C,D
Lead 166 mg/kg C,D
Mercury 0.32 mg/kg C
B-10 (8') (1/10/18)
PCE 340 ug/kg C

B-1 (3-4') (10/09/17)
PCE 44.8 J ug/kg C
B-1 (11.5-12.5') (10/09/17)
NE

B-9 (3') (1/10/18)
PCE 80.7 J ug/kg C
B-9 (8') (1/10/18)
PCE 3,650 ug/kg C

B-15 (3') (1/10/18)
NE
B-15 (8') (1/10/18)
NE

B-11 (3') (1/10/18)
PCE 50.6 J ug/kg C
Lead 96.3 mg/kg C,D
Mercury 0.38 mg/kg C
B-11 (8') (1/10/18)
NE

B-2 (3-4') (10/09/17)
Lead 214 mg/kg C,D
Mercury 0.59 mg/kg C
B-2 (12-13') (10/09/17)
NE

B-7 (3') (1/10/18)
Barium 335 mg/kg C
Lead 491 mg/kg A,C,D
Mercury 0.96 mg/kg C
B-7 (7.5') (1/10/18)
PCE 29.5 J ug/kg C

B-3 (3-4') (10/09/17)
PCE 44.6 J ug/kg C
B-3 (11-12') (10/09/17)
NE

B-16 (3') (1/10/18)
NE
B-16 (8') (1/10/18)
NE

B-12 (3') (1/10/18)
Selenium 1.4 J mg/kg C
B-12 (8') (1/10/18)
PCE 38.6 J ug/kg C

B-4 (2-3') (10/09/17)
PCE 371 ug/kg C
Cadmium 7.7 mg/kg C,D
Lead 135 mg/kg C,D
Selenium 1.5 J mg/kg C
B-4 (10-11') (10/09/17)
NE

B-13 (3') (1/10/18)
NE
B-13 (8') (1/10/18)
NE

B-14 (3') (1/10/18)
NE
B-14 (8') (1/10/18)
NE

Legend

- Soil Boring
- Soil Boring/Temporary Well
- Previous Geotechnical Soil Boring
- Soil Gas Probe
- Milwaukee County Parcel Boundary

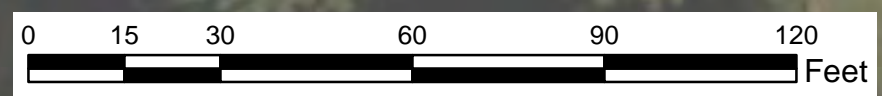
Notes

µg/kg - micrograms per kilogram
mg/kg - milligrams per kilogram
PCE - Tetrachloroethene
NE - No exceedances

A Parameter exceeds NR 720 Residual Contaminant Level (RCL) for Non-Industrial Direct Contact.
B Parameter exceeds NR 720 RCL for Industrial Direct Contact.
C Parameter exceeds NR 720 RCL for Groundwater Pathway
D Parameter exceeds Surficial Background Threshold Value (BTV) for metals
J Estimated concentration at or above the LOD and below the LOQ

Refer to Table 1 for NR 720 RCL and BTV criteria.

Arsenic detections in surficial soil that are below the BTV are not shown as they are not considered exceedances of the NR 720 RCLs for the purposes of this evaluation.



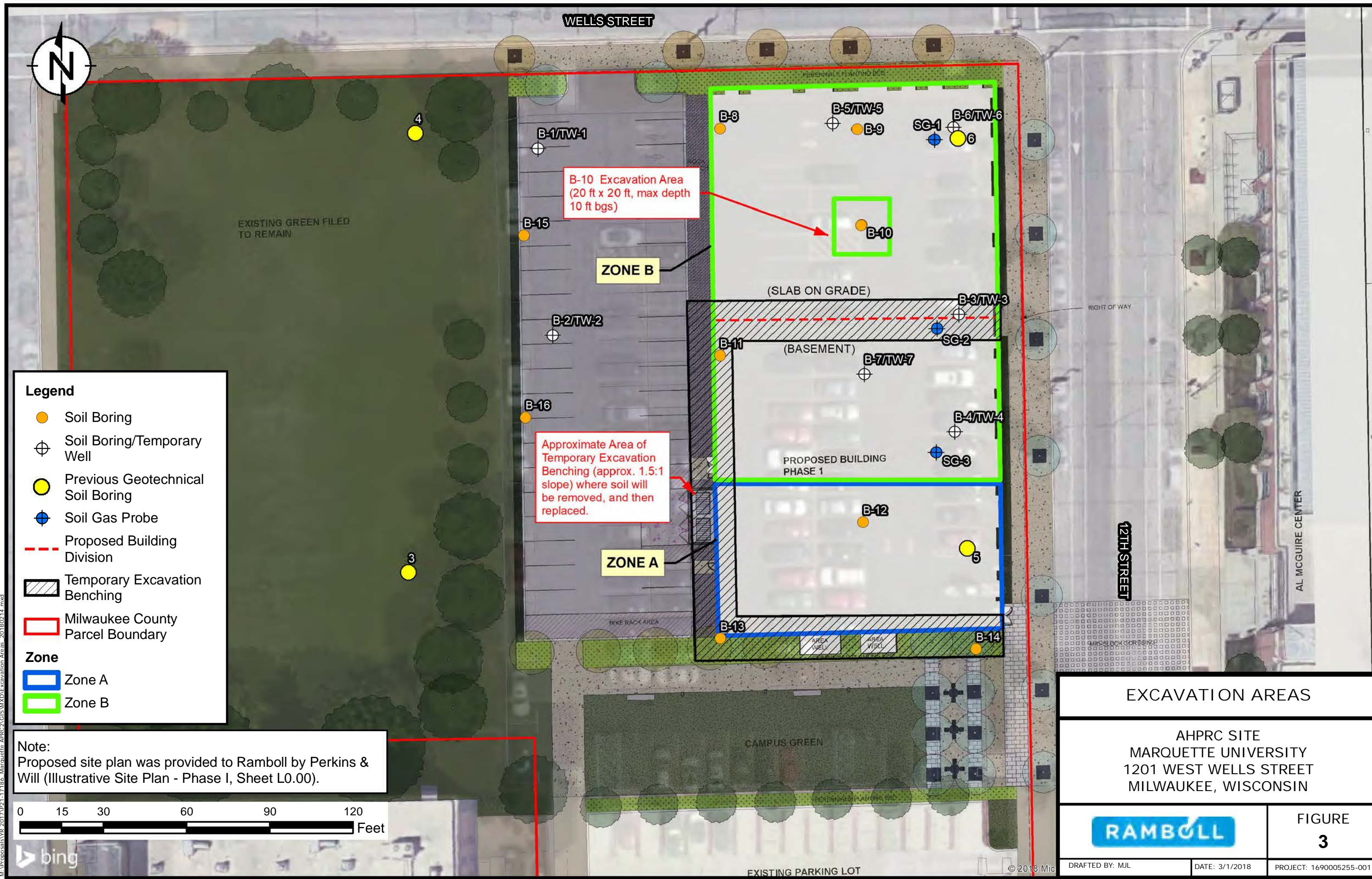
NR 720 RCL EXCEEDANCES IN SOIL

AHPRC SITE
MARQUETTE UNIVERSITY
1201 WEST WELLS STREET
MILWAUKEE, WISCONSIN



FIGURE
2

M:\Proposals\1717186_Marquette\APRC2\GIS\MXD\Fig3_APRC_Extent_of_NR720_Exceedances_in_Soil_20180205.mxd



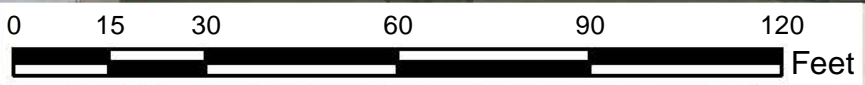
Legend

- Soil Boring
- ⊕ Soil Boring/Temporary Well
- Previous Geotechnical Soil Boring
- ⊕ Soil Gas Probe
- Proposed Building Division
- Temporary Excavation Benching
- Milwaukee County Parcel Boundary

Zone

- Zone A
- Zone B

Note:
Proposed site plan was provided to Ramboll by Perkins & Will (Illustrative Site Plan - Phase I, Sheet L0.00).

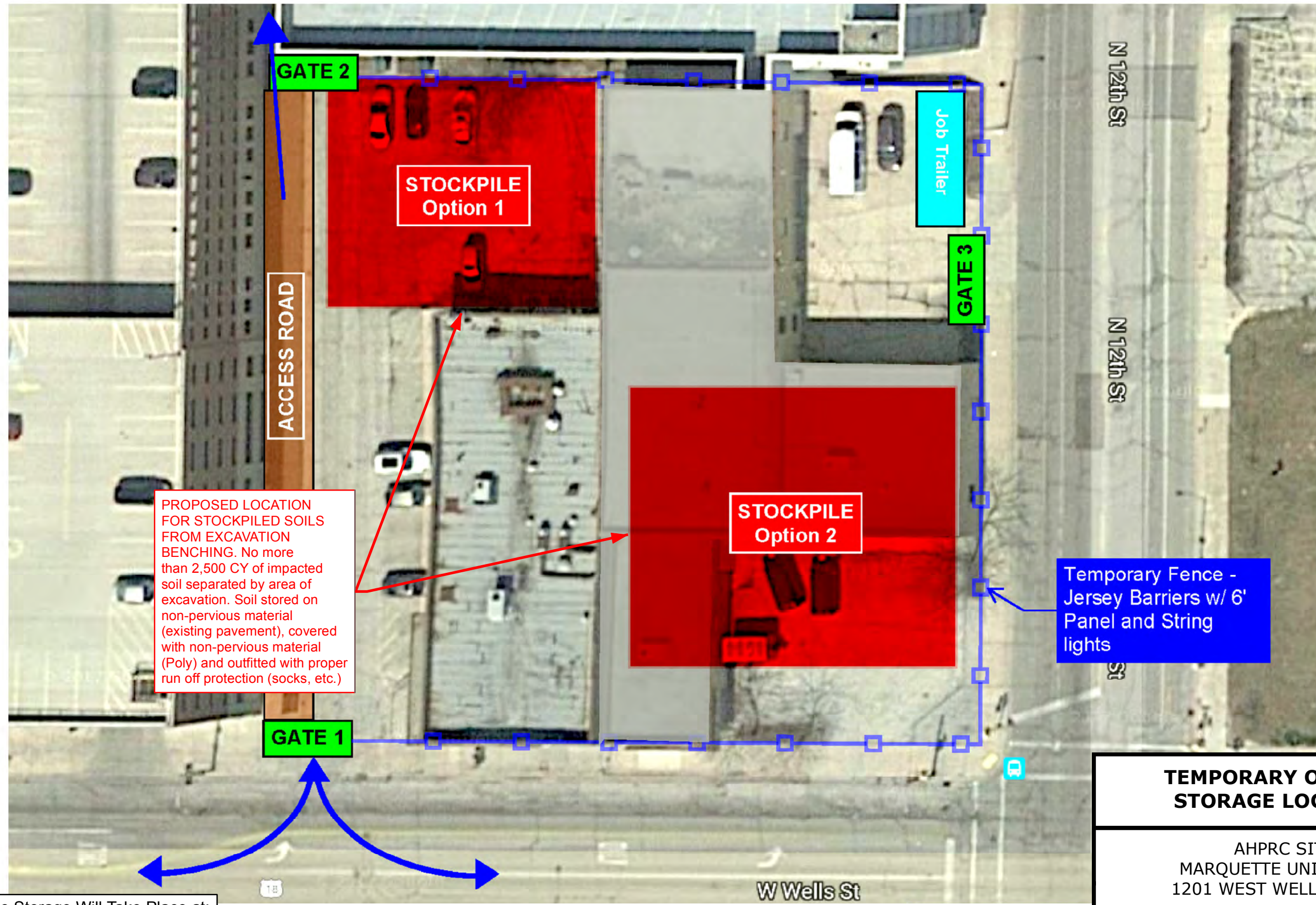
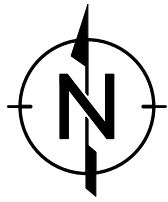


B-10 Excavation Area
(20 ft x 20 ft, max depth
10 ft bgs)

Approximate Area of
Temporary Excavation
Benching (approx. 1.5:1
slope) where soil will
be removed, and then
replaced.

EXCAVATION AREAS	
AHPRC SITE MARQUETTE UNIVERSITY 1201 WEST WELLS STREET MILWAUKEE, WISCONSIN	
	FIGURE 3
DRAFTED BY: MJL	DATE: 3/1/2018
PROJECT: 1690005255-001	

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PROPOSED LOCATION FOR STOCKPILED SOILS FROM EXCAVATION BENCHING. No more than 2,500 CY of impacted soil separated by area of excavation. Soil stored on non-pervious material (existing pavement), covered with non-pervious material (Poly) and outfitted with proper run off protection (socks, etc.)

Temporary Off-Site Storage Will Take Place at:
 Former One Hour Valet Property
 1214-1222 West Wells Street
 Milwaukee, WI
 BRRTS No. 02-41-152248

TEMPORARY OFF-SITE STORAGE LOCATION		
AHPRC SITE MARQUETTE UNIVERSITY 1201 WEST WELLS STREET		
		FIGURE 4
DRAFTED BY: MJL	DATE: 3/1/2018	PROJECT: 1690005255-001

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APPENDIX A

SOIL AND GROUNDWATER LABORATORY ANALYTICAL RESULTS

**TABLE 1. SOIL ANALYTICAL RESULTS
AHPRC PRE-CONSTRUCTION SITE INVESTIGATION
1201 WEST WELLS STREET
MILWAUKEE, WISCONSIN
RAMBOLL PROJECT NO. 1690005255-001**

Parameters	Soil RCLs			BTV	B-1 (3-4')	B-1 (11.5-12.5')	B-2 (3-4')	B-2 (12-13')	B-3 (3-4')	B-3 (11-12')	B-4 (2-3')	B-4 (10-11')	B-5 (12.5-13.5')	B-5 (14-15')	B-6 (3-4')	B-6 (11-12')	B-7 (3')	B-7 (7.5')
	Non-Industrial Direct Contact	Industrial Direct Contact	Groundwater Pathway		10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	01/10/18
VOCs (µg/kg)																		
sec-Butylbenzene	145,000	145,000	--	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	159	46.5 J	<25.0	<25.0	<28.1	<25.0
n-Butylbenzene	108,000	108,000	--	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	324	152	<25.0	<25.0	<28.1	<25.0
Chloroform	454	1,980	3.3	--	<46.4	<46.4	<46.4	<46.4	<46.4	<46.4	<46.4	<46.4	151 J C	133 J C	<46.4	<46.4	<52.2	<46.4
Ethylbenzene	8,020	35,400	1,570	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	74.1	1,060	<25.0	<25.0	61.8 J	<25.0
Isopropylbenzene	268,000	268,000	--	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	112	211	<25.0	<25.0	<28.1	<25.0
n-Propylbenzene	264,000	264,000	--	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	545	778	<25.0	<25.0	32.5 J	<25.0
Tetrachloroethene	33,000	145,000	4.54	--	44.8 J C	<25.0	<25.0	<25.0	44.6 J C	<25.0	371 C	<25.0	<25.0	<25.0	109 C	39.1 J C	<28.1	29.5 J C
Trichloroethene	1,300	8,410	3.6	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<28.1	<25.0
1,2,4-Trimethylbenzene ¹	219,000	219,000	1,378.7	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	36.6 J	<25.0	<25.0	<28.1	<25.0
PAHs (µg/kg)																		
Acenaphthene	3,590,000	45,200,000	--	--	<4.3	7.1 J	13.3 J	<4.6	9.3 J	<4.6	<4.6	<4.4	<4.4	<4.8	<4.5	<4.3	#N/A	#N/A
Acenaphthylene	--	--	--	--	<3.7	<3.9	6.3 J	<3.9	<3.8	<3.9	<3.9	<3.8	<3.7	<4.1	<3.8	<3.7	#N/A	#N/A
Anthracene	17,900,000	100,000,000	196,949.2	--	<6.3	<6.8	25.3	<6.7	16.7 J	<6.8	10.6 J	<6.5	<6.4	<7.0	<6.6	<6.4	#N/A	#N/A
Benzo(a)anthracene	1140	20,800	--	--	11.7 J	17.3	64.3	<3.7	26.0	5.5 J	27.6	<3.6	<3.9	<3.9	5.9 J	<3.6	#N/A	#N/A
Benzo(a)pyrene	115	2110	470	--	12.1	15.3	65.7	<2.9	20.2	4.9 J	26.3	3.7 J	<2.8	<3.1	4.2 J	<2.8	#N/A	#N/A
Benzo(b)fluoranthene	1150	21,100	478.1	--	20.6	21.8	79.0	<3.3	25.7	7.1 J	39.9	4.7 J	3.5 J	<3.5	6.5 J	<3.2	#N/A	#N/A
Benzo(ghi)perylene	--	--	--	--	11.1	10.7	38.8	<2.4	11.6	4.3 J	20.9	5.1 J	<2.3	<2.5	3.2 J	<2.3	#N/A	#N/A
Benzo(k)fluoranthene	11,500	211,000	--	--	7.1 J	9.4 J	33.5	<2.9	10.9	<3.0	14.4	<2.9	<3.1	<3.1	<2.9	<2.8	#N/A	#N/A
Chrysene	115,000	2,110,000	144.2	--	15.2	21.5	67.2	<4.0	24.4	6.6 J	33.7	<3.8	<3.8	<4.1	6.5 J	<3.8	#N/A	#N/A
Dibenzo(a,h)anthracene	115	2110	--	--	<2.5	<2.7	9.0 J	<2.6	3.2 J	<2.6	4.4 J	<2.6	<2.5	<2.8	<2.6	<2.5	#N/A	#N/A
Fluoranthene	2,390,000	30,100,000	88,877.8	--	33.9	52.2	143	<6.1	66.1	15.2 J	77.5	6.5 J	<5.9	<6.4	10.7 J	<5.8	#N/A	#N/A
Fluorene	2,390,000	30,100,000	14,829.9	--	<4.6	6.2 J	15.0 J	<4.9	9.7 J	<4.9	<4.9	<4.7	<4.7	<5.1	<4.8	<4.6	#N/A	#N/A
Indeno(1,2,3-cd)pyrene	1150	21,100	--	--	8.3	9.2	34.6	<2.6	9.9	3.0 J	17.4	2.6 J	<2.5	<2.7	<2.5	<2.5	#N/A	#N/A
1-Methylnaphthalene	17,600	72,700	--	--	<4.5	<4.8	7.5 J	<4.7	<4.7	<4.8	<4.8	<4.6	12.1 J	47.0	<4.6	5.0 J	#N/A	#N/A
2-Methylnaphthalene	239,000	3,010,000	--	--	<5.6	<5.9	7.7 J	<5.9	<5.8	<5.9	<5.9	<5.7	<5.6	8.4 J	<5.8	<5.6	#N/A	#N/A
Naphthalene	5,520	24,100	658.2	--	<9.4	<10.0 C4	20.4 J	<9.9	<9.8	<10	<9.9	<9.6 C4	52.5	35.3	<9.7	10.0 J	#N/A	#N/A
Phenanthrene	--	--	--	--	15.6 J	53.0	128	<13.7	79.8	<13.8	57.0	<13.3	<13.1	<14.3	<13.5	<13.1	#N/A	#N/A
Pyrene	1,790,000	22,600,000	54,545.5	--	27.9	43.9	126	<5.3	56.2	12.5 J	61.1	5.4 J	<5.1	<5.5	12.1 J	<5.1	#N/A	#N/A
Metals (mg/kg)																		
Arsenic ³	0.677	3.00	0.58	8.3	3.7 J A,B,C	4.6 J C	8.2 A,B,C	3.9 J C	6.9 A,B,C	3.3 J A,B,C	6.1 A,B,C	4.1 J A,B,C	3.3 J A,B,C	3.5 J A,B,C	3.9 J A,B,C	3.7 J A,B,C	4.4 J A,B,C	3.0 J A,C
Barium ³	15,300	100,000	164.8	364	48.0	72.1	105	49.9	86.2	65.6	128	47.8	20.0	94.4	43.7	43.1	335 C	10.8
Cadmium ³	71	985	0.75	1.07	0.15 J	0.23 J	0.43 J	0.19 J	0.19 J	0.28 J	7.7 C,D	0.15 J	0.16 J	0.18 J	0.21 J	0.14 J	0.31 J	<0.13
Chromium	--	--	360,000	43.5	19.5	19.0	39.0	18.3	20.4	27.1	14.0	17.7	9.3	27.9	16.1	14.2	12.4	6.2
Lead ³	400	800	27	51.6	7.0	9.8	214 C,D	8.2	13.8	9.0	135 C,D	7.8	7.1	8.7	6.9	6.6	491 A,C,D	5.2
Mercury	3.13	3.13	0.21	--	0.015 J	<0.013	0.59 C	<0.012	<0.012	0.016 J	0.013 J	<0.012	<0.012	0.020 M0	<0.012	0.012 J	0.96 C	<0.012
Selenium	391	5,840	0.52	--	<1.2	<1.2	<1.3	<1.3	<1.2	<1.2	1.5 J C	<1.3	<1.2	<1.2	<1.2	<1.2	<1.3	<1.1

Notes:
Analytical results displayed are for detected parameters only.
VOCs = Volatile Organic Compounds
PAHs = Polynuclear Aromatic Hydrocarbons
RCL = Residual Contaminant Level
BTV = Background Threshold Value
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
¹ Groundwater Pathway RCL listed is for 1,2,4- and 1,3,5-Trimethylbenzenes combined.
² Direct Contact RCL listed is for the more stringent m-Xylene.
³ Parameter BTV is larger than one or more of the RCLs or is the only standard available.
A Parameter exceeds NR 720 Residual Contaminant Level (RCL) for Non-Industrial Direct Contact.
B Parameter exceeds NR 720 RCL for Industrial Direct Contact.
C Parameter exceeds NR 720 RCL for Groundwater Pathway.
D Parameter exceeds Surficial BTV for metals.
J Estimated concentration at or above the LOD and below the LOQ.
M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
#N/A = Not analyzed
Soil RCLs and surficial BTVs established by the WDNR RR program using the EPA's RSL web-calculator with WAC NR 720 default parameters (WDNR PUB-RR-890, June 2014 - updated RCL spreadsheet, December 2017).

**TABLE 1. SOIL ANALYTICAL RESULTS
 AHPRC PRE-CONSTRUCTION SITE INVESTIGATION
 1201 WEST WELLS STREET
 MILWAUKEE, WISCONSIN
 RAMBOLL PROJECT NO. 1690005255-001**

Parameters	Soil RCLs			BTV	B-8 (3')	B-8 (8')	B-9 (3')	B-9 (8')	B-10 (3')	B-10 (8')	B-11 (3')	B-11 (8')	B-12 (3')	B-12 (8')	B-13 (3')	B-13 (8')	B-14 (3')	B-14 (8')	
	Non-Industrial Direct Contact	Industrial Direct Contact	Groundwater Pathway		01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18
VOCs (µg/kg)																			
sec-Butylbenzene	145,000	145,000	--	--	<27.5	<25.0	<37.9	<33.3	<78.1	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0	
n-Butylbenzene	108,000	108,000	--	--	<27.5	<25.0	<37.9	<33.3	<78.1	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0	
Chloroform	454	1,980	3.3	--	<51.0	<46.4	<70.4	<61.9	<145	<46.4	<74.9	<52.8	<65.4	<46.4	<50.5	<46.4	<60.3	<46.4	
Ethylbenzene	8,020	35,400	1,570	--	<27.5	<25.0	<37.9	<33.3	<78.1	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0	
Isopropylbenzene	268,000	268,000	--	--	<27.5	<25.0	<37.9	<33.3	<78.1	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0	
n-Propylbenzene	264,000	264,000	--	--	<27.5	<25.0	<37.9	<33.3	<78.1	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0	
Tetrachloroethene	33,000	145,000	4.54	--	<27.5	<25.0	80.7 J C	3,650 C	19,600 C	340 C	50.6 J C	<28.4	<35.2	38.6 J C	<27.2	<25.0	<32.5	<25.0	
Trichloroethene	1,300	8,410	3.6	--	<27.5	<25.0	<37.9	<33.3	350 C	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0	
1,2,4-Trimethylbenzene ¹	219,000	219,000	1,378.7	--	<27.5	<25.0	<37.9	<33.3	<78.1	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0	
PAHs (µg/kg)																			
Acenaphthene	3,590,000	45,200,000	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
Acenaphthylene	--	--	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
Anthracene	17,900,000	100,000,000	196,949.2	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
Benzo(a)anthracene	1140	20,800	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
Benzo(a)pyrene	115	2110	470	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
Benzo(b)fluoranthene	1150	21,100	478.1	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
Benzo(ghi)perylene	--	--	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
Benzo(k)fluoranthene	11,500	211,000	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
Chrysene	115,000	2,110,000	144.2	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
Dibenzo(a,h)anthracene	115	2110	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
Fluoranthene	2,390,000	30,100,000	88,877.8	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
Fluorene	2,390,000	30,100,000	14,829.9	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
Indeno(1,2,3-cd)pyrene	1150	21,100	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
1-Methylnaphthalene	17,600	72,700	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
2-Methylnaphthalene	239,000	3,010,000	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
Naphthalene	5,520	24,100	658.2	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
Phenanthrene	--	--	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
Pyrene	1,790,000	22,600,000	54,545.5	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
Metals (mg/kg)																			
Arsenic ³	0.677	3.00	0.58	8.3	5.1 J A,B,C	10.4 A,B,C,D	4.2 J A,B,C	4.6 J A,B,C	9.3 A,B,C,D	5.3 J A,B,C	5.1 J A,B,C	6.9 A,B,C	4.5 J A,B,C	3.8 J A,B,C	4.0 J A,B,C	5.0 J A,B,C	5.5 J A,B,C	4.8 J A,B,C	
Barium ³	15,300	100,000	164.8	364	80.4	73.4	17.2	48.5	83.1	17.7	91.9	71.9	46.5	61.8	21.8	49.5	58.4	74.2	
Cadmium ³	71	985	0.75	1.07	0.18 J	0.21 J	<0.14	0.19 J	0.43 J	0.20 J	0.17 J	0.24 J	0.16 J	0.20 J	0.28 J	0.23 J	0.22 J	0.24 J	
Chromium	--	--	360,000	43.5	29.0	20.7	8.2	23.5	17.2	10.2	19.1	26.4	16.2	17.6	10.1	20.6	25.8	19.7	
Lead ³	400	800	27	51.6	12.5	8.3	5.2	8.2	166 C,D	6.4	96.3 C,D	8.1	8.5	5.8	7.6	7.6	11.5	8.7	
Mercury	3.13	3.13	0.21	--	0.042	0.016 J	<0.012	<0.013	0.32 C	0.019 J	0.38 C	0.019 J	0.018 J	<0.012	0.029 J	0.013 J	0.020 J	0.014 J	
Selenium	391	5,840	0.52	--	<1.2	<1.2	<1.2	<1.3	<1.3	<1.3	<1.2	<1.3	1.4 J C	<1.3	<1.3	<1.2	<1.3	<1.2	

Notes:

- Analytical results displayed are for detected parameters only.
- VOCs = Volatile Organic Compounds
- PAHs = Polynuclear Aromatic Hydrocarbons
- RCL = Residual Contaminant Level
- BTV = Background Threshold Value
- µg/kg = micrograms per kilogram
- mg/kg = milligrams per kilogram
- ¹ Groundwater Pathway RCL listed is for 1,2,4- and 1,3,5-Trimethylbenzenes combined.
- ² Direct Contact RCL listed is for the more stringent m-Xylene.
- ³ Parameter BTV is larger than one or more of the RCLs or is the only standard available.
- A** Parameter exceeds NR 720 Residual Contaminant Level (RCL) for Non-Industrial Direct Contact.
- B** Parameter exceeds NR 720 RCL for Industrial Direct Contact.
- C** Parameter exceeds NR 720 RCL for Groundwater Pathway.
- D** Parameter exceeds Surficial BTV for metals.
- J** Estimated concentration at or above the LOD and below the LOQ.
- M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- #N/A = Not analyzed
- Soil RCLs and surficial BTVs established by the WDNR RR program using the EPA's RSL web-calculator with WAC NR 720 default parameters (WDNR PUB-RR-890, June 2014 - updated RCL spreadsheet, December 2017).

**TABLE 1. SOIL ANALYTICAL RESULTS
AHPRC PRE-CONSTRUCTION SITE INVESTIGATION
1201 WEST WELLS STREET
MILWAUKEE, WISCONSIN
RAMBOLL PROJECT NO. 1690005255-001**

Parameters	Soil RCLs			BTV	B-15 (3')	B-15 (8')	B-16 (3')	B-16 (8')
	Non-Industrial Direct Contact	Industrial Direct Contact	Groundwater Pathway		01/10/18	01/10/18	01/10/18	01/10/18
VOCs (µg/kg)								
sec-Butylbenzene	145,000	145,000	--	--	<27.8	<30.1	<25.0	<25.0
n-Butylbenzene	108,000	108,000	--	--	<27.8	<30.1	<25.0	<25.0
Chloroform	454	1,980	3.3	--	<51.6	<56.0	<46.4	<46.4
Ethylbenzene	8,020	35,400	1,570	--	<27.8	<30.1	<25.0	<25.0
Isopropylbenzene	268,000	268,000	--	--	<27.8	<30.1	<25.0	<25.0
n-Propylbenzene	264,000	264,000	--	--	<27.8	<30.1	<25.0	<25.0
Tetrachloroethene	33,000	145,000	4.54	--	<27.8	<30.1	<25.0	<25.0
Trichloroethene	1,300	8,410	3.6	--	<27.8	<30.1	<25.0	<25.0
1,2,4-Trimethylbenzene ¹	219,000	219,000	1,378.7	--	<27.8	<30.1	<25.0	<25.0
PAHs (µg/kg)								
Anthracene	17,900,000	100,000,000	196,949.2	--	#N/A	#N/A	#N/A	#N/A
Benzo(a)anthracene	1140	20,800	--	--	#N/A	#N/A	#N/A	#N/A
Benzo(a)pyrene	115	2110	470	--	#N/A	#N/A	#N/A	#N/A
Benzo(b)fluoranthene	1150	21,100	478.1	--	#N/A	#N/A	#N/A	#N/A
Benzo(ghi)perylene	--	--	--	--	#N/A	#N/A	#N/A	#N/A
Benzo(k)fluoranthene	11,500	211,000	--	--	#N/A	#N/A	#N/A	#N/A
Chrysene	115,000	2,110,000	144.2	--	#N/A	#N/A	#N/A	#N/A
Dibenzo(a,h.)anthracene	115	2110	--	--	#N/A	#N/A	#N/A	#N/A
Fluoranthene	2,390,000	30,100,000	88,877.8	--	#N/A	#N/A	#N/A	#N/A
Indeno(1,2,3-cd)pyrene	1150	21,100	--	--	#N/A	#N/A	#N/A	#N/A
1-Methylnaphthalene	17,600	72,700	--	--	#N/A	#N/A	#N/A	#N/A
2-Methylnaphthalene	239,000	3,010,000	--	--	#N/A	#N/A	#N/A	#N/A
Naphthalene	5,520	24,100	658.2	--	#N/A	#N/A	#N/A	#N/A
Phenanthrene	--	--	--	--	#N/A	#N/A	#N/A	#N/A
Pyrene	1,790,000	22,600,000	54,545.5	--	#N/A	#N/A	#N/A	#N/A
Metals (mg/kg)								
Arsenic ³	0.677	3.00	0.58	8.3	4.8 J A,B,C	6.5 C	4.6 J A,B,C	5.6 C
Barium ³	15,300	100,000	164.8	364	71.1	67.3	59.8	61.2
Cadmium ³	71	985	0.75	1.07	<0.16	0.29 J	0.18 J	0.15 J
Chromium	--	--	360,000	43.5	22.2	27.3	26.1	18.0
Lead ³	400	800	27	51.6	11.2	9.8	10.3	7.1
Mercury	3.13	3.13	0.21	--	0.016 J	0.045	0.055	<0.012
Selenium	391	5,840	0.52	--	<1.3	<1.3	<1.3	<1.2

Notes:

Analytical results displayed are for detected parameters only.
VOCs = Volatile Organic Compounds
PAHs = Polynuclear Aromatic Hydrocarbons
RCL = Residual Contaminant Level
BTV = Background Threshold Value
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
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² Direct Contact RCL listed is for the more stringent m-Xylene.
³ Parameter BTV is larger than one or more of the RCLs or is the only standard available.
A Parameter exceeds NR 720 Residual Contaminant Level (RCL) for Non-Industrial Direct Contact.
B Parameter exceeds NR 720 RCL for Industrial Direct Contact.
C Parameter exceeds NR 720 RCL for Groundwater Pathway.
D Parameter exceeds Surficial BTV for metals.
J Estimated concentration at or above the LOD and below the LOQ.
M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
#N/A = Not analyzed
Soil RCLs and surficial BTVs established by the WDNR RR program using the EPA's RSL web-calculator with WAC NR 720 default parameters (WDNR PUB-RR-890, June 2014 - updated RCL spreadsheet, December 2017).

**TABLE 2. GROUNDWATER ANALYTICAL RESULTS
AHPRC PRE-CONSTRUCTION SITE INVESTIGATION
1201 WEST WELLS STREET
MILWAUKEE, WISCONSIN
RAMBOLL PROJECT NO. 1690005255-001**

Parameters	NR 140 Standards		TW-1	TW-2	TW-3	TW-4	TW-5	TW-6	TW-7
	ES	PAL	10/10/17	10/10/17	10/10/17	10/10/17	10/10/17	10/10/17	1/11/18
VOCs (µg/L)									
Benzene	5	0.5	<0.50	<0.50	<0.50	<0.50	12.3	681	<0.50
Bromobenzene	--	--	<0.23	<0.23	<0.23	<0.23	<0.23	<2.3	<0.23
Bromochloromethane	--	--	<0.34	<0.34	<0.34	<0.34	<0.34	<3.4	<0.34
Bromodichloromethane	0.6	0.06	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
Bromoform	4.4	0.44	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
Bromomethane	10	1	<2.4	<2.4	<2.4	<2.4	<2.4	<24.3	<2.4
n-Butylbenzene	--	--	<0.50	<0.50	<0.50	<0.50	13.5	5.8 J	<0.50
sec-Butylbenzene	--	--	<2.2	<2.2	<2.2	<2.2	7.3	<21.9	<2.2
tert-Butylbenzene	--	--	<0.18	<0.18	<0.18	<0.18	0.67 J	<1.8	<0.18
Carbon tetrachloride	5	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
Chlorobenzene	--	--	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
Chloroethane	400	80	<0.37	<0.37	<0.37	<0.37	<0.37	<3.7	<0.37
Chloroform	6	0.6	<2.5	<2.5	<2.5	<2.5	<2.5	<25.0	<2.5
Chloromethane	30	3	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	1.7
2-Chlorotoluene	--	--	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
4-Chlorotoluene	--	--	<0.21	<0.21	<0.21	<0.21	<0.21	<2.1	<0.21
Dibromochloromethane	60	6	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
1,2-Dibromo-3-chloropropane	0.2	0.02	<2.2	<2.2	<2.2	<2.2	<2.2	<21.6	<2.2
1,2-Dibromoethane	0.05	0.005	<0.18	<0.18	<0.18	<0.18	<0.18	<1.8	<0.18
Dibromomethane	--	--	<0.43	<0.43	<0.43	<0.43	<0.43	<4.3	<0.43
1,2-Dichlorobenzene	600	60	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
1,3-Dichlorobenzene	600	120	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
1,4-Dichlorobenzene	75	15	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
Dichlorodifluoromethane	1000	200	<0.22	<0.22	<0.22	<0.22	<0.22	<2.2	<0.22
1,1-Dichloroethane	850	85	<0.24	<0.24	<0.24	<0.24	<0.24	<2.4	<0.24
1,2-Dichloroethane	5	0.5	<0.17	<0.17	<0.17	<0.17	2.2	<1.7	<0.17
1,1-Dichloroethene	7	0.7	<0.41	<0.41	<0.41	<0.41	<0.41	<4.1	<0.41
cis-1,2-Dichloroethene	70	7	<0.26	<0.26	3.3	<0.26	3.4	4.9 J	0.49 J
trans-1,2-Dichloroethene	100	20	<0.26	<0.26	0.65 J	<0.26	2.0	<2.6	<0.26
1,2-Dichloropropane	5	0.5	<0.23	<0.23	<0.23	<0.23	<0.23	<2.3	<0.23
1,3-Dichloropropane	--	--	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
2,2-Dichloropropane	--	--	<0.48	<0.48	<0.48	<0.48	<0.48	<4.8	<0.48
1,1-Dichloropropene	--	--	<0.44	<0.44	<0.44	<0.44	<0.44	<4.4	<0.44
cis-1,3-Dichloropropene	0.4	0.04	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
trans-1,3-Dichloropropene	0.4	0.04	<0.23	<0.23	<0.23	<0.23	<0.23	<2.3	<0.23
Diisopropyl ether	--	--	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
Ethylbenzene	700	140	<0.50	<0.50	<0.50	<0.50	23.6	404	<0.50
Hexachlorobutadiene	--	--	<2.1	<2.1	<2.1	<2.1	<2.1	<21.1	<2.1
Isopropylbenzene	--	--	<0.14	<0.14	<0.14	<0.14	12.7	9.3 J	<0.14
p-Isopropyltoluene	--	--	<0.50	<0.50	<0.50	<0.50	3.2	<5.0	<0.50
Methylene chloride	5	0.5	0.42 JB	0.46 JB	0.31 JB	0.46 JB	<0.23	<2.3	<0.23
Methyl-tert-butyl-ether	60	12	<0.17	<0.17	<0.17	<0.17	<0.17	<1.7	<0.17
Naphthalene	100	10	<2.5	<2.5	<2.5	<2.5	<2.5	<25.0	<2.5
n-Propylbenzene	--	--	<0.50	<0.50	<0.50	<0.50	47.7	21.8	<0.50
Styrene	100	10	<0.50 L1	<0.50 L1	<0.50 L1	<0.50 L1	<0.50 L1	<5.0 L1	<0.50
1,1,1,2-Tetrachloroethane	70	7	<0.18	<0.18	<0.18	<0.18	<0.18	<1.8	<0.18
1,1,2,2-Tetrachloroethane	0.2	0.02	<0.25	<0.25	<0.25	<0.25	<0.25	<2.5	<0.25
Tetrachloroethene	5	0.5	<0.50	<0.50	188	<0.50	2.0	<5.0	61.8
Toluene	800	160	<0.50	<0.50	<0.50	<0.50	0.68 J	65.1	<0.50
1,2,3-Trichlorobenzene	--	--	<2.1	<2.1	<2.1	<2.1	<2.1	<21.3	<2.1
1,2,4-Trichlorobenzene	70	14	<2.2	<2.2	<2.2	<2.2	<2.2	<22.1	<2.2
1,1,1-Trichloroethane	200	40	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
1,1,2-Trichloroethane	5	0.5	<0.20	<0.20	<0.20	<0.20	<0.20	<2.0	<0.20
Trichloroethene	5	0.5	<0.33	<0.33	8.5	<0.33	<0.33	<3.3	1.7
Trichlorofluoromethane	3490	698	<0.18	<0.18	<0.18	<0.18	<0.18	<1.8	<0.18
1,2,3-Trichloropropane	60	12	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
1,2,4-Trimethylbenzene ¹	480	96	<0.50	<0.50	<0.50	<0.50	17.9	154	<0.50
1,3,5-Trimethylbenzene ¹	480	96	<0.50	<0.50	<0.50	<0.50	<0.50	7.5 J	<0.50
Vinyl chloride	0.2	0.02	<0.18	<0.18	<0.18	<0.18	0.43 J	<1.8	<0.18
m&p-Xylene ²	2,000	400	<1.0 L1	<1.0 L1	<1.0 L1	<1.0 L1	1.2 JL1	246 L1	<1.0
o-Xylene ²	2,000	400	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
Xylenes, total	2,000	400	<1.5 LS	<1.5 LS	<1.5 LS	<1.5 LS	<1.5 LS	250 LS	<1.5
PAHs (µg/L)									
Acenaphthene	--	--	0.051	0.022 J	0.0084 J	0.014 J	0.028 J	0.015 J	#N/A
Acenaphthylene	--	--	0.0082 J	<0.010	<0.0065	<0.0053	0.0062 J	0.0062 J	#N/A
Anthracene	3000	600	0.060	<0.021	<0.014	0.014 J	<0.011	<0.012	#N/A
Benzo(a)anthracene	--	--	0.088	<0.015	0.023 J	0.030 J	0.0085 J	0.0087 J	#N/A
Benzo(a)pyrene	0.2	0.02	0.075	<0.021	0.020 J	0.031 J	<0.011	<0.012	#N/A
Benzo(b)fluoranthene	0.2	0.02	0.12	0.024 J	0.043	0.067	<0.0062	<0.0064	#N/A
Benzo(ghi)perylene	--	--	0.077	0.019 J	0.033 J	0.046	<0.0073	<0.0075	#N/A
Benzo(k)fluoranthene	--	--	0.074	0.020 J	0.026 J	0.036 J	<0.0081	<0.0084	#N/A
Chrysene	0.2	0.02	0.17	0.040 J	0.066 J	0.071	0.031 J	<0.014	#N/A
Dibenzo(a,h)anthracene	--	--	0.013 J	<0.020	<0.013	<0.011	<0.011	<0.011	#N/A
Fluoranthene	400	80	0.35	0.13	0.15	0.21	0.033 J	0.066	#N/A
Fluorene	400	80	0.040 J	<0.016	<0.010	0.014 J	0.017 J	0.011 J	#N/A
Indeno(1,2,3-cd)pyrene	--	--	0.059 J	<0.036	<0.023	0.034 J	<0.019	<0.020	#N/A
1-Methylnaphthalene	--	--	0.033	<0.012	0.012 J	0.0082 J	1.4	3.2	#N/A
2-Methylnaphthalene	--	--	0.036	<0.010	0.014 J	0.012 J	0.041	0.15	#N/A
Naphthalene	100	10	0.17	<0.037	<0.024	<0.020	2.5	5.6	#N/A
Phenanthrene	--	--	0.33	0.089 J	0.13	0.17	0.073 J	0.10	#N/A
Pyrene	250	50	0.32	0.11	0.14	0.17	0.030 J	0.055	#N/A
Metals (µg/L)									
Arsenic	10	1	10 J	<8.3	<8.3	<8.3	<8.3	10.9 J	<5.4
Barium	2000	400	239	170	114	141	370	204	170
Cadmium	5	0.5	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
Chromium	100	10	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Lead	15	1.5	<4.3	<4.3	<4.3	<4.3	<4.3	<4.3	<4.3
Selenium	50	10	<16.6	<16.6	<16.6	<16.6	<16.6	<16.6	<5.6
Silver	50	10	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	3.4 J
Mercury	2	0.2	<0.25 D3	<0.13	<0.13	<0.13	<0.50 D3	<0.25 D3	<0.50

Notes:

VOCs = Volatile Organic Compounds
PAHs = Polynuclear Aromatic Hydrocarbons
µg/L = micrograms per Liter
¹ Standards are for 1,2,4- and 1,3,5-Trimethylbenzene
² Standards are for Total Xylenes (-m, -p and -o).
ES = Enforcement Standard
PAL = Preventive Action Limit
Bold value = NR 140 ES Exceedance
Italic value = NR 140 PAL Exceedance
-- No NR 140 ES or PAL established.
#N/A = Not analyzed
J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
B = Analyte was detected in the associated method blank.
L1 = Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.
LS = Analyte recovery in the laboratory control sample (LCS) was outside QC limits for one or more of the constituent analyties used in the calculated result.
D3 = Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

October 18, 2017

Jeanne Tarvin
Ramboll Environ
175 North Corporate Drive
Suite 160
Brookfield, WI 53045

RE: Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

Dear Jeanne Tarvin:

Enclosed are the analytical results for sample(s) received by the laboratory on October 11, 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,



Steven Mleczo
steve.mleczo@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Jim Hutchens, Ramboll Environ
Jim Kane, Ramboll Environ
Snejana Karakis, Environ
David L. Markelz, Ramboll Environ
Michelle Murphy, Environ
Susan Petrofske, Ramboll Environ
Abigail M. Wedig, Environ International Corp



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

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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SAMPLE SUMMARY

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40158427001	B-2 (3-4')	Solid	10/09/17 09:15	10/11/17 09:25
40158427002	B-2 (12-13')	Solid	10/09/17 09:20	10/11/17 09:25
40158427003	B-1 (3-4')	Solid	10/09/17 10:00	10/11/17 09:25
40158427004	B-1 (11.5-12.5')	Solid	10/09/17 10:05	10/11/17 09:25
40158427005	B-4 (2-3')	Solid	10/09/17 10:50	10/11/17 09:25
40158427006	B-4 (10-11')	Solid	10/09/17 10:55	10/11/17 09:25
40158427007	TRIP BLANK	Solid	10/09/17 00:00	10/11/17 09:25
40158427008	B-3 (3-4')	Solid	10/09/17 11:35	10/11/17 09:25
40158427009	B-3 (11-12')	Solid	10/09/17 11:40	10/11/17 09:25
40158427010	B-5 (12.5-13.5')	Solid	10/09/17 12:15	10/11/17 09:25
40158427011	B-5 (14-15')	Solid	10/09/17 12:20	10/11/17 09:25
40158427012	B-6 (3-4')	Solid	10/09/17 12:55	10/11/17 09:25
40158427013	B-6 (11-12')	Solid	10/09/17 13:00	10/11/17 09:25
40158427014	TW-2	Water	10/10/17 08:55	10/11/17 09:25
40158427015	TW-1	Water	10/10/17 09:40	10/11/17 09:25
40158427016	TW-4	Water	10/10/17 10:10	10/11/17 09:25
40158427017	TW-3	Water	10/10/17 10:30	10/11/17 09:25
40158427018	TW-5	Water	10/10/17 11:05	10/11/17 09:25
40158427019	TW-6	Water	10/10/17 11:35	10/11/17 09:25

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40158427001	B-2 (3-4')	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	LAP	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
40158427002	B-2 (12-13')	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
40158427003	B-1 (3-4')	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
40158427004	B-1 (11.5-12.5')	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
40158427005	B-4 (2-3')	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
40158427006	B-4 (10-11')	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
40158427007	TRIP BLANK	EPA 8260	SMT	65	PASI-G
40158427008	B-3 (3-4')	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
40158427009	B-3 (11-12')	EPA 6010	JLD	7	PASI-G

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SAMPLE ANALYTE COUNT

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40158427010	B-5 (12.5-13.5')	EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
40158427011	B-5 (14-15')	EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
40158427012	B-6 (3-4')	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
40158427013	B-6 (11-12')	EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
40158427014	TW-2	ASTM D2974-87	RMV	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	65	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7470	AJT	1	PASI-G
40158427015	TW-1	EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	65	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	65	PASI-G
		EPA 6010	JLD	7	PASI-G
40158427016	TW-4	EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	65	PASI-G
		EPA 6010	JLD	7	PASI-G
40158427017	TW-3	EPA 8260	HNW	65	PASI-G
		EPA 6010	JLD	7	PASI-G

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SAMPLE ANALYTE COUNT

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40158427018	TW-5	EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	65	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
40158427019	TW-6	EPA 8260	HNW	65	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	65	PASI-G

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
40158427001	B-2 (3-4')					
EPA 6010	Arsenic	8.2	mg/kg	6.0	10/13/17 21:48	
EPA 6010	Barium	105	mg/kg	0.60	10/13/17 21:48	
EPA 6010	Cadmium	0.43J	mg/kg	0.60	10/13/17 21:48	
EPA 6010	Chromium	39.0	mg/kg	1.2	10/13/17 21:48	
EPA 6010	Lead	214	mg/kg	1.6	10/13/17 21:48	
EPA 7471	Mercury	0.59	mg/kg	0.044	10/17/17 11:45	
EPA 8270 by SIM	Acenaphthene	13.3J	ug/kg	16.2	10/13/17 14:56	
EPA 8270 by SIM	Acenaphthylene	6.3J	ug/kg	13.8	10/13/17 14:56	
EPA 8270 by SIM	Anthracene	25.3	ug/kg	23.9	10/13/17 14:56	
EPA 8270 by SIM	Benzo(a)anthracene	64.3	ug/kg	13.3	10/13/17 14:56	
EPA 8270 by SIM	Benzo(a)pyrene	65.7	ug/kg	10.5	10/13/17 14:56	
EPA 8270 by SIM	Benzo(b)fluoranthene	79.0	ug/kg	11.8	10/13/17 14:56	
EPA 8270 by SIM	Benzo(g,h,i)perylene	38.8	ug/kg	8.5	10/13/17 14:56	
EPA 8270 by SIM	Benzo(k)fluoranthene	33.5	ug/kg	10.5	10/13/17 14:56	
EPA 8270 by SIM	Chrysene	67.2	ug/kg	14.1	10/13/17 14:56	
EPA 8270 by SIM	Dibenz(a,h)anthracene	9.0J	ug/kg	9.4	10/13/17 14:56	
EPA 8270 by SIM	Fluoranthene	143	ug/kg	21.9	10/13/17 14:56	
EPA 8270 by SIM	Fluorene	15.0J	ug/kg	17.3	10/13/17 14:56	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	34.6	ug/kg	9.2	10/13/17 14:56	
EPA 8270 by SIM	1-Methylnaphthalene	7.5J	ug/kg	16.8	10/13/17 14:56	
EPA 8270 by SIM	2-Methylnaphthalene	7.7J	ug/kg	21.0	10/13/17 14:56	
EPA 8270 by SIM	Naphthalene	20.4J	ug/kg	35.3	10/13/17 14:56	
EPA 8270 by SIM	Phenanthrene	128	ug/kg	48.7	10/13/17 14:56	
EPA 8270 by SIM	Pyrene	126	ug/kg	18.8	10/13/17 14:56	
ASTM D2974-87	Percent Moisture	20.4	%	0.10	10/16/17 11:11	
40158427002	B-2 (12-13')					
EPA 6010	Arsenic	3.9J	mg/kg	5.7	10/13/17 21:50	
EPA 6010	Barium	49.9	mg/kg	0.57	10/13/17 21:50	
EPA 6010	Cadmium	0.19J	mg/kg	0.57	10/13/17 21:50	
EPA 6010	Chromium	18.3	mg/kg	1.1	10/13/17 21:50	
EPA 6010	Lead	8.2	mg/kg	1.5	10/13/17 21:50	
ASTM D2974-87	Percent Moisture	14.9	%	0.10	10/16/17 11:11	
40158427003	B-1 (3-4')					
EPA 6010	Arsenic	3.7J	mg/kg	5.3	10/13/17 21:52	
EPA 6010	Barium	48.0	mg/kg	0.53	10/13/17 21:52	
EPA 6010	Cadmium	0.15J	mg/kg	0.53	10/13/17 21:52	
EPA 6010	Chromium	19.5	mg/kg	1.1	10/13/17 21:52	
EPA 6010	Lead	7.0	mg/kg	1.4	10/13/17 21:52	
EPA 7471	Mercury	0.015J	mg/kg	0.038	10/17/17 11:49	
EPA 8270 by SIM	Benzo(a)anthracene	11.7J	ug/kg	11.8	10/13/17 15:30	
EPA 8270 by SIM	Benzo(a)pyrene	12.1	ug/kg	9.3	10/13/17 15:30	
EPA 8270 by SIM	Benzo(b)fluoranthene	20.6	ug/kg	10.5	10/13/17 15:30	
EPA 8270 by SIM	Benzo(g,h,i)perylene	11.1	ug/kg	7.5	10/13/17 15:30	
EPA 8270 by SIM	Benzo(k)fluoranthene	7.1J	ug/kg	9.3	10/13/17 15:30	
EPA 8270 by SIM	Chrysene	15.2	ug/kg	12.5	10/13/17 15:30	
EPA 8270 by SIM	Fluoranthene	33.9	ug/kg	19.3	10/13/17 15:30	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40158427003	B-1 (3-4')					
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	8.3	ug/kg	8.2	10/13/17 15:30	
EPA 8270 by SIM	Phenanthrene	15.6J	ug/kg	43.1	10/13/17 15:30	
EPA 8270 by SIM	Pyrene	27.9	ug/kg	16.7	10/13/17 15:30	
EPA 8260	Tetrachloroethene	44.8J	ug/kg	66.6	10/12/17 20:50	
ASTM D2974-87	Percent Moisture	10	%	0.10	10/16/17 11:11	
40158427004	B-1 (11.5-12.5')					
EPA 6010	Arsenic	4.6J	mg/kg	5.5	10/13/17 21:55	
EPA 6010	Barium	72.1	mg/kg	0.55	10/13/17 21:55	
EPA 6010	Cadmium	0.23J	mg/kg	0.55	10/13/17 21:55	
EPA 6010	Chromium	19.0	mg/kg	1.1	10/13/17 21:55	
EPA 6010	Lead	9.8	mg/kg	1.4	10/13/17 21:55	
EPA 8270 by SIM	Acenaphthene	7.1J	ug/kg	15.3	10/13/17 15:48	
EPA 8270 by SIM	Benzo(a)anthracene	17.3	ug/kg	12.6	10/13/17 15:48	
EPA 8270 by SIM	Benzo(a)pyrene	15.3	ug/kg	9.9	10/13/17 15:48	
EPA 8270 by SIM	Benzo(b)fluoranthene	21.8	ug/kg	11.2	10/13/17 15:48	
EPA 8270 by SIM	Benzo(g,h,i)perylene	10.7	ug/kg	8.0	10/13/17 15:48	
EPA 8270 by SIM	Benzo(k)fluoranthene	9.4J	ug/kg	9.9	10/13/17 15:48	
EPA 8270 by SIM	Chrysene	21.5	ug/kg	13.3	10/13/17 15:48	
EPA 8270 by SIM	Fluoranthene	52.2	ug/kg	20.7	10/13/17 15:48	
EPA 8270 by SIM	Fluorene	6.2J	ug/kg	16.4	10/13/17 15:48	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	9.2	ug/kg	8.7	10/13/17 15:48	
EPA 8270 by SIM	Phenanthrene	53.0	ug/kg	46.1	10/13/17 15:48	
EPA 8270 by SIM	Pyrene	43.9	ug/kg	17.8	10/13/17 15:48	
ASTM D2974-87	Percent Moisture	16.0	%	0.10	10/16/17 11:11	
40158427005	B-4 (2-3')					
EPA 6010	Arsenic	6.1	mg/kg	5.9	10/13/17 21:57	
EPA 6010	Barium	128	mg/kg	0.59	10/13/17 21:57	
EPA 6010	Cadmium	7.7	mg/kg	0.59	10/13/17 21:57	
EPA 6010	Chromium	14.0	mg/kg	1.2	10/13/17 21:57	
EPA 6010	Lead	135	mg/kg	1.5	10/13/17 21:57	
EPA 6010	Selenium	1.5J	mg/kg	5.9	10/13/17 21:57	
EPA 7471	Mercury	0.013J	mg/kg	0.041	10/17/17 11:54	
EPA 8270 by SIM	Anthracene	10.6J	ug/kg	22.4	10/13/17 16:05	
EPA 8270 by SIM	Benzo(a)anthracene	27.6	ug/kg	12.5	10/13/17 16:05	
EPA 8270 by SIM	Benzo(a)pyrene	26.3	ug/kg	9.9	10/13/17 16:05	
EPA 8270 by SIM	Benzo(b)fluoranthene	39.9	ug/kg	11.1	10/13/17 16:05	
EPA 8270 by SIM	Benzo(g,h,i)perylene	20.9	ug/kg	8.0	10/13/17 16:05	
EPA 8270 by SIM	Benzo(k)fluoranthene	14.4	ug/kg	9.9	10/13/17 16:05	
EPA 8270 by SIM	Chrysene	33.7	ug/kg	13.2	10/13/17 16:05	
EPA 8270 by SIM	Dibenz(a,h)anthracene	4.4J	ug/kg	8.8	10/13/17 16:05	
EPA 8270 by SIM	Fluoranthene	77.5	ug/kg	20.5	10/13/17 16:05	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	17.4	ug/kg	8.7	10/13/17 16:05	
EPA 8270 by SIM	Phenanthrene	57.0	ug/kg	45.8	10/13/17 16:05	
EPA 8270 by SIM	Pyrene	61.1	ug/kg	17.7	10/13/17 16:05	
EPA 8260	Tetrachloroethene	371	ug/kg	70.9	10/12/17 21:36	
ASTM D2974-87	Percent Moisture	15.3	%	0.10	10/16/17 12:45	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40158427006	B-4 (10-11')					
EPA 6010	Arsenic	4.1J	mg/kg	5.7	10/13/17 22:00	
EPA 6010	Barium	47.8	mg/kg	0.57	10/13/17 22:00	
EPA 6010	Cadmium	0.15J	mg/kg	0.57	10/13/17 22:00	
EPA 6010	Chromium	17.7	mg/kg	1.1	10/13/17 22:00	
EPA 6010	Lead	7.8	mg/kg	1.5	10/13/17 22:00	
EPA 8270 by SIM	Benzo(a)pyrene	3.7J	ug/kg	9.5	10/13/17 16:22	
EPA 8270 by SIM	Benzo(b)fluoranthene	4.7J	ug/kg	10.7	10/13/17 16:22	
EPA 8270 by SIM	Benzo(g,h,i)perylene	5.1J	ug/kg	7.7	10/13/17 16:22	
EPA 8270 by SIM	Fluoranthene	6.5J	ug/kg	19.8	10/13/17 16:22	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	2.6J	ug/kg	8.4	10/13/17 16:22	
EPA 8270 by SIM	Pyrene	5.4J	ug/kg	17.1	10/13/17 16:22	
ASTM D2974-87	Percent Moisture	12.4	%	0.10	10/16/17 13:20	
40158427008	B-3 (3-4')					
EPA 6010	Arsenic	6.9	mg/kg	5.4	10/13/17 22:07	
EPA 6010	Barium	86.2	mg/kg	0.54	10/13/17 22:07	
EPA 6010	Cadmium	0.19J	mg/kg	0.54	10/13/17 22:07	
EPA 6010	Chromium	20.4	mg/kg	1.1	10/13/17 22:07	
EPA 6010	Lead	13.8	mg/kg	1.4	10/13/17 22:07	
EPA 8270 by SIM	Acenaphthene	9.3J	ug/kg	15.0	10/13/17 16:39	
EPA 8270 by SIM	Anthracene	16.7J	ug/kg	22.1	10/13/17 16:39	
EPA 8270 by SIM	Benzo(a)anthracene	26.0	ug/kg	12.4	10/13/17 16:39	
EPA 8270 by SIM	Benzo(a)pyrene	20.2	ug/kg	9.8	10/13/17 16:39	
EPA 8270 by SIM	Benzo(b)fluoranthene	25.7	ug/kg	11.0	10/13/17 16:39	
EPA 8270 by SIM	Benzo(g,h,i)perylene	11.6	ug/kg	7.9	10/13/17 16:39	
EPA 8270 by SIM	Benzo(k)fluoranthene	10.9	ug/kg	9.7	10/13/17 16:39	
EPA 8270 by SIM	Chrysene	24.4	ug/kg	13.1	10/13/17 16:39	
EPA 8270 by SIM	Dibenz(a,h)anthracene	3.2J	ug/kg	8.7	10/13/17 16:39	
EPA 8270 by SIM	Fluoranthene	66.1	ug/kg	20.3	10/13/17 16:39	
EPA 8270 by SIM	Fluorene	9.7J	ug/kg	16.1	10/13/17 16:39	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	9.9	ug/kg	8.5	10/13/17 16:39	
EPA 8270 by SIM	Phenanthrene	79.8	ug/kg	45.2	10/13/17 16:39	
EPA 8270 by SIM	Pyrene	56.2	ug/kg	17.5	10/13/17 16:39	
EPA 8260	Tetrachloroethene	44.6J	ug/kg	69.8	10/12/17 22:22	
ASTM D2974-87	Percent Moisture	14.1	%	0.10	10/16/17 13:20	
40158427009	B-3 (11-12')					
EPA 6010	Arsenic	3.3J	mg/kg	5.6	10/13/17 22:10	
EPA 6010	Barium	65.6	mg/kg	0.56	10/13/17 22:10	
EPA 6010	Cadmium	0.28J	mg/kg	0.56	10/13/17 22:10	
EPA 6010	Chromium	27.1	mg/kg	1.1	10/13/17 22:10	
EPA 6010	Lead	9.0	mg/kg	1.5	10/13/17 22:10	
EPA 7471	Mercury	0.016J	mg/kg	0.043	10/17/17 12:06	
EPA 8270 by SIM	Benzo(a)anthracene	5.5J	ug/kg	12.6	10/13/17 16:56	
EPA 8270 by SIM	Benzo(a)pyrene	4.9J	ug/kg	9.9	10/13/17 16:56	
EPA 8270 by SIM	Benzo(b)fluoranthene	7.1J	ug/kg	11.1	10/13/17 16:56	
EPA 8270 by SIM	Benzo(g,h,i)perylene	4.3J	ug/kg	8.0	10/13/17 16:56	
EPA 8270 by SIM	Chrysene	6.6J	ug/kg	13.3	10/13/17 16:56	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40158427009	B-3 (11-12')					
EPA 8270 by SIM	Fluoranthene	15.2J	ug/kg	20.6	10/13/17 16:56	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	3.0J	ug/kg	8.7	10/13/17 16:56	
EPA 8270 by SIM	Pyrene	12.5J	ug/kg	17.8	10/13/17 16:56	
ASTM D2974-87	Percent Moisture	15.4	%	0.10	10/16/17 12:45	
40158427010	B-5 (12.5-13.5')					
EPA 6010	Arsenic	3.3J	mg/kg	5.4	10/13/17 22:12	
EPA 6010	Barium	20.0	mg/kg	0.54	10/13/17 22:12	
EPA 6010	Cadmium	0.16J	mg/kg	0.54	10/13/17 22:12	
EPA 6010	Chromium	9.3	mg/kg	1.1	10/13/17 22:12	
EPA 6010	Lead	7.1	mg/kg	1.4	10/13/17 22:12	
EPA 8270 by SIM	Benzo(b)fluoranthene	3.5J	ug/kg	10.6	10/13/17 17:13	
EPA 8270 by SIM	1-Methylnaphthalene	12.1J	ug/kg	15.1	10/13/17 17:13	
EPA 8270 by SIM	Naphthalene	52.5	ug/kg	31.7	10/13/17 17:13	
EPA 8260	Chloroform	151J	ug/kg	282	10/12/17 23:09	
EPA 8260	Ethylbenzene	74.1	ug/kg	67.7	10/12/17 23:09	
EPA 8260	Isopropylbenzene (Cumene)	112	ug/kg	67.7	10/12/17 23:09	
EPA 8260	n-Butylbenzene	324	ug/kg	67.7	10/12/17 23:09	
EPA 8260	n-Propylbenzene	545	ug/kg	67.7	10/12/17 23:09	
EPA 8260	sec-Butylbenzene	159	ug/kg	67.7	10/12/17 23:09	
ASTM D2974-87	Percent Moisture	11.4	%	0.10	10/16/17 12:45	
40158427011	B-5 (14-15')					
EPA 6010	Arsenic	3.5J	mg/kg	5.4	10/13/17 22:15	
EPA 6010	Barium	94.4	mg/kg	0.54	10/13/17 22:15	
EPA 6010	Cadmium	0.18J	mg/kg	0.54	10/13/17 22:15	
EPA 6010	Chromium	27.9	mg/kg	1.1	10/13/17 22:15	
EPA 6010	Lead	8.7	mg/kg	1.4	10/13/17 22:15	
EPA 7471	Mercury	0.020J	mg/kg	0.045	10/17/17 12:15	MO
EPA 8270 by SIM	1-Methylnaphthalene	47.0	ug/kg	16.5	10/13/17 17:31	
EPA 8270 by SIM	2-Methylnaphthalene	8.4J	ug/kg	20.5	10/13/17 17:31	
EPA 8270 by SIM	Naphthalene	35.3	ug/kg	34.6	10/13/17 17:31	
EPA 8260	1,2,4-Trimethylbenzene	36.6J	ug/kg	73.8	10/13/17 01:28	
EPA 8260	Chloroform	133J	ug/kg	307	10/13/17 01:28	
EPA 8260	Ethylbenzene	1060	ug/kg	73.8	10/13/17 01:28	
EPA 8260	Isopropylbenzene (Cumene)	211	ug/kg	73.8	10/13/17 01:28	
EPA 8260	n-Butylbenzene	152	ug/kg	73.8	10/13/17 01:28	
EPA 8260	n-Propylbenzene	778	ug/kg	73.8	10/13/17 01:28	
EPA 8260	sec-Butylbenzene	46.5J	ug/kg	73.8	10/13/17 01:28	
ASTM D2974-87	Percent Moisture	18.6	%	0.10	10/16/17 12:45	
40158427012	B-6 (3-4')					
EPA 6010	Arsenic	3.9J	mg/kg	5.3	10/13/17 22:17	
EPA 6010	Barium	43.7	mg/kg	0.53	10/13/17 22:17	
EPA 6010	Cadmium	0.21J	mg/kg	0.53	10/13/17 22:17	
EPA 6010	Chromium	16.1	mg/kg	1.1	10/13/17 22:17	
EPA 6010	Lead	6.9	mg/kg	1.4	10/13/17 22:17	
EPA 8270 by SIM	Benzo(a)anthracene	5.9J	ug/kg	12.2	10/13/17 17:48	
EPA 8270 by SIM	Benzo(a)pyrene	4.2J	ug/kg	9.7	10/13/17 17:48	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40158427012	B-6 (3-4')					
EPA 8270 by SIM	Benzo(b)fluoranthene	6.5J	ug/kg	10.9	10/13/17 17:48	
EPA 8270 by SIM	Benzo(g,h,i)perylene	3.2J	ug/kg	7.8	10/13/17 17:48	
EPA 8270 by SIM	Chrysene	6.5J	ug/kg	12.9	10/13/17 17:48	
EPA 8270 by SIM	Fluoranthene	10.7J	ug/kg	20.1	10/13/17 17:48	
EPA 8270 by SIM	Pyrene	12.1J	ug/kg	17.3	10/13/17 17:48	
EPA 8260	Tetrachloroethene	109	ug/kg	69.3	10/13/17 01:51	
ASTM D2974-87	Percent Moisture	13.4	%	0.10	10/16/17 12:45	
40158427013	B-6 (11-12')					
EPA 6010	Arsenic	3.7J	mg/kg	5.4	10/13/17 22:19	
EPA 6010	Barium	43.1	mg/kg	0.54	10/13/17 22:19	
EPA 6010	Cadmium	0.14J	mg/kg	0.54	10/13/17 22:19	
EPA 6010	Chromium	14.2	mg/kg	1.1	10/13/17 22:19	
EPA 6010	Lead	6.6	mg/kg	1.4	10/13/17 22:19	
EPA 7471	Mercury	0.012J	mg/kg	0.040	10/17/17 12:29	
EPA 8270 by SIM	1-Methylnaphthalene	5.0J	ug/kg	15.0	10/13/17 18:05	
EPA 8270 by SIM	Naphthalene	10.0J	ug/kg	31.5	10/13/17 18:05	
EPA 8260	Ethylbenzene	61.8J	ug/kg	67.3	10/13/17 02:14	
EPA 8260	Tetrachloroethene	39.1J	ug/kg	67.3	10/13/17 02:14	
EPA 8260	n-Propylbenzene	32.5J	ug/kg	67.3	10/13/17 02:14	
ASTM D2974-87	Percent Moisture	10.8	%	0.10	10/16/17 12:46	
40158427014	TW-2					
EPA 6010	Barium	170	ug/L	5.0	10/12/17 17:29	
EPA 8270 by HVI	Acenaphthene	0.022J	ug/L	0.062	10/13/17 16:26	
EPA 8270 by HVI	Benzo(b)fluoranthene	0.024J	ug/L	0.059	10/13/17 16:26	
EPA 8270 by HVI	Benzo(g,h,i)perylene	0.019J	ug/L	0.069	10/13/17 16:26	
EPA 8270 by HVI	Benzo(k)fluoranthene	0.020J	ug/L	0.077	10/13/17 16:26	
EPA 8270 by HVI	Chrysene	0.040J	ug/L	0.13	10/13/17 16:26	
EPA 8270 by HVI	Fluoranthene	0.13	ug/L	0.11	10/13/17 16:26	
EPA 8270 by HVI	Phenanthrene	0.089J	ug/L	0.14	10/13/17 16:26	
EPA 8270 by HVI	Pyrene	0.11	ug/L	0.078	10/13/17 16:26	
EPA 8270 by HVI	Total PAHs	0.55	ug/L		10/13/17 16:26	
EPA 8260	Methylene Chloride	0.46J	ug/L	1.0	10/12/17 15:48	B
40158427015	TW-1					
EPA 6010	Arsenic	10J	ug/L	25.0	10/12/17 17:31	
EPA 6010	Barium	239	ug/L	5.0	10/12/17 17:31	
EPA 8270 by HVI	Acenaphthene	0.051	ug/L	0.031	10/13/17 16:44	
EPA 8270 by HVI	Acenaphthylene	0.0082J	ug/L	0.026	10/13/17 16:44	
EPA 8270 by HVI	Anthracene	0.060	ug/L	0.054	10/13/17 16:44	
EPA 8270 by HVI	Benzo(a)anthracene	0.088	ug/L	0.039	10/13/17 16:44	
EPA 8270 by HVI	Benzo(a)pyrene	0.075	ug/L	0.054	10/13/17 16:44	
EPA 8270 by HVI	Benzo(b)fluoranthene	0.12	ug/L	0.030	10/13/17 16:44	
EPA 8270 by HVI	Benzo(g,h,i)perylene	0.077	ug/L	0.035	10/13/17 16:44	
EPA 8270 by HVI	Benzo(k)fluoranthene	0.074	ug/L	0.039	10/13/17 16:44	
EPA 8270 by HVI	Chrysene	0.17	ug/L	0.067	10/13/17 16:44	
EPA 8270 by HVI	Dibenz(a,h)anthracene	0.013J	ug/L	0.052	10/13/17 16:44	
EPA 8270 by HVI	Fluoranthene	0.35	ug/L	0.055	10/13/17 16:44	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
40158427015	TW-1					
EPA 8270 by HVI	Fluorene	0.040J	ug/L	0.041	10/13/17 16:44	
EPA 8270 by HVI	Indeno(1,2,3-cd)pyrene	0.059J	ug/L	0.091	10/13/17 16:44	
EPA 8270 by HVI	1-Methylnaphthalene	0.033	ug/L	0.030	10/13/17 16:44	
EPA 8270 by HVI	2-Methylnaphthalene	0.036	ug/L	0.025	10/13/17 16:44	
EPA 8270 by HVI	Naphthalene	0.17	ug/L	0.094	10/13/17 16:44	
EPA 8270 by HVI	Phenanthrene	0.33	ug/L	0.071	10/13/17 16:44	
EPA 8270 by HVI	Pyrene	0.32	ug/L	0.039	10/13/17 16:44	
EPA 8270 by HVI	Total PAHs	2.1	ug/L		10/13/17 16:44	
EPA 8260	Methylene Chloride	0.42J	ug/L	1.0	10/12/17 13:35	B
40158427016	TW-4					
EPA 6010	Barium	141	ug/L	5.0	10/12/17 17:39	
EPA 8270 by HVI	Acenaphthene	0.014J	ug/L	0.032	10/13/17 17:03	
EPA 8270 by HVI	Anthracene	0.014J	ug/L	0.056	10/13/17 17:03	
EPA 8270 by HVI	Benzo(a)anthracene	0.030J	ug/L	0.040	10/13/17 17:03	
EPA 8270 by HVI	Benzo(a)pyrene	0.031J	ug/L	0.056	10/13/17 17:03	
EPA 8270 by HVI	Benzo(b)fluoranthene	0.067	ug/L	0.031	10/13/17 17:03	
EPA 8270 by HVI	Benzo(g,h,i)perylene	0.046	ug/L	0.036	10/13/17 17:03	
EPA 8270 by HVI	Benzo(k)fluoranthene	0.036J	ug/L	0.040	10/13/17 17:03	
EPA 8270 by HVI	Chrysene	0.071	ug/L	0.069	10/13/17 17:03	
EPA 8270 by HVI	Fluoranthene	0.21	ug/L	0.057	10/13/17 17:03	
EPA 8270 by HVI	Fluorene	0.014J	ug/L	0.042	10/13/17 17:03	
EPA 8270 by HVI	Indeno(1,2,3-cd)pyrene	0.034J	ug/L	0.094	10/13/17 17:03	
EPA 8270 by HVI	1-Methylnaphthalene	0.0082J	ug/L	0.031	10/13/17 17:03	
EPA 8270 by HVI	2-Methylnaphthalene	0.012J	ug/L	0.026	10/13/17 17:03	
EPA 8270 by HVI	Phenanthrene	0.17	ug/L	0.073	10/13/17 17:03	
EPA 8270 by HVI	Pyrene	0.17	ug/L	0.041	10/13/17 17:03	
EPA 8270 by HVI	Total PAHs	0.95	ug/L		10/13/17 17:03	
EPA 8260	Methylene Chloride	0.46J	ug/L	1.0	10/12/17 13:58	B
40158427017	TW-3					
EPA 6010	Barium	114	ug/L	5.0	10/12/17 17:41	
EPA 8270 by HVI	Acenaphthene	0.0084J	ug/L	0.039	10/13/17 17:21	
EPA 8270 by HVI	Benzo(a)anthracene	0.023J	ug/L	0.049	10/13/17 17:21	
EPA 8270 by HVI	Benzo(a)pyrene	0.020J	ug/L	0.068	10/13/17 17:21	
EPA 8270 by HVI	Benzo(b)fluoranthene	0.043	ug/L	0.037	10/13/17 17:21	
EPA 8270 by HVI	Benzo(g,h,i)perylene	0.033J	ug/L	0.044	10/13/17 17:21	
EPA 8270 by HVI	Benzo(k)fluoranthene	0.026J	ug/L	0.049	10/13/17 17:21	
EPA 8270 by HVI	Chrysene	0.066J	ug/L	0.085	10/13/17 17:21	
EPA 8270 by HVI	Fluoranthene	0.15	ug/L	0.069	10/13/17 17:21	
EPA 8270 by HVI	1-Methylnaphthalene	0.012J	ug/L	0.038	10/13/17 17:21	
EPA 8270 by HVI	2-Methylnaphthalene	0.014J	ug/L	0.032	10/13/17 17:21	
EPA 8270 by HVI	Phenanthrene	0.13	ug/L	0.090	10/13/17 17:21	
EPA 8270 by HVI	Pyrene	0.14	ug/L	0.050	10/13/17 17:21	
EPA 8270 by HVI	Total PAHs	0.71	ug/L		10/13/17 17:21	
EPA 8260	cis-1,2-Dichloroethene	3.3	ug/L	1.0	10/12/17 14:42	
EPA 8260	trans-1,2-Dichloroethene	0.65J	ug/L	1.0	10/12/17 14:42	
EPA 8260	Methylene Chloride	0.31J	ug/L	1.0	10/12/17 14:42	B

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
40158427017	TW-3					
EPA 8260	Tetrachloroethene	188	ug/L	1.0	10/12/17 14:42	
EPA 8260	Trichloroethene	8.5	ug/L	1.0	10/12/17 14:42	
40158427018	TW-5					
EPA 6010	Barium	370	ug/L	5.0	10/12/17 17:44	
EPA 8270 by HVI	Acenaphthene	0.028J	ug/L	0.033	10/13/17 21:01	
EPA 8270 by HVI	Acenaphthylene	0.0062J	ug/L	0.027	10/13/17 21:01	
EPA 8270 by HVI	Benzo(a)anthracene	0.0085J	ug/L	0.041	10/13/17 21:01	
EPA 8270 by HVI	Chrysene	0.031J	ug/L	0.070	10/13/17 21:01	
EPA 8270 by HVI	Fluoranthene	0.033J	ug/L	0.057	10/13/17 21:01	
EPA 8270 by HVI	Fluorene	0.017J	ug/L	0.043	10/13/17 21:01	
EPA 8270 by HVI	1-Methylnaphthalene	1.4	ug/L	0.032	10/13/17 21:01	
EPA 8270 by HVI	2-Methylnaphthalene	0.041	ug/L	0.026	10/13/17 21:01	
EPA 8270 by HVI	Naphthalene	2.5	ug/L	0.099	10/13/17 21:01	
EPA 8270 by HVI	Phenanthrene	0.073J	ug/L	0.074	10/13/17 21:01	
EPA 8270 by HVI	Pyrene	0.030J	ug/L	0.041	10/13/17 21:01	
EPA 8270 by HVI	Total PAHs	4.2	ug/L		10/13/17 21:01	
EPA 8260	Benzene	12.3	ug/L	1.0	10/12/17 14:20	
EPA 8260	n-Butylbenzene	13.5	ug/L	1.0	10/12/17 14:20	
EPA 8260	sec-Butylbenzene	7.3	ug/L	5.0	10/12/17 14:20	
EPA 8260	tert-Butylbenzene	0.67J	ug/L	1.0	10/12/17 14:20	
EPA 8260	1,2-Dichloroethane	2.2	ug/L	1.0	10/12/17 14:20	
EPA 8260	cis-1,2-Dichloroethene	3.4	ug/L	1.0	10/12/17 14:20	
EPA 8260	trans-1,2-Dichloroethene	2.0	ug/L	1.0	10/12/17 14:20	
EPA 8260	Ethylbenzene	23.6	ug/L	1.0	10/12/17 14:20	
EPA 8260	Isopropylbenzene (Cumene)	12.7	ug/L	1.0	10/12/17 14:20	
EPA 8260	p-Isopropyltoluene	3.2	ug/L	1.0	10/12/17 14:20	
EPA 8260	n-Propylbenzene	47.7	ug/L	1.0	10/12/17 14:20	
EPA 8260	Tetrachloroethene	2.0	ug/L	1.0	10/12/17 14:20	
EPA 8260	Toluene	0.68J	ug/L	1.0	10/12/17 14:20	
EPA 8260	1,2,4-Trimethylbenzene	17.9	ug/L	1.0	10/12/17 14:20	
EPA 8260	Vinyl chloride	0.43J	ug/L	1.0	10/12/17 14:20	
EPA 8260	m&p-Xylene	1.2J	ug/L	2.0	10/12/17 14:20	L1
40158427019	TW-6					
EPA 6010	Arsenic	10.9J	ug/L	25.0	10/12/17 17:47	
EPA 6010	Barium	204	ug/L	5.0	10/12/17 17:47	
EPA 8270 by HVI	Acenaphthene	0.015J	ug/L	0.034	10/13/17 20:43	
EPA 8270 by HVI	Acenaphthylene	0.0062J	ug/L	0.028	10/13/17 20:43	
EPA 8270 by HVI	Benzo(a)anthracene	0.0087J	ug/L	0.042	10/13/17 20:43	
EPA 8270 by HVI	Fluoranthene	0.066	ug/L	0.059	10/13/17 20:43	
EPA 8270 by HVI	Fluorene	0.011J	ug/L	0.044	10/13/17 20:43	
EPA 8270 by HVI	1-Methylnaphthalene	3.2	ug/L	0.033	10/13/17 20:43	
EPA 8270 by HVI	2-Methylnaphthalene	0.15	ug/L	0.027	10/13/17 20:43	
EPA 8270 by HVI	Naphthalene	5.6	ug/L	0.10	10/13/17 20:43	
EPA 8270 by HVI	Phenanthrene	0.10	ug/L	0.077	10/13/17 20:43	
EPA 8270 by HVI	Pyrene	0.055	ug/L	0.043	10/13/17 20:43	
EPA 8270 by HVI	Total PAHs	9.3	ug/L		10/13/17 20:43	

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SUMMARY OF DETECTION

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40158427019	TW-6					
EPA 8260	Benzene	681	ug/L	10.0	10/13/17 10:47	
EPA 8260	n-Butylbenzene	5.8J	ug/L	10.0	10/13/17 10:47	
EPA 8260	cis-1,2-Dichloroethene	4.9J	ug/L	10.0	10/13/17 10:47	
EPA 8260	Ethylbenzene	404	ug/L	10.0	10/13/17 10:47	
EPA 8260	Isopropylbenzene (Cumene)	9.3J	ug/L	10.0	10/13/17 10:47	
EPA 8260	n-Propylbenzene	21.8	ug/L	10.0	10/13/17 10:47	
EPA 8260	Toluene	65.1	ug/L	10.0	10/13/17 10:47	
EPA 8260	1,2,4-Trimethylbenzene	154	ug/L	10.0	10/13/17 10:47	
EPA 8260	1,3,5-Trimethylbenzene	7.5J	ug/L	10.0	10/13/17 10:47	
EPA 8260	Xylene (Total)	250	ug/L	30.0	10/13/17 10:47	LS
EPA 8260	m&p-Xylene	246	ug/L	20.0	10/13/17 10:47	L1

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-2 (3-4) **Lab ID: 40158427001** Collected: 10/09/17 09:15 Received: 10/11/17 09:25 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									
Arsenic	8.2	mg/kg	6.0	1.3	1	10/12/17 15:03	10/13/17 21:48	7440-38-2	
Barium	105	mg/kg	0.60	0.18	1	10/12/17 15:03	10/13/17 21:48	7440-39-3	
Cadmium	0.43J	mg/kg	0.60	0.16	1	10/12/17 15:03	10/13/17 21:48	7440-43-9	
Chromium	39.0	mg/kg	1.2	0.34	1	10/12/17 15:03	10/13/17 21:48	7440-47-3	
Lead	214	mg/kg	1.6	0.52	1	10/12/17 15:03	10/13/17 21:48	7439-92-1	
Selenium	<1.3	mg/kg	6.0	1.3	1	10/12/17 15:03	10/13/17 21:48	7782-49-2	
Silver	<0.42	mg/kg	1.2	0.42	1	10/12/17 15:03	10/13/17 21:48	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.59	mg/kg	0.044	0.013	1	10/17/17 06:54	10/17/17 11:45	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	13.3J	ug/kg	16.2	4.9	1	10/13/17 08:32	10/13/17 14:56	83-32-9	
Acenaphthylene	6.3J	ug/kg	13.8	4.1	1	10/13/17 08:32	10/13/17 14:56	208-96-8	
Anthracene	25.3	ug/kg	23.9	7.2	1	10/13/17 08:32	10/13/17 14:56	120-12-7	
Benzo(a)anthracene	64.3	ug/kg	13.3	4.0	1	10/13/17 08:32	10/13/17 14:56	56-55-3	
Benzo(a)pyrene	65.7	ug/kg	10.5	3.2	1	10/13/17 08:32	10/13/17 14:56	50-32-8	
Benzo(b)fluoranthene	79.0	ug/kg	11.8	3.5	1	10/13/17 08:32	10/13/17 14:56	205-99-2	
Benzo(g,h,i)perylene	38.8	ug/kg	8.5	2.6	1	10/13/17 08:32	10/13/17 14:56	191-24-2	
Benzo(k)fluoranthene	33.5	ug/kg	10.5	3.2	1	10/13/17 08:32	10/13/17 14:56	207-08-9	
Chrysene	67.2	ug/kg	14.1	4.2	1	10/13/17 08:32	10/13/17 14:56	218-01-9	
Dibenz(a,h)anthracene	9.0J	ug/kg	9.4	2.8	1	10/13/17 08:32	10/13/17 14:56	53-70-3	
Fluoranthene	143	ug/kg	21.9	6.5	1	10/13/17 08:32	10/13/17 14:56	206-44-0	
Fluorene	15.0J	ug/kg	17.3	5.2	1	10/13/17 08:32	10/13/17 14:56	86-73-7	
Indeno(1,2,3-cd)pyrene	34.6	ug/kg	9.2	2.8	1	10/13/17 08:32	10/13/17 14:56	193-39-5	
1-Methylnaphthalene	7.5J	ug/kg	16.8	5.1	1	10/13/17 08:32	10/13/17 14:56	90-12-0	
2-Methylnaphthalene	7.7J	ug/kg	21.0	6.3	1	10/13/17 08:32	10/13/17 14:56	91-57-6	
Naphthalene	20.4J	ug/kg	35.3	10.6	1	10/13/17 08:32	10/13/17 14:56	91-20-3	
Phenanthrene	128	ug/kg	48.7	14.6	1	10/13/17 08:32	10/13/17 14:56	85-01-8	
Pyrene	126	ug/kg	18.8	5.7	1	10/13/17 08:32	10/13/17 14:56	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	61	%	23-106		1	10/13/17 08:32	10/13/17 14:56	321-60-8	
Terphenyl-d14 (S)	63	%	29-106		1	10/13/17 08:32	10/13/17 14:56	1718-51-0	
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	10/12/17 11:00	10/13/17 09:35	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 11:00	10/13/17 09:35	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-2 (3-4) **Lab ID: 40158427001** Collected: 10/09/17 09:15 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 11:00	10/13/17 09:35	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 11:00	10/13/17 09:35	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 11:00	10/13/17 09:35	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 11:00	10/13/17 09:35	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 11:00	10/13/17 09:35	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 11:00	10/13/17 09:35	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 11:00	10/13/17 09:35	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	104-51-8	W

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-2 (3-4) **Lab ID: 40158427001** Collected: 10/09/17 09:15 Received: 10/11/17 09:25 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								
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 09:35	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	77	%	68-130		1	10/12/17 11:00	10/13/17 09:35	1868-53-7	
Toluene-d8 (S)	73	%	68-149		1	10/12/17 11:00	10/13/17 09:35	2037-26-5	
4-Bromofluorobenzene (S)	62	%	58-141		1	10/12/17 11:00	10/13/17 09:35	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	20.4	%	0.10	0.10	1		10/16/17 11:11		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-2 (12-13') **Lab ID: 40158427002** Collected: 10/09/17 09:20 Received: 10/11/17 09:25 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									
Arsenic	3.9J	mg/kg	5.7	1.2	1	10/12/17 15:03	10/13/17 21:50	7440-38-2	
Barium	49.9	mg/kg	0.57	0.17	1	10/12/17 15:03	10/13/17 21:50	7440-39-3	
Cadmium	0.19J	mg/kg	0.57	0.15	1	10/12/17 15:03	10/13/17 21:50	7440-43-9	
Chromium	18.3	mg/kg	1.1	0.31	1	10/12/17 15:03	10/13/17 21:50	7440-47-3	
Lead	8.2	mg/kg	1.5	0.49	1	10/12/17 15:03	10/13/17 21:50	7439-92-1	
Selenium	<1.3	mg/kg	5.7	1.3	1	10/12/17 15:03	10/13/17 21:50	7782-49-2	
Silver	<0.39	mg/kg	1.1	0.39	1	10/12/17 15:03	10/13/17 21:50	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.039	0.012	1	10/17/17 06:54	10/17/17 11:47	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.6	ug/kg	15.1	4.6	1	10/13/17 08:32	10/13/17 15:13	83-32-9	
Acenaphthylene	<3.9	ug/kg	12.9	3.9	1	10/13/17 08:32	10/13/17 15:13	208-96-8	
Anthracene	<6.7	ug/kg	22.3	6.7	1	10/13/17 08:32	10/13/17 15:13	120-12-7	
Benzo(a)anthracene	<3.7	ug/kg	12.4	3.7	1	10/13/17 08:32	10/13/17 15:13	56-55-3	
Benzo(a)pyrene	<2.9	ug/kg	9.8	2.9	1	10/13/17 08:32	10/13/17 15:13	50-32-8	
Benzo(b)fluoranthene	<3.3	ug/kg	11.0	3.3	1	10/13/17 08:32	10/13/17 15:13	205-99-2	
Benzo(g,h,i)perylene	<2.4	ug/kg	7.9	2.4	1	10/13/17 08:32	10/13/17 15:13	191-24-2	
Benzo(k)fluoranthene	<2.9	ug/kg	9.8	2.9	1	10/13/17 08:32	10/13/17 15:13	207-08-9	
Chrysene	<4.0	ug/kg	13.1	4.0	1	10/13/17 08:32	10/13/17 15:13	218-01-9	
Dibenz(a,h)anthracene	<2.6	ug/kg	8.7	2.6	1	10/13/17 08:32	10/13/17 15:13	53-70-3	
Fluoranthene	<6.1	ug/kg	20.4	6.1	1	10/13/17 08:32	10/13/17 15:13	206-44-0	
Fluorene	<4.9	ug/kg	16.2	4.9	1	10/13/17 08:32	10/13/17 15:13	86-73-7	
Indeno(1,2,3-cd)pyrene	<2.6	ug/kg	8.6	2.6	1	10/13/17 08:32	10/13/17 15:13	193-39-5	
1-Methylnaphthalene	<4.7	ug/kg	15.7	4.7	1	10/13/17 08:32	10/13/17 15:13	90-12-0	
2-Methylnaphthalene	<5.9	ug/kg	19.6	5.9	1	10/13/17 08:32	10/13/17 15:13	91-57-6	
Naphthalene	<9.9	ug/kg	33.0	9.9	1	10/13/17 08:32	10/13/17 15:13	91-20-3	
Phenanthrene	<13.7	ug/kg	45.5	13.7	1	10/13/17 08:32	10/13/17 15:13	85-01-8	
Pyrene	<5.3	ug/kg	17.6	5.3	1	10/13/17 08:32	10/13/17 15:13	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	51	%	23-106		1	10/13/17 08:32	10/13/17 15:13	321-60-8	
Terphenyl-d14 (S)	54	%	29-106		1	10/13/17 08:32	10/13/17 15:13	1718-51-0	
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	10/12/17 07:15	10/12/17 20:26	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 07:15	10/12/17 20:26	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-2 (12-13') **Lab ID: 40158427002** Collected: 10/09/17 09:20 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 07:15	10/12/17 20:26	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 07:15	10/12/17 20:26	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 07:15	10/12/17 20:26	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 07:15	10/12/17 20:26	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 07:15	10/12/17 20:26	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 07:15	10/12/17 20:26	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 07:15	10/12/17 20:26	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	104-51-8	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-2 (12-13') **Lab ID: 40158427002** Collected: 10/09/17 09:20 Received: 10/11/17 09:25 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								
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:26	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	90	%	68-130		1	10/12/17 07:15	10/12/17 20:26	1868-53-7	
Toluene-d8 (S)	89	%	68-149		1	10/12/17 07:15	10/12/17 20:26	2037-26-5	
4-Bromofluorobenzene (S)	77	%	58-141		1	10/12/17 07:15	10/12/17 20:26	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	14.9	%	0.10	0.10	1		10/16/17 11:11		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-1 (3-4) **Lab ID: 40158427003** Collected: 10/09/17 10:00 Received: 10/11/17 09:25 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									
Arsenic	3.7J	mg/kg	5.3	1.1	1	10/12/17 15:03	10/13/17 21:52	7440-38-2	
Barium	48.0	mg/kg	0.53	0.16	1	10/12/17 15:03	10/13/17 21:52	7440-39-3	
Cadmium	0.15J	mg/kg	0.53	0.14	1	10/12/17 15:03	10/13/17 21:52	7440-43-9	
Chromium	19.5	mg/kg	1.1	0.30	1	10/12/17 15:03	10/13/17 21:52	7440-47-3	
Lead	7.0	mg/kg	1.4	0.46	1	10/12/17 15:03	10/13/17 21:52	7439-92-1	
Selenium	<1.2	mg/kg	5.3	1.2	1	10/12/17 15:03	10/13/17 21:52	7782-49-2	
Silver	<0.37	mg/kg	1.1	0.37	1	10/12/17 15:03	10/13/17 21:52	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.015J	mg/kg	0.038	0.012	1	10/17/17 06:54	10/17/17 11:49	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.3	ug/kg	14.3	4.3	1	10/13/17 08:32	10/13/17 15:30	83-32-9	
Acenaphthylene	<3.7	ug/kg	12.2	3.7	1	10/13/17 08:32	10/13/17 15:30	208-96-8	
Anthracene	<6.3	ug/kg	21.1	6.3	1	10/13/17 08:32	10/13/17 15:30	120-12-7	
Benzo(a)anthracene	11.7J	ug/kg	11.8	3.5	1	10/13/17 08:32	10/13/17 15:30	56-55-3	
Benzo(a)pyrene	12.1	ug/kg	9.3	2.8	1	10/13/17 08:32	10/13/17 15:30	50-32-8	
Benzo(b)fluoranthene	20.6	ug/kg	10.5	3.1	1	10/13/17 08:32	10/13/17 15:30	205-99-2	
Benzo(g,h,i)perylene	11.1	ug/kg	7.5	2.3	1	10/13/17 08:32	10/13/17 15:30	191-24-2	
Benzo(k)fluoranthene	7.1J	ug/kg	9.3	2.8	1	10/13/17 08:32	10/13/17 15:30	207-08-9	
Chrysene	15.2	ug/kg	12.5	3.7	1	10/13/17 08:32	10/13/17 15:30	218-01-9	
Dibenz(a,h)anthracene	<2.5	ug/kg	8.3	2.5	1	10/13/17 08:32	10/13/17 15:30	53-70-3	
Fluoranthene	33.9	ug/kg	19.3	5.8	1	10/13/17 08:32	10/13/17 15:30	206-44-0	
Fluorene	<4.6	ug/kg	15.3	4.6	1	10/13/17 08:32	10/13/17 15:30	86-73-7	
Indeno(1,2,3-cd)pyrene	8.3	ug/kg	8.2	2.4	1	10/13/17 08:32	10/13/17 15:30	193-39-5	
1-Methylnaphthalene	<4.5	ug/kg	14.9	4.5	1	10/13/17 08:32	10/13/17 15:30	90-12-0	
2-Methylnaphthalene	<5.6	ug/kg	18.6	5.6	1	10/13/17 08:32	10/13/17 15:30	91-57-6	
Naphthalene	<9.4	ug/kg	31.2	9.4	1	10/13/17 08:32	10/13/17 15:30	91-20-3	
Phenanthrene	15.6J	ug/kg	43.1	13.0	1	10/13/17 08:32	10/13/17 15:30	85-01-8	
Pyrene	27.9	ug/kg	16.7	5.0	1	10/13/17 08:32	10/13/17 15:30	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	68	%	23-106		1	10/13/17 08:32	10/13/17 15:30	321-60-8	
Terphenyl-d14 (S)	69	%	29-106		1	10/13/17 08:32	10/13/17 15:30	1718-51-0	
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	10/12/17 07:15	10/12/17 20:50	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 07:15	10/12/17 20:50	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-1 (3-4) **Lab ID: 40158427003** Collected: 10/09/17 10:00 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 07:15	10/12/17 20:50	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 07:15	10/12/17 20:50	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 07:15	10/12/17 20:50	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 07:15	10/12/17 20:50	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 07:15	10/12/17 20:50	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	100-42-5	W
Tetrachloroethene	44.8J	ug/kg	66.6	27.8	1	10/12/17 07:15	10/12/17 20:50	127-18-4	
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 07:15	10/12/17 20:50	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 07:15	10/12/17 20:50	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	104-51-8	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-1 (3-4) **Lab ID: 40158427003** Collected: 10/09/17 10:00 Received: 10/11/17 09:25 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								
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 20:50	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	91	%	68-130		1	10/12/17 07:15	10/12/17 20:50	1868-53-7	
Toluene-d8 (S)	87	%	68-149		1	10/12/17 07:15	10/12/17 20:50	2037-26-5	
4-Bromofluorobenzene (S)	76	%	58-141		1	10/12/17 07:15	10/12/17 20:50	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	10	%	0.10	0.10	1		10/16/17 11:11		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

Sample: B-1 (11.5-12.5') Lab ID: 40158427004 Collected: 10/09/17 10:05 Received: 10/11/17 09:25 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									
Arsenic	4.6J	mg/kg	5.5	1.2	1	10/12/17 15:03	10/13/17 21:55	7440-38-2	
Barium	72.1	mg/kg	0.55	0.17	1	10/12/17 15:03	10/13/17 21:55	7440-39-3	
Cadmium	0.23J	mg/kg	0.55	0.15	1	10/12/17 15:03	10/13/17 21:55	7440-43-9	
Chromium	19.0	mg/kg	1.1	0.31	1	10/12/17 15:03	10/13/17 21:55	7440-47-3	
Lead	9.8	mg/kg	1.4	0.48	1	10/12/17 15:03	10/13/17 21:55	7439-92-1	
Selenium	<1.2	mg/kg	5.5	1.2	1	10/12/17 15:03	10/13/17 21:55	7782-49-2	
Silver	<0.38	mg/kg	1.1	0.38	1	10/12/17 15:03	10/13/17 21:55	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.013	mg/kg	0.043	0.013	1	10/17/17 06:54	10/17/17 11:52	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	7.1J	ug/kg	15.3	4.6	1	10/13/17 08:32	10/13/17 15:48	83-32-9	
Acenaphthylene	<3.9	ug/kg	13.1	3.9	1	10/13/17 08:32	10/13/17 15:48	208-96-8	
Anthracene	<6.8	ug/kg	22.6	6.8	1	10/13/17 08:32	10/13/17 15:48	120-12-7	
Benzo(a)anthracene	17.3	ug/kg	12.6	3.8	1	10/13/17 08:32	10/13/17 15:48	56-55-3	
Benzo(a)pyrene	15.3	ug/kg	9.9	3.0	1	10/13/17 08:32	10/13/17 15:48	50-32-8	
Benzo(b)fluoranthene	21.8	ug/kg	11.2	3.4	1	10/13/17 08:32	10/13/17 15:48	205-99-2	
Benzo(g,h,i)perylene	10.7	ug/kg	8.0	2.4	1	10/13/17 08:32	10/13/17 15:48	191-24-2	
Benzo(k)fluoranthene	9.4J	ug/kg	9.9	3.0	1	10/13/17 08:32	10/13/17 15:48	207-08-9	
Chrysene	21.5	ug/kg	13.3	4.0	1	10/13/17 08:32	10/13/17 15:48	218-01-9	
Dibenz(a,h)anthracene	<2.7	ug/kg	8.9	2.7	1	10/13/17 08:32	10/13/17 15:48	53-70-3	
Fluoranthene	52.2	ug/kg	20.7	6.2	1	10/13/17 08:32	10/13/17 15:48	206-44-0	
Fluorene	6.2J	ug/kg	16.4	4.9	1	10/13/17 08:32	10/13/17 15:48	86-73-7	
Indeno(1,2,3-cd)pyrene	9.2	ug/kg	8.7	2.6	1	10/13/17 08:32	10/13/17 15:48	193-39-5	
1-Methylnaphthalene	<4.8	ug/kg	15.9	4.8	1	10/13/17 08:32	10/13/17 15:48	90-12-0	
2-Methylnaphthalene	<5.9	ug/kg	19.8	5.9	1	10/13/17 08:32	10/13/17 15:48	91-57-6	
Naphthalene	<10.0	ug/kg	33.4	10.0	1	10/13/17 08:32	10/13/17 15:48	91-20-3	C4
Phenanthrene	53.0	ug/kg	46.1	13.8	1	10/13/17 08:32	10/13/17 15:48	85-01-8	
Pyrene	43.9	ug/kg	17.8	5.4	1	10/13/17 08:32	10/13/17 15:48	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	56	%	23-106		1	10/13/17 08:32	10/13/17 15:48	321-60-8	
Terphenyl-d14 (S)	51	%	29-106		1	10/13/17 08:32	10/13/17 15:48	1718-51-0	
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	10/12/17 07:15	10/12/17 21:13	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 07:15	10/12/17 21:13	120-82-1	W

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-1 (11.5-12.5') Lab ID: 40158427004 Collected: 10/09/17 10:05 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 07:15	10/12/17 21:13	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 07:15	10/12/17 21:13	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 07:15	10/12/17 21:13	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 07:15	10/12/17 21:13	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 07:15	10/12/17 21:13	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 07:15	10/12/17 21:13	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 07:15	10/12/17 21:13	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	104-51-8	W

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-1 (11.5-12.5') **Lab ID: 40158427004** Collected: 10/09/17 10:05 Received: 10/11/17 09:25 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									
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:13	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	80	%	68-130		1	10/12/17 07:15	10/12/17 21:13	1868-53-7	
Toluene-d8 (S)	81	%	68-149		1	10/12/17 07:15	10/12/17 21:13	2037-26-5	
4-Bromofluorobenzene (S)	72	%	58-141		1	10/12/17 07:15	10/12/17 21:13	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	16.0	%	0.10	0.10	1		10/16/17 11:11		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-4 (2-3) **Lab ID: 40158427005** Collected: 10/09/17 10:50 Received: 10/11/17 09:25 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									
Arsenic	6.1	mg/kg	5.9	1.2	1	10/12/17 15:03	10/13/17 21:57	7440-38-2	
Barium	128	mg/kg	0.59	0.18	1	10/12/17 15:03	10/13/17 21:57	7440-39-3	
Cadmium	7.7	mg/kg	0.59	0.16	1	10/12/17 15:03	10/13/17 21:57	7440-43-9	
Chromium	14.0	mg/kg	1.2	0.33	1	10/12/17 15:03	10/13/17 21:57	7440-47-3	
Lead	135	mg/kg	1.5	0.51	1	10/12/17 15:03	10/13/17 21:57	7439-92-1	
Selenium	1.5J	mg/kg	5.9	1.3	1	10/12/17 15:03	10/13/17 21:57	7782-49-2	
Silver	<0.41	mg/kg	1.2	0.41	1	10/12/17 15:03	10/13/17 21:57	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.013J	mg/kg	0.041	0.012	1	10/17/17 06:54	10/17/17 11:54	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.6	ug/kg	15.2	4.6	1	10/13/17 08:32	10/13/17 16:05	83-32-9	
Acenaphthylene	<3.9	ug/kg	13.0	3.9	1	10/13/17 08:32	10/13/17 16:05	208-96-8	
Anthracene	10.6J	ug/kg	22.4	6.7	1	10/13/17 08:32	10/13/17 16:05	120-12-7	
Benzo(a)anthracene	27.6	ug/kg	12.5	3.7	1	10/13/17 08:32	10/13/17 16:05	56-55-3	
Benzo(a)pyrene	26.3	ug/kg	9.9	3.0	1	10/13/17 08:32	10/13/17 16:05	50-32-8	
Benzo(b)fluoranthene	39.9	ug/kg	11.1	3.3	1	10/13/17 08:32	10/13/17 16:05	205-99-2	
Benzo(g,h,i)perylene	20.9	ug/kg	8.0	2.4	1	10/13/17 08:32	10/13/17 16:05	191-24-2	
Benzo(k)fluoranthene	14.4	ug/kg	9.9	3.0	1	10/13/17 08:32	10/13/17 16:05	207-08-9	
Chrysene	33.7	ug/kg	13.2	4.0	1	10/13/17 08:32	10/13/17 16:05	218-01-9	
Dibenz(a,h)anthracene	4.4J	ug/kg	8.8	2.6	1	10/13/17 08:32	10/13/17 16:05	53-70-3	
Fluoranthene	77.5	ug/kg	20.5	6.1	1	10/13/17 08:32	10/13/17 16:05	206-44-0	
Fluorene	<4.9	ug/kg	16.3	4.9	1	10/13/17 08:32	10/13/17 16:05	86-73-7	
Indeno(1,2,3-cd)pyrene	17.4	ug/kg	8.7	2.6	1	10/13/17 08:32	10/13/17 16:05	193-39-5	
1-Methylnaphthalene	<4.8	ug/kg	15.8	4.8	1	10/13/17 08:32	10/13/17 16:05	90-12-0	
2-Methylnaphthalene	<5.9	ug/kg	19.7	5.9	1	10/13/17 08:32	10/13/17 16:05	91-57-6	
Naphthalene	<9.9	ug/kg	33.2	9.9	1	10/13/17 08:32	10/13/17 16:05	91-20-3	
Phenanthrene	57.0	ug/kg	45.8	13.8	1	10/13/17 08:32	10/13/17 16:05	85-01-8	
Pyrene	61.1	ug/kg	17.7	5.3	1	10/13/17 08:32	10/13/17 16:05	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	64	%	23-106		1	10/13/17 08:32	10/13/17 16:05	321-60-8	
Terphenyl-d14 (S)	62	%	29-106		1	10/13/17 08:32	10/13/17 16:05	1718-51-0	
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	10/12/17 07:15	10/12/17 21:36	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 07:15	10/12/17 21:36	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-4 (2-3') Lab ID: **40158427005** Collected: 10/09/17 10:50 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 07:15	10/12/17 21:36	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 07:15	10/12/17 21:36	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 07:15	10/12/17 21:36	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 07:15	10/12/17 21:36	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 07:15	10/12/17 21:36	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	100-42-5	W
Tetrachloroethene	371	ug/kg	70.9	29.5	1	10/12/17 07:15	10/12/17 21:36	127-18-4	
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 07:15	10/12/17 21:36	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 07:15	10/12/17 21:36	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	104-51-8	W

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-4 (2-3') **Lab ID: 40158427005** Collected: 10/09/17 10:50 Received: 10/11/17 09:25 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								
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:36	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	87	%	68-130		1	10/12/17 07:15	10/12/17 21:36	1868-53-7	
Toluene-d8 (S)	87	%	68-149		1	10/12/17 07:15	10/12/17 21:36	2037-26-5	
4-Bromofluorobenzene (S)	75	%	58-141		1	10/12/17 07:15	10/12/17 21:36	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	15.3	%	0.10	0.10	1		10/16/17 12:45		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-4 (10-11') **Lab ID: 40158427006** Collected: 10/09/17 10:55 Received: 10/11/17 09:25 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									
Arsenic	4.1J	mg/kg	5.7	1.2	1	10/12/17 15:03	10/13/17 22:00	7440-38-2	
Barium	47.8	mg/kg	0.57	0.17	1	10/12/17 15:03	10/13/17 22:00	7440-39-3	
Cadmium	0.15J	mg/kg	0.57	0.15	1	10/12/17 15:03	10/13/17 22:00	7440-43-9	
Chromium	17.7	mg/kg	1.1	0.32	1	10/12/17 15:03	10/13/17 22:00	7440-47-3	
Lead	7.8	mg/kg	1.5	0.49	1	10/12/17 15:03	10/13/17 22:00	7439-92-1	
Selenium	<1.3	mg/kg	5.7	1.3	1	10/12/17 15:03	10/13/17 22:00	7782-49-2	
Silver	<0.39	mg/kg	1.1	0.39	1	10/12/17 15:03	10/13/17 22:00	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.038	0.012	1	10/17/17 06:54	10/17/17 12:01	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.4	ug/kg	14.7	4.4	1	10/13/17 08:32	10/13/17 16:22	83-32-9	
Acenaphthylene	<3.8	ug/kg	12.5	3.8	1	10/13/17 08:32	10/13/17 16:22	208-96-8	
Anthracene	<6.5	ug/kg	21.7	6.5	1	10/13/17 08:32	10/13/17 16:22	120-12-7	
Benzo(a)anthracene	<3.6	ug/kg	12.1	3.6	1	10/13/17 08:32	10/13/17 16:22	56-55-3	
Benzo(a)pyrene	3.7J	ug/kg	9.5	2.9	1	10/13/17 08:32	10/13/17 16:22	50-32-8	
Benzo(b)fluoranthene	4.7J	ug/kg	10.7	3.2	1	10/13/17 08:32	10/13/17 16:22	205-99-2	
Benzo(g,h,i)perylene	5.1J	ug/kg	7.7	2.3	1	10/13/17 08:32	10/13/17 16:22	191-24-2	
Benzo(k)fluoranthene	<2.9	ug/kg	9.5	2.9	1	10/13/17 08:32	10/13/17 16:22	207-08-9	
Chrysene	<3.8	ug/kg	12.8	3.8	1	10/13/17 08:32	10/13/17 16:22	218-01-9	
Dibenz(a,h)anthracene	<2.6	ug/kg	8.5	2.6	1	10/13/17 08:32	10/13/17 16:22	53-70-3	
Fluoranthene	6.5J	ug/kg	19.8	5.9	1	10/13/17 08:32	10/13/17 16:22	206-44-0	
Fluorene	<4.7	ug/kg	15.7	4.7	1	10/13/17 08:32	10/13/17 16:22	86-73-7	
Indeno(1,2,3-cd)pyrene	2.6J	ug/kg	8.4	2.5	1	10/13/17 08:32	10/13/17 16:22	193-39-5	
1-Methylnaphthalene	<4.6	ug/kg	15.3	4.6	1	10/13/17 08:32	10/13/17 16:22	90-12-0	
2-Methylnaphthalene	<5.7	ug/kg	19.0	5.7	1	10/13/17 08:32	10/13/17 16:22	91-57-6	
Naphthalene	<9.6	ug/kg	32.1	9.6	1	10/13/17 08:32	10/13/17 16:22	91-20-3	C4
Phenanthrene	<13.3	ug/kg	44.3	13.3	1	10/13/17 08:32	10/13/17 16:22	85-01-8	
Pyrene	5.4J	ug/kg	17.1	5.1	1	10/13/17 08:32	10/13/17 16:22	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	58	%	23-106		1	10/13/17 08:32	10/13/17 16:22	321-60-8	
Terphenyl-d14 (S)	59	%	29-106		1	10/13/17 08:32	10/13/17 16:22	1718-51-0	
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	10/12/17 07:15	10/12/17 21:59	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 07:15	10/12/17 21:59	120-82-1	W

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-4 (10-11') **Lab ID: 40158427006** Collected: 10/09/17 10:55 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 07:15	10/12/17 21:59	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 07:15	10/12/17 21:59	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 07:15	10/12/17 21:59	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 07:15	10/12/17 21:59	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 07:15	10/12/17 21:59	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 07:15	10/12/17 21:59	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 07:15	10/12/17 21:59	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	104-51-8	W

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-4 (10-11') **Lab ID: 40158427006** Collected: 10/09/17 10:55 Received: 10/11/17 09:25 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								
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 21:59	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	86	%	68-130		1	10/12/17 07:15	10/12/17 21:59	1868-53-7	
Toluene-d8 (S)	83	%	68-149		1	10/12/17 07:15	10/12/17 21:59	2037-26-5	
4-Bromofluorobenzene (S)	69	%	58-141		1	10/12/17 07:15	10/12/17 21:59	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	12.4	%	0.10	0.10	1		10/16/17 13:20		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TRIP BLANK Lab ID: **40158427007** Collected: 10/09/17 00:00 Received: 10/11/17 09:25 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	10/12/17 07:15	10/12/17 17:21	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 07:15	10/12/17 17:21	120-82-1	W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 07:15	10/12/17 17:21	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 07:15	10/12/17 17:21	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 07:15	10/12/17 17:21	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 07:15	10/12/17 17:21	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 07:15	10/12/17 17:21	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	100-42-5	W

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TRIP BLANK **Lab ID: 40158427007** Collected: 10/09/17 00:00 Received: 10/11/17 09:25 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 07:15	10/12/17 17:21	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 07:15	10/12/17 17:21	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 17:21	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	84	%	68-130		1	10/12/17 07:15	10/12/17 17:21	1868-53-7	
Toluene-d8 (S)	77	%	68-149		1	10/12/17 07:15	10/12/17 17:21	2037-26-5	
4-Bromofluorobenzene (S)	79	%	58-141		1	10/12/17 07:15	10/12/17 17:21	460-00-4	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-3 (3-4) **Lab ID: 40158427008** Collected: 10/09/17 11:35 Received: 10/11/17 09:25 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									
Arsenic	6.9	mg/kg	5.4	1.1	1	10/12/17 15:03	10/13/17 22:07	7440-38-2	
Barium	86.2	mg/kg	0.54	0.16	1	10/12/17 15:03	10/13/17 22:07	7440-39-3	
Cadmium	0.19J	mg/kg	0.54	0.14	1	10/12/17 15:03	10/13/17 22:07	7440-43-9	
Chromium	20.4	mg/kg	1.1	0.30	1	10/12/17 15:03	10/13/17 22:07	7440-47-3	
Lead	13.8	mg/kg	1.4	0.47	1	10/12/17 15:03	10/13/17 22:07	7439-92-1	
Selenium	<1.2	mg/kg	5.4	1.2	1	10/12/17 15:03	10/13/17 22:07	7782-49-2	
Silver	<0.37	mg/kg	1.1	0.37	1	10/12/17 15:03	10/13/17 22:07	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.040	0.012	1	10/17/17 06:54	10/17/17 12:03	7439-97-6	
8270 MSSV PAH by SIM Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	9.3J	ug/kg	15.0	4.5	1	10/13/17 08:32	10/13/17 16:39	83-32-9	
Acenaphthylene	<3.8	ug/kg	12.8	3.8	1	10/13/17 08:32	10/13/17 16:39	208-96-8	
Anthracene	16.7J	ug/kg	22.1	6.7	1	10/13/17 08:32	10/13/17 16:39	120-12-7	
Benzo(a)anthracene	26.0	ug/kg	12.4	3.7	1	10/13/17 08:32	10/13/17 16:39	56-55-3	
Benzo(a)pyrene	20.2	ug/kg	9.8	2.9	1	10/13/17 08:32	10/13/17 16:39	50-32-8	
Benzo(b)fluoranthene	25.7	ug/kg	11.0	3.3	1	10/13/17 08:32	10/13/17 16:39	205-99-2	
Benzo(g,h,i)perylene	11.6	ug/kg	7.9	2.4	1	10/13/17 08:32	10/13/17 16:39	191-24-2	
Benzo(k)fluoranthene	10.9	ug/kg	9.7	2.9	1	10/13/17 08:32	10/13/17 16:39	207-08-9	
Chrysene	24.4	ug/kg	13.1	3.9	1	10/13/17 08:32	10/13/17 16:39	218-01-9	
Dibenz(a,h)anthracene	3.2J	ug/kg	8.7	2.6	1	10/13/17 08:32	10/13/17 16:39	53-70-3	
Fluoranthene	66.1	ug/kg	20.3	6.1	1	10/13/17 08:32	10/13/17 16:39	206-44-0	
Fluorene	9.7J	ug/kg	16.1	4.8	1	10/13/17 08:32	10/13/17 16:39	86-73-7	
Indeno(1,2,3-cd)pyrene	9.9	ug/kg	8.5	2.6	1	10/13/17 08:32	10/13/17 16:39	193-39-5	
1-Methylnaphthalene	<4.7	ug/kg	15.6	4.7	1	10/13/17 08:32	10/13/17 16:39	90-12-0	
2-Methylnaphthalene	<5.8	ug/kg	19.5	5.8	1	10/13/17 08:32	10/13/17 16:39	91-57-6	
Naphthalene	<9.8	ug/kg	32.8	9.8	1	10/13/17 08:32	10/13/17 16:39	91-20-3	
Phenanthrene	79.8	ug/kg	45.2	13.6	1	10/13/17 08:32	10/13/17 16:39	85-01-8	
Pyrene	56.2	ug/kg	17.5	5.3	1	10/13/17 08:32	10/13/17 16:39	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	61	%	23-106		1	10/13/17 08:32	10/13/17 16:39	321-60-8	
Terphenyl-d14 (S)	60	%	29-106		1	10/13/17 08:32	10/13/17 16:39	1718-51-0	
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	10/12/17 07:15	10/12/17 22:22	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 07:15	10/12/17 22:22	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-3 (3-4) **Lab ID: 40158427008** Collected: 10/09/17 11:35 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 07:15	10/12/17 22:22	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 07:15	10/12/17 22:22	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 07:15	10/12/17 22:22	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 07:15	10/12/17 22:22	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 07:15	10/12/17 22:22	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	100-42-5	W
Tetrachloroethene	44.6J	ug/kg	69.8	29.1	1	10/12/17 07:15	10/12/17 22:22	127-18-4	
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 07:15	10/12/17 22:22	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 07:15	10/12/17 22:22	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	104-51-8	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-3 (3-4) **Lab ID: 40158427008** Collected: 10/09/17 11:35 Received: 10/11/17 09:25 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									
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:22	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	93	%	68-130		1	10/12/17 07:15	10/12/17 22:22	1868-53-7	
Toluene-d8 (S)	96	%	68-149		1	10/12/17 07:15	10/12/17 22:22	2037-26-5	
4-Bromofluorobenzene (S)	83	%	58-141		1	10/12/17 07:15	10/12/17 22:22	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	14.1	%	0.10	0.10	1		10/16/17 13:20		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-3 (11-12') **Lab ID: 40158427009** Collected: 10/09/17 11:40 Received: 10/11/17 09:25 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									
Arsenic	3.3J	mg/kg	5.6	1.2	1	10/12/17 15:03	10/13/17 22:10	7440-38-2	
Barium	65.6	mg/kg	0.56	0.17	1	10/12/17 15:03	10/13/17 22:10	7440-39-3	
Cadmium	0.28J	mg/kg	0.56	0.15	1	10/12/17 15:03	10/13/17 22:10	7440-43-9	
Chromium	27.1	mg/kg	1.1	0.31	1	10/12/17 15:03	10/13/17 22:10	7440-47-3	
Lead	9.0	mg/kg	1.5	0.48	1	10/12/17 15:03	10/13/17 22:10	7439-92-1	
Selenium	<1.2	mg/kg	5.6	1.2	1	10/12/17 15:03	10/13/17 22:10	7782-49-2	
Silver	<0.38	mg/kg	1.1	0.38	1	10/12/17 15:03	10/13/17 22:10	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.016J	mg/kg	0.043	0.013	1	10/17/17 06:54	10/17/17 12:06	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.6	ug/kg	15.3	4.6	1	10/13/17 08:32	10/13/17 16:56	83-32-9	
Acenaphthylene	<3.9	ug/kg	13.0	3.9	1	10/13/17 08:32	10/13/17 16:56	208-96-8	
Anthracene	<6.8	ug/kg	22.5	6.8	1	10/13/17 08:32	10/13/17 16:56	120-12-7	
Benzo(a)anthracene	5.5J	ug/kg	12.6	3.8	1	10/13/17 08:32	10/13/17 16:56	56-55-3	
Benzo(a)pyrene	4.9J	ug/kg	9.9	3.0	1	10/13/17 08:32	10/13/17 16:56	50-32-8	
Benzo(b)fluoranthene	7.1J	ug/kg	11.1	3.3	1	10/13/17 08:32	10/13/17 16:56	205-99-2	
Benzo(g,h,i)perylene	4.3J	ug/kg	8.0	2.4	1	10/13/17 08:32	10/13/17 16:56	191-24-2	
Benzo(k)fluoranthene	<3.0	ug/kg	9.9	3.0	1	10/13/17 08:32	10/13/17 16:56	207-08-9	
Chrysene	6.6J	ug/kg	13.3	4.0	1	10/13/17 08:32	10/13/17 16:56	218-01-9	
Dibenz(a,h)anthracene	<2.6	ug/kg	8.8	2.6	1	10/13/17 08:32	10/13/17 16:56	53-70-3	
Fluoranthene	15.2J	ug/kg	20.6	6.2	1	10/13/17 08:32	10/13/17 16:56	206-44-0	
Fluorene	<4.9	ug/kg	16.3	4.9	1	10/13/17 08:32	10/13/17 16:56	86-73-7	
Indeno(1,2,3-cd)pyrene	3.0J	ug/kg	8.7	2.6	1	10/13/17 08:32	10/13/17 16:56	193-39-5	
1-Methylnaphthalene	<4.8	ug/kg	15.9	4.8	1	10/13/17 08:32	10/13/17 16:56	90-12-0	
2-Methylnaphthalene	<5.9	ug/kg	19.8	5.9	1	10/13/17 08:32	10/13/17 16:56	91-57-6	
Naphthalene	<10	ug/kg	33.3	10	1	10/13/17 08:32	10/13/17 16:56	91-20-3	
Phenanthrene	<13.8	ug/kg	46.0	13.8	1	10/13/17 08:32	10/13/17 16:56	85-01-8	
Pyrene	12.5J	ug/kg	17.8	5.3	1	10/13/17 08:32	10/13/17 16:56	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	63	%	23-106		1	10/13/17 08:32	10/13/17 16:56	321-60-8	
Terphenyl-d14 (S)	63	%	29-106		1	10/13/17 08:32	10/13/17 16:56	1718-51-0	
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	10/12/17 07:15	10/12/17 22:45	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 07:15	10/12/17 22:45	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-3 (11-12') **Lab ID: 40158427009** Collected: 10/09/17 11:40 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 07:15	10/12/17 22:45	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 07:15	10/12/17 22:45	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 07:15	10/12/17 22:45	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 07:15	10/12/17 22:45	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 07:15	10/12/17 22:45	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 07:15	10/12/17 22:45	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 07:15	10/12/17 22:45	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	104-51-8	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-3 (11-12') **Lab ID: 40158427009** Collected: 10/09/17 11:40 Received: 10/11/17 09:25 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								
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 22:45	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	88	%	68-130		1	10/12/17 07:15	10/12/17 22:45	1868-53-7	
Toluene-d8 (S)	90	%	68-149		1	10/12/17 07:15	10/12/17 22:45	2037-26-5	
4-Bromofluorobenzene (S)	76	%	58-141		1	10/12/17 07:15	10/12/17 22:45	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	15.4	%	0.10	0.10	1		10/16/17 12:45		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-5 (12.5-13.5') **Lab ID: 40158427010** Collected: 10/09/17 12:15 Received: 10/11/17 09:25 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									
Arsenic	3.3J	mg/kg	5.4	1.1	1	10/12/17 15:03	10/13/17 22:12	7440-38-2	
Barium	20.0	mg/kg	0.54	0.16	1	10/12/17 15:03	10/13/17 22:12	7440-39-3	
Cadmium	0.16J	mg/kg	0.54	0.14	1	10/12/17 15:03	10/13/17 22:12	7440-43-9	
Chromium	9.3	mg/kg	1.1	0.30	1	10/12/17 15:03	10/13/17 22:12	7440-47-3	
Lead	7.1	mg/kg	1.4	0.47	1	10/12/17 15:03	10/13/17 22:12	7439-92-1	
Selenium	<1.2	mg/kg	5.4	1.2	1	10/12/17 15:03	10/13/17 22:12	7782-49-2	
Silver	<0.37	mg/kg	1.1	0.37	1	10/12/17 15:03	10/13/17 22:12	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.041	0.012	1	10/17/17 06:54	10/17/17 12:08	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.4	ug/kg	14.6	4.4	1	10/13/17 08:32	10/13/17 17:13	83-32-9	
Acenaphthylene	<3.7	ug/kg	12.4	3.7	1	10/13/17 08:32	10/13/17 17:13	208-96-8	
Anthracene	<6.4	ug/kg	21.4	6.4	1	10/13/17 08:32	10/13/17 17:13	120-12-7	
Benzo(a)anthracene	<3.6	ug/kg	12.0	3.6	1	10/13/17 08:32	10/13/17 17:13	56-55-3	
Benzo(a)pyrene	<2.8	ug/kg	9.4	2.8	1	10/13/17 08:32	10/13/17 17:13	50-32-8	
Benzo(b)fluoranthene	3.5J	ug/kg	10.6	3.2	1	10/13/17 08:32	10/13/17 17:13	205-99-2	
Benzo(g,h,i)perylene	<2.3	ug/kg	7.6	2.3	1	10/13/17 08:32	10/13/17 17:13	191-24-2	
Benzo(k)fluoranthene	<2.8	ug/kg	9.4	2.8	1	10/13/17 08:32	10/13/17 17:13	207-08-9	
Chrysene	<3.8	ug/kg	12.6	3.8	1	10/13/17 08:32	10/13/17 17:13	218-01-9	
Dibenz(a,h)anthracene	<2.5	ug/kg	8.4	2.5	1	10/13/17 08:32	10/13/17 17:13	53-70-3	
Fluoranthene	<5.9	ug/kg	19.6	5.9	1	10/13/17 08:32	10/13/17 17:13	206-44-0	
Fluorene	<4.7	ug/kg	15.6	4.7	1	10/13/17 08:32	10/13/17 17:13	86-73-7	
Indeno(1,2,3-cd)pyrene	<2.5	ug/kg	8.3	2.5	1	10/13/17 08:32	10/13/17 17:13	193-39-5	
1-Methylnaphthalene	12.1J	ug/kg	15.1	4.5	1	10/13/17 08:32	10/13/17 17:13	90-12-0	
2-Methylnaphthalene	<5.6	ug/kg	18.8	5.6	1	10/13/17 08:32	10/13/17 17:13	91-57-6	
Naphthalene	52.5	ug/kg	31.7	9.5	1	10/13/17 08:32	10/13/17 17:13	91-20-3	
Phenanthrene	<13.1	ug/kg	43.8	13.1	1	10/13/17 08:32	10/13/17 17:13	85-01-8	
Pyrene	<5.1	ug/kg	16.9	5.1	1	10/13/17 08:32	10/13/17 17:13	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	64	%	23-106		1	10/13/17 08:32	10/13/17 17:13	321-60-8	
Terphenyl-d14 (S)	68	%	29-106		1	10/13/17 08:32	10/13/17 17:13	1718-51-0	
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	10/12/17 07:15	10/12/17 23:09	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 07:15	10/12/17 23:09	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-5 (12.5-13.5') **Lab ID: 40158427010** Collected: 10/09/17 12:15 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 07:15	10/12/17 23:09	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 07:15	10/12/17 23:09	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 07:15	10/12/17 23:09	75-00-3	W
Chloroform	151J	ug/kg	282	52.4	1	10/12/17 07:15	10/12/17 23:09	67-66-3	
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	108-20-3	W
Ethylbenzene	74.1	ug/kg	67.7	28.2	1	10/12/17 07:15	10/12/17 23:09	100-41-4	
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	87-68-3	W
Isopropylbenzene (Cumene)	112	ug/kg	67.7	28.2	1	10/12/17 07:15	10/12/17 23:09	98-82-8	
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 07:15	10/12/17 23:09	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 07:15	10/12/17 23:09	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 07:15	10/12/17 23:09	179601-23-1	W
n-Butylbenzene	324	ug/kg	67.7	28.2	1	10/12/17 07:15	10/12/17 23:09	104-51-8	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-5 (12.5-13.5') **Lab ID: 40158427010** Collected: 10/09/17 12:15 Received: 10/11/17 09:25 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							
n-Propylbenzene	545	ug/kg	67.7	28.2	1	10/12/17 07:15	10/12/17 23:09	103-65-1	
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	99-87-6	W
sec-Butylbenzene	159	ug/kg	67.7	28.2	1	10/12/17 07:15	10/12/17 23:09	135-98-8	
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 07:15	10/12/17 23:09	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	86	%	68-130		1	10/12/17 07:15	10/12/17 23:09	1868-53-7	
Toluene-d8 (S)	84	%	68-149		1	10/12/17 07:15	10/12/17 23:09	2037-26-5	
4-Bromofluorobenzene (S)	84	%	58-141		1	10/12/17 07:15	10/12/17 23:09	460-00-4	
Percent Moisture		Analytical Method: ASTM D2974-87							
Percent Moisture	11.4	%	0.10	0.10	1		10/16/17 12:45		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-5 (14-15') **Lab ID: 40158427011** Collected: 10/09/17 12:20 Received: 10/11/17 09:25 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									
Arsenic	3.5J	mg/kg	5.4	1.1	1	10/12/17 15:03	10/13/17 22:15	7440-38-2	
Barium	94.4	mg/kg	0.54	0.16	1	10/12/17 15:03	10/13/17 22:15	7440-39-3	
Cadmium	0.18J	mg/kg	0.54	0.14	1	10/12/17 15:03	10/13/17 22:15	7440-43-9	
Chromium	27.9	mg/kg	1.1	0.30	1	10/12/17 15:03	10/13/17 22:15	7440-47-3	
Lead	8.7	mg/kg	1.4	0.46	1	10/12/17 15:03	10/13/17 22:15	7439-92-1	
Selenium	<1.2	mg/kg	5.4	1.2	1	10/12/17 15:03	10/13/17 22:15	7782-49-2	
Silver	<0.37	mg/kg	1.1	0.37	1	10/12/17 15:03	10/13/17 22:15	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.020J	mg/kg	0.045	0.014	1	10/17/17 06:56	10/17/17 12:15	7439-97-6	M0
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.8	ug/kg	15.9	4.8	1	10/13/17 08:32	10/13/17 17:31	83-32-9	
Acenaphthylene	<4.1	ug/kg	13.5	4.1	1	10/13/17 08:32	10/13/17 17:31	208-96-8	
Anthracene	<7.0	ug/kg	23.4	7.0	1	10/13/17 08:32	10/13/17 17:31	120-12-7	
Benzo(a)anthracene	<3.9	ug/kg	13.0	3.9	1	10/13/17 08:32	10/13/17 17:31	56-55-3	
Benzo(a)pyrene	<3.1	ug/kg	10.3	3.1	1	10/13/17 08:32	10/13/17 17:31	50-32-8	
Benzo(b)fluoranthene	<3.5	ug/kg	11.6	3.5	1	10/13/17 08:32	10/13/17 17:31	205-99-2	
Benzo(g,h,i)perylene	<2.5	ug/kg	8.3	2.5	1	10/13/17 08:32	10/13/17 17:31	191-24-2	
Benzo(k)fluoranthene	<3.1	ug/kg	10.3	3.1	1	10/13/17 08:32	10/13/17 17:31	207-08-9	
Chrysene	<4.1	ug/kg	13.8	4.1	1	10/13/17 08:32	10/13/17 17:31	218-01-9	
Dibenz(a,h)anthracene	<2.8	ug/kg	9.2	2.8	1	10/13/17 08:32	10/13/17 17:31	53-70-3	
Fluoranthene	<6.4	ug/kg	21.4	6.4	1	10/13/17 08:32	10/13/17 17:31	206-44-0	
Fluorene	<5.1	ug/kg	17.0	5.1	1	10/13/17 08:32	10/13/17 17:31	86-73-7	
Indeno(1,2,3-cd)pyrene	<2.7	ug/kg	9.0	2.7	1	10/13/17 08:32	10/13/17 17:31	193-39-5	
1-Methylnaphthalene	47.0	ug/kg	16.5	4.9	1	10/13/17 08:32	10/13/17 17:31	90-12-0	
2-Methylnaphthalene	8.4J	ug/kg	20.5	6.2	1	10/13/17 08:32	10/13/17 17:31	91-57-6	
Naphthalene	35.3	ug/kg	34.6	10.4	1	10/13/17 08:32	10/13/17 17:31	91-20-3	
Phenanthrene	<14.3	ug/kg	47.7	14.3	1	10/13/17 08:32	10/13/17 17:31	85-01-8	
Pyrene	<5.5	ug/kg	18.5	5.5	1	10/13/17 08:32	10/13/17 17:31	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	61	%	23-106		1	10/13/17 08:32	10/13/17 17:31	321-60-8	
Terphenyl-d14 (S)	60	%	29-106		1	10/13/17 08:32	10/13/17 17:31	1718-51-0	
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	10/12/17 11:00	10/13/17 01:28	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 11:00	10/13/17 01:28	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-5 (14-15') **Lab ID: 40158427011** Collected: 10/09/17 12:20 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	36.6J	ug/kg	73.8	30.7	1	10/12/17 11:00	10/13/17 01:28	95-63-6	
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 11:00	10/13/17 01:28	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 11:00	10/13/17 01:28	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 11:00	10/13/17 01:28	75-00-3	W
Chloroform	133J	ug/kg	307	57.1	1	10/12/17 11:00	10/13/17 01:28	67-66-3	
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	108-20-3	W
Ethylbenzene	1060	ug/kg	73.8	30.7	1	10/12/17 11:00	10/13/17 01:28	100-41-4	
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	87-68-3	W
Isopropylbenzene (Cumene)	211	ug/kg	73.8	30.7	1	10/12/17 11:00	10/13/17 01:28	98-82-8	
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 11:00	10/13/17 01:28	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 11:00	10/13/17 01:28	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 11:00	10/13/17 01:28	179601-23-1	W
n-Butylbenzene	152	ug/kg	73.8	30.7	1	10/12/17 11:00	10/13/17 01:28	104-51-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-5 (14-15') **Lab ID: 40158427011** Collected: 10/09/17 12:20 Received: 10/11/17 09:25 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							
n-Propylbenzene	778	ug/kg	73.8	30.7	1	10/12/17 11:00	10/13/17 01:28	103-65-1	
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	99-87-6	W
sec-Butylbenzene	46.5J	ug/kg	73.8	30.7	1	10/12/17 11:00	10/13/17 01:28	135-98-8	
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:28	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	81	%	68-130		1	10/12/17 11:00	10/13/17 01:28	1868-53-7	
Toluene-d8 (S)	83	%	68-149		1	10/12/17 11:00	10/13/17 01:28	2037-26-5	
4-Bromofluorobenzene (S)	76	%	58-141		1	10/12/17 11:00	10/13/17 01:28	460-00-4	
Percent Moisture		Analytical Method: ASTM D2974-87							
Percent Moisture	18.6	%	0.10	0.10	1		10/16/17 12:45		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-6 (3-4') Lab ID: 40158427012 Collected: 10/09/17 12:55 Received: 10/11/17 09:25 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									
Arsenic	3.9J	mg/kg	5.3	1.1	1	10/12/17 15:03	10/13/17 22:17	7440-38-2	
Barium	43.7	mg/kg	0.53	0.16	1	10/12/17 15:03	10/13/17 22:17	7440-39-3	
Cadmium	0.21J	mg/kg	0.53	0.14	1	10/12/17 15:03	10/13/17 22:17	7440-43-9	
Chromium	16.1	mg/kg	1.1	0.30	1	10/12/17 15:03	10/13/17 22:17	7440-47-3	
Lead	6.9	mg/kg	1.4	0.46	1	10/12/17 15:03	10/13/17 22:17	7439-92-1	
Selenium	<1.2	mg/kg	5.3	1.2	1	10/12/17 15:03	10/13/17 22:17	7782-49-2	
Silver	<0.37	mg/kg	1.1	0.37	1	10/12/17 15:03	10/13/17 22:17	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.039	0.012	1	10/17/17 06:56	10/17/17 12:22	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.5	ug/kg	14.9	4.5	1	10/13/17 08:32	10/13/17 17:48	83-32-9	
Acenaphthylene	<3.8	ug/kg	12.7	3.8	1	10/13/17 08:32	10/13/17 17:48	208-96-8	
Anthracene	<6.6	ug/kg	21.9	6.6	1	10/13/17 08:32	10/13/17 17:48	120-12-7	
Benzo(a)anthracene	5.9J	ug/kg	12.2	3.7	1	10/13/17 08:32	10/13/17 17:48	56-55-3	
Benzo(a)pyrene	4.2J	ug/kg	9.7	2.9	1	10/13/17 08:32	10/13/17 17:48	50-32-8	
Benzo(b)fluoranthene	6.5J	ug/kg	10.9	3.3	1	10/13/17 08:32	10/13/17 17:48	205-99-2	
Benzo(g,h,i)perylene	3.2J	ug/kg	7.8	2.3	1	10/13/17 08:32	10/13/17 17:48	191-24-2	
Benzo(k)fluoranthene	<2.9	ug/kg	9.7	2.9	1	10/13/17 08:32	10/13/17 17:48	207-08-9	
Chrysene	6.5J	ug/kg	12.9	3.9	1	10/13/17 08:32	10/13/17 17:48	218-01-9	
Dibenz(a,h)anthracene	<2.6	ug/kg	8.6	2.6	1	10/13/17 08:32	10/13/17 17:48	53-70-3	
Fluoranthene	10.7J	ug/kg	20.1	6.0	1	10/13/17 08:32	10/13/17 17:48	206-44-0	
Fluorene	<4.8	ug/kg	15.9	4.8	1	10/13/17 08:32	10/13/17 17:48	86-73-7	
Indeno(1,2,3-cd)pyrene	<2.5	ug/kg	8.5	2.5	1	10/13/17 08:32	10/13/17 17:48	193-39-5	
1-Methylnaphthalene	<4.6	ug/kg	15.5	4.6	1	10/13/17 08:32	10/13/17 17:48	90-12-0	
2-Methylnaphthalene	<5.8	ug/kg	19.3	5.8	1	10/13/17 08:32	10/13/17 17:48	91-57-6	
Naphthalene	<9.7	ug/kg	32.5	9.7	1	10/13/17 08:32	10/13/17 17:48	91-20-3	
Phenanthrene	<13.5	ug/kg	44.8	13.5	1	10/13/17 08:32	10/13/17 17:48	85-01-8	
Pyrene	12.1J	ug/kg	17.3	5.2	1	10/13/17 08:32	10/13/17 17:48	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	68	%	23-106		1	10/13/17 08:32	10/13/17 17:48	321-60-8	
Terphenyl-d14 (S)	61	%	29-106		1	10/13/17 08:32	10/13/17 17:48	1718-51-0	
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	10/12/17 11:00	10/13/17 01:51	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 11:00	10/13/17 01:51	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-6 (3-4) **Lab ID: 40158427012** Collected: 10/09/17 12:55 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 11:00	10/13/17 01:51	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 11:00	10/13/17 01:51	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 11:00	10/13/17 01:51	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 11:00	10/13/17 01:51	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 11:00	10/13/17 01:51	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	100-42-5	W
Tetrachloroethene	109	ug/kg	69.3	28.9	1	10/12/17 11:00	10/13/17 01:51	127-18-4	
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 11:00	10/13/17 01:51	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 11:00	10/13/17 01:51	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	104-51-8	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-6 (3-4) **Lab ID: 40158427012** Collected: 10/09/17 12:55 Received: 10/11/17 09:25 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								
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 01:51	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	86	%	68-130		1	10/12/17 11:00	10/13/17 01:51	1868-53-7	
Toluene-d8 (S)	85	%	68-149		1	10/12/17 11:00	10/13/17 01:51	2037-26-5	
4-Bromofluorobenzene (S)	73	%	58-141		1	10/12/17 11:00	10/13/17 01:51	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	13.4	%	0.10	0.10	1		10/16/17 12:45		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-6 (11-12') **Lab ID: 40158427013** Collected: 10/09/17 13:00 Received: 10/11/17 09:25 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									
Arsenic	3.7J	mg/kg	5.4	1.1	1	10/12/17 15:03	10/13/17 22:19	7440-38-2	
Barium	43.1	mg/kg	0.54	0.16	1	10/12/17 15:03	10/13/17 22:19	7440-39-3	
Cadmium	0.14J	mg/kg	0.54	0.14	1	10/12/17 15:03	10/13/17 22:19	7440-43-9	
Chromium	14.2	mg/kg	1.1	0.30	1	10/12/17 15:03	10/13/17 22:19	7440-47-3	
Lead	6.6	mg/kg	1.4	0.46	1	10/12/17 15:03	10/13/17 22:19	7439-92-1	
Selenium	<1.2	mg/kg	5.4	1.2	1	10/12/17 15:03	10/13/17 22:19	7782-49-2	
Silver	<0.37	mg/kg	1.1	0.37	1	10/12/17 15:03	10/13/17 22:19	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.012J	mg/kg	0.040	0.012	1	10/17/17 06:56	10/17/17 12:29	7439-97-6	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.3	ug/kg	14.5	4.3	1	10/13/17 08:32	10/13/17 18:05	83-32-9	
Acenaphthylene	<3.7	ug/kg	12.3	3.7	1	10/13/17 08:32	10/13/17 18:05	208-96-8	
Anthracene	<6.4	ug/kg	21.3	6.4	1	10/13/17 08:32	10/13/17 18:05	120-12-7	
Benzo(a)anthracene	<3.6	ug/kg	11.9	3.6	1	10/13/17 08:32	10/13/17 18:05	56-55-3	
Benzo(a)pyrene	<2.8	ug/kg	9.4	2.8	1	10/13/17 08:32	10/13/17 18:05	50-32-8	
Benzo(b)fluoranthene	<3.2	ug/kg	10.5	3.2	1	10/13/17 08:32	10/13/17 18:05	205-99-2	
Benzo(g,h,i)perylene	<2.3	ug/kg	7.6	2.3	1	10/13/17 08:32	10/13/17 18:05	191-24-2	
Benzo(k)fluoranthene	<2.8	ug/kg	9.4	2.8	1	10/13/17 08:32	10/13/17 18:05	207-08-9	
Chrysene	<3.8	ug/kg	12.5	3.8	1	10/13/17 08:32	10/13/17 18:05	218-01-9	
Dibenz(a,h)anthracene	<2.5	ug/kg	8.3	2.5	1	10/13/17 08:32	10/13/17 18:05	53-70-3	
Fluoranthene	<5.8	ug/kg	19.5	5.8	1	10/13/17 08:32	10/13/17 18:05	206-44-0	
Fluorene	<4.6	ug/kg	15.5	4.6	1	10/13/17 08:32	10/13/17 18:05	86-73-7	
Indeno(1,2,3-cd)pyrene	<2.5	ug/kg	8.2	2.5	1	10/13/17 08:32	10/13/17 18:05	193-39-5	
1-Methylnaphthalene	5.0J	ug/kg	15.0	4.5	1	10/13/17 08:32	10/13/17 18:05	90-12-0	
2-Methylnaphthalene	<5.6	ug/kg	18.7	5.6	1	10/13/17 08:32	10/13/17 18:05	91-57-6	
Naphthalene	10.0J	ug/kg	31.5	9.4	1	10/13/17 08:32	10/13/17 18:05	91-20-3	
Phenanthrene	<13.1	ug/kg	43.5	13.1	1	10/13/17 08:32	10/13/17 18:05	85-01-8	
Pyrene	<5.1	ug/kg	16.8	5.1	1	10/13/17 08:32	10/13/17 18:05	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	62	%	23-106		1	10/13/17 08:32	10/13/17 18:05	321-60-8	
Terphenyl-d14 (S)	62	%	29-106		1	10/13/17 08:32	10/13/17 18:05	1718-51-0	
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	10/12/17 11:00	10/13/17 02:14	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	71-55-6	W
1,1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	10/12/17 11:00	10/13/17 02:14	120-82-1	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-6 (11-12') **Lab ID: 40158427013** Collected: 10/09/17 13:00 Received: 10/11/17 09:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	10/12/17 11:00	10/13/17 02:14	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	10/12/17 11:00	10/13/17 02:14	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	10/12/17 11:00	10/13/17 02:14	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	10/12/17 11:00	10/13/17 02:14	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	108-20-3	W
Ethylbenzene	61.8J	ug/kg	67.3	28.0	1	10/12/17 11:00	10/13/17 02:14	100-41-4	
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	10/12/17 11:00	10/13/17 02:14	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	100-42-5	W
Tetrachloroethene	39.1J	ug/kg	67.3	28.0	1	10/12/17 11:00	10/13/17 02:14	127-18-4	
Toluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	10/12/17 11:00	10/13/17 02:14	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	10/12/17 11:00	10/13/17 02:14	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	104-51-8	W

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: B-6 (11-12') **Lab ID: 40158427013** Collected: 10/09/17 13:00 Received: 10/11/17 09:25 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							
n-Propylbenzene	32.5J	ug/kg	67.3	28.0	1	10/12/17 11:00	10/13/17 02:14	103-65-1	
o-Xylene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	10/12/17 11:00	10/13/17 02:14	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	92	%	68-130		1	10/12/17 11:00	10/13/17 02:14	1868-53-7	
Toluene-d8 (S)	93	%	68-149		1	10/12/17 11:00	10/13/17 02:14	2037-26-5	
4-Bromofluorobenzene (S)	82	%	58-141		1	10/12/17 11:00	10/13/17 02:14	460-00-4	
Percent Moisture		Analytical Method: ASTM D2974-87							
Percent Moisture	10.8	%	0.10	0.10	1		10/16/17 12:46		

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-2 **Lab ID:** 40158427014 Collected: 10/10/17 08:55 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Arsenic	<8.3	ug/L	25.0	8.3	1	10/12/17 09:27	10/12/17 17:29	7440-38-2	
Barium	170	ug/L	5.0	1.5	1	10/12/17 09:27	10/12/17 17:29	7440-39-3	
Cadmium	<1.3	ug/L	5.0	1.3	1	10/12/17 09:27	10/12/17 17:29	7440-43-9	
Chromium	<2.5	ug/L	10.0	2.5	1	10/12/17 09:27	10/12/17 17:29	7440-47-3	
Lead	<4.3	ug/L	13.0	4.3	1	10/12/17 09:27	10/12/17 17:29	7439-92-1	
Selenium	<16.6	ug/L	50.0	16.6	1	10/12/17 09:27	10/12/17 17:29	7782-49-2	
Silver	<3.3	ug/L	10.0	3.3	1	10/12/17 09:27	10/12/17 17:29	7440-22-4	
7470 Mercury Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	<0.13	ug/L	0.42	0.13	1	10/13/17 11:00	10/16/17 09:02	7439-97-6	
8270 MSSV PAH by HVI Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510									
Acenaphthene	0.022J	ug/L	0.062	0.012	1	10/12/17 12:41	10/13/17 16:26	83-32-9	
Acenaphthylene	<0.010	ug/L	0.051	0.010	1	10/12/17 12:41	10/13/17 16:26	208-96-8	
Anthracene	<0.021	ug/L	0.11	0.021	1	10/12/17 12:41	10/13/17 16:26	120-12-7	
Benzo(a)anthracene	<0.015	ug/L	0.077	0.015	1	10/12/17 12:41	10/13/17 16:26	56-55-3	
Benzo(a)pyrene	<0.021	ug/L	0.11	0.021	1	10/12/17 12:41	10/13/17 16:26	50-32-8	
Benzo(b)fluoranthene	0.024J	ug/L	0.059	0.012	1	10/12/17 12:41	10/13/17 16:26	205-99-2	
Benzo(g,h,i)perylene	0.019J	ug/L	0.069	0.014	1	10/12/17 12:41	10/13/17 16:26	191-24-2	
Benzo(k)fluoranthene	0.020J	ug/L	0.077	0.015	1	10/12/17 12:41	10/13/17 16:26	207-08-9	
Chrysene	0.040J	ug/L	0.13	0.027	1	10/12/17 12:41	10/13/17 16:26	218-01-9	
Dibenz(a,h)anthracene	<0.020	ug/L	0.10	0.020	1	10/12/17 12:41	10/13/17 16:26	53-70-3	
Fluoranthene	0.13	ug/L	0.11	0.022	1	10/12/17 12:41	10/13/17 16:26	206-44-0	
Fluorene	<0.016	ug/L	0.081	0.016	1	10/12/17 12:41	10/13/17 16:26	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.036	ug/L	0.18	0.036	1	10/12/17 12:41	10/13/17 16:26	193-39-5	
1-Methylnaphthalene	<0.012	ug/L	0.060	0.012	1	10/12/17 12:41	10/13/17 16:26	90-12-0	
2-Methylnaphthalene	<0.010	ug/L	0.050	0.010	1	10/12/17 12:41	10/13/17 16:26	91-57-6	
Naphthalene	<0.037	ug/L	0.19	0.037	1	10/12/17 12:41	10/13/17 16:26	91-20-3	
Phenanthrene	0.089J	ug/L	0.14	0.028	1	10/12/17 12:41	10/13/17 16:26	85-01-8	
Pyrene	0.11	ug/L	0.078	0.016	1	10/12/17 12:41	10/13/17 16:26	129-00-0	
Total PAHs	0.55	ug/L			1	10/12/17 12:41	10/13/17 16:26		
Surrogates									
2-Fluorobiphenyl (S)	50	%	35-84		1	10/12/17 12:41	10/13/17 16:26	321-60-8	
Terphenyl-d14 (S)	64	%	10-129		1	10/12/17 12:41	10/13/17 16:26	1718-51-0	
8260 MSV Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		10/12/17 15:48	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		10/12/17 15:48	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		10/12/17 15:48	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		10/12/17 15:48	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		10/12/17 15:48	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	56-23-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-2 **Lab ID: 40158427014** Collected: 10/10/17 08:55 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		10/12/17 15:48	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		10/12/17 15:48	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		10/12/17 15:48	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		10/12/17 15:48	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		10/12/17 15:48	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		10/12/17 15:48	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		10/12/17 15:48	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		10/12/17 15:48	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		10/12/17 15:48	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		10/12/17 15:48	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		10/12/17 15:48	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		10/12/17 15:48	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		10/12/17 15:48	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		10/12/17 15:48	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		10/12/17 15:48	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		10/12/17 15:48	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		10/12/17 15:48	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		10/12/17 15:48	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	99-87-6	
Methylene Chloride	0.46J	ug/L	1.0	0.23	1		10/12/17 15:48	75-09-2	B
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		10/12/17 15:48	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		10/12/17 15:48	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	100-42-5	L1
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		10/12/17 15:48	630-20-6	
1,1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		10/12/17 15:48	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		10/12/17 15:48	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		10/12/17 15:48	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		10/12/17 15:48	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		10/12/17 15:48	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		10/12/17 15:48	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	96-18-4	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-2 **Lab ID: 40158427014** Collected: 10/10/17 08:55 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		10/12/17 15:48	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/12/17 15:48	1330-20-7	LS
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		10/12/17 15:48	179601-23-1	L1
o-Xylene	<0.50	ug/L	1.0	0.50	1		10/12/17 15:48	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	82	%	61-130		1		10/12/17 15:48	460-00-4	HS,pH
Dibromofluoromethane (S)	93	%	67-130		1		10/12/17 15:48	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		10/12/17 15:48	2037-26-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-1 **Lab ID:** 40158427015 Collected: 10/10/17 09:40 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Arsenic	10J	ug/L	25.0	8.3	1	10/12/17 09:27	10/12/17 17:31	7440-38-2	
Barium	239	ug/L	5.0	1.5	1	10/12/17 09:27	10/12/17 17:31	7440-39-3	
Cadmium	<1.3	ug/L	5.0	1.3	1	10/12/17 09:27	10/12/17 17:31	7440-43-9	
Chromium	<2.5	ug/L	10.0	2.5	1	10/12/17 09:27	10/12/17 17:31	7440-47-3	
Lead	<4.3	ug/L	13.0	4.3	1	10/12/17 09:27	10/12/17 17:31	7439-92-1	
Selenium	<16.6	ug/L	50.0	16.6	1	10/12/17 09:27	10/12/17 17:31	7782-49-2	
Silver	<3.3	ug/L	10.0	3.3	1	10/12/17 09:27	10/12/17 17:31	7440-22-4	
7470 Mercury Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	<0.25	ug/L	0.84	0.25	1	10/17/17 12:45	10/18/17 11:12	7439-97-6	D3
8270 MSSV PAH by HVI Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510									
Acenaphthene	0.051	ug/L	0.031	0.0063	1	10/12/17 12:41	10/13/17 16:44	83-32-9	
Acenaphthylene	0.0082J	ug/L	0.026	0.0051	1	10/12/17 12:41	10/13/17 16:44	208-96-8	
Anthracene	0.060	ug/L	0.054	0.011	1	10/12/17 12:41	10/13/17 16:44	120-12-7	
Benzo(a)anthracene	0.088	ug/L	0.039	0.0078	1	10/12/17 12:41	10/13/17 16:44	56-55-3	
Benzo(a)pyrene	0.075	ug/L	0.054	0.011	1	10/12/17 12:41	10/13/17 16:44	50-32-8	
Benzo(b)fluoranthene	0.12	ug/L	0.030	0.0059	1	10/12/17 12:41	10/13/17 16:44	205-99-2	
Benzo(g,h,i)perylene	0.077	ug/L	0.035	0.0070	1	10/12/17 12:41	10/13/17 16:44	191-24-2	
Benzo(k)fluoranthene	0.074	ug/L	0.039	0.0078	1	10/12/17 12:41	10/13/17 16:44	207-08-9	
Chrysene	0.17	ug/L	0.067	0.013	1	10/12/17 12:41	10/13/17 16:44	218-01-9	
Dibenz(a,h)anthracene	0.013J	ug/L	0.052	0.010	1	10/12/17 12:41	10/13/17 16:44	53-70-3	
Fluoranthene	0.35	ug/L	0.055	0.011	1	10/12/17 12:41	10/13/17 16:44	206-44-0	
Fluorene	0.040J	ug/L	0.041	0.0082	1	10/12/17 12:41	10/13/17 16:44	86-73-7	
Indeno(1,2,3-cd)pyrene	0.059J	ug/L	0.091	0.018	1	10/12/17 12:41	10/13/17 16:44	193-39-5	
1-Methylnaphthalene	0.033	ug/L	0.030	0.0061	1	10/12/17 12:41	10/13/17 16:44	90-12-0	
2-Methylnaphthalene	0.036	ug/L	0.025	0.0051	1	10/12/17 12:41	10/13/17 16:44	91-57-6	
Naphthalene	0.17	ug/L	0.094	0.019	1	10/12/17 12:41	10/13/17 16:44	91-20-3	
Phenanthrene	0.33	ug/L	0.071	0.014	1	10/12/17 12:41	10/13/17 16:44	85-01-8	
Pyrene	0.32	ug/L	0.039	0.0079	1	10/12/17 12:41	10/13/17 16:44	129-00-0	
Total PAHs	2.1	ug/L			1	10/12/17 12:41	10/13/17 16:44		
Surrogates									
2-Fluorobiphenyl (S)	61	%	35-84		1	10/12/17 12:41	10/13/17 16:44	321-60-8	
Terphenyl-d14 (S)	68	%	10-129		1	10/12/17 12:41	10/13/17 16:44	1718-51-0	
8260 MSV Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		10/12/17 13:35	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		10/12/17 13:35	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		10/12/17 13:35	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		10/12/17 13:35	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		10/12/17 13:35	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	56-23-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-1 Lab ID: 40158427015 Collected: 10/10/17 09:40 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		10/12/17 13:35	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		10/12/17 13:35	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		10/12/17 13:35	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		10/12/17 13:35	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		10/12/17 13:35	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		10/12/17 13:35	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		10/12/17 13:35	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		10/12/17 13:35	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		10/12/17 13:35	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		10/12/17 13:35	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		10/12/17 13:35	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		10/12/17 13:35	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		10/12/17 13:35	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		10/12/17 13:35	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		10/12/17 13:35	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		10/12/17 13:35	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		10/12/17 13:35	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		10/12/17 13:35	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	99-87-6	
Methylene Chloride	0.42J	ug/L	1.0	0.23	1		10/12/17 13:35	75-09-2	B
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		10/12/17 13:35	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		10/12/17 13:35	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	100-42-5	L1
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		10/12/17 13:35	630-20-6	
1,1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		10/12/17 13:35	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		10/12/17 13:35	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		10/12/17 13:35	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		10/12/17 13:35	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		10/12/17 13:35	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		10/12/17 13:35	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	96-18-4	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-1 **Lab ID: 40158427015** Collected: 10/10/17 09:40 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		10/12/17 13:35	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/12/17 13:35	1330-20-7	LS
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		10/12/17 13:35	179601-23-1	L1
o-Xylene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:35	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	81	%	61-130		1		10/12/17 13:35	460-00-4	
Dibromofluoromethane (S)	95	%	67-130		1		10/12/17 13:35	1868-53-7	
Toluene-d8 (S)	92	%	70-130		1		10/12/17 13:35	2037-26-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-4 **Lab ID: 40158427016** Collected: 10/10/17 10:10 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Arsenic	<8.3	ug/L	25.0	8.3	1	10/12/17 09:27	10/12/17 17:39	7440-38-2	
Barium	141	ug/L	5.0	1.5	1	10/12/17 09:27	10/12/17 17:39	7440-39-3	
Cadmium	<1.3	ug/L	5.0	1.3	1	10/12/17 09:27	10/12/17 17:39	7440-43-9	
Chromium	<2.5	ug/L	10.0	2.5	1	10/12/17 09:27	10/12/17 17:39	7440-47-3	
Lead	<4.3	ug/L	13.0	4.3	1	10/12/17 09:27	10/12/17 17:39	7439-92-1	
Selenium	<16.6	ug/L	50.0	16.6	1	10/12/17 09:27	10/12/17 17:39	7782-49-2	
Silver	<3.3	ug/L	10.0	3.3	1	10/12/17 09:27	10/12/17 17:39	7440-22-4	
7470 Mercury Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	<0.50	ug/L	1.7	0.50	1	10/17/17 12:45	10/18/17 11:15	7439-97-6	D3
8270 MSSV PAH by HVI Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510									
Acenaphthene	0.014J	ug/L	0.032	0.0065	1	10/12/17 12:41	10/13/17 17:03	83-32-9	
Acenaphthylene	<0.0053	ug/L	0.026	0.0053	1	10/12/17 12:41	10/13/17 17:03	208-96-8	
Anthracene	0.014J	ug/L	0.056	0.011	1	10/12/17 12:41	10/13/17 17:03	120-12-7	
Benzo(a)anthracene	0.030J	ug/L	0.040	0.0080	1	10/12/17 12:41	10/13/17 17:03	56-55-3	
Benzo(a)pyrene	0.031J	ug/L	0.056	0.011	1	10/12/17 12:41	10/13/17 17:03	50-32-8	
Benzo(b)fluoranthene	0.067	ug/L	0.031	0.0061	1	10/12/17 12:41	10/13/17 17:03	205-99-2	
Benzo(g,h,i)perylene	0.046	ug/L	0.036	0.0072	1	10/12/17 12:41	10/13/17 17:03	191-24-2	
Benzo(k)fluoranthene	0.036J	ug/L	0.040	0.0080	1	10/12/17 12:41	10/13/17 17:03	207-08-9	
Chrysene	0.071	ug/L	0.069	0.014	1	10/12/17 12:41	10/13/17 17:03	218-01-9	
Dibenz(a,h)anthracene	<0.011	ug/L	0.053	0.011	1	10/12/17 12:41	10/13/17 17:03	53-70-3	
Fluoranthene	0.21	ug/L	0.057	0.011	1	10/12/17 12:41	10/13/17 17:03	206-44-0	
Fluorene	0.014J	ug/L	0.042	0.0085	1	10/12/17 12:41	10/13/17 17:03	86-73-7	
Indeno(1,2,3-cd)pyrene	0.034J	ug/L	0.094	0.019	1	10/12/17 12:41	10/13/17 17:03	193-39-5	
1-Methylnaphthalene	0.0082J	ug/L	0.031	0.0063	1	10/12/17 12:41	10/13/17 17:03	90-12-0	
2-Methylnaphthalene	0.012J	ug/L	0.026	0.0052	1	10/12/17 12:41	10/13/17 17:03	91-57-6	
Naphthalene	<0.020	ug/L	0.097	0.020	1	10/12/17 12:41	10/13/17 17:03	91-20-3	
Phenanthrene	0.17	ug/L	0.073	0.015	1	10/12/17 12:41	10/13/17 17:03	85-01-8	
Pyrene	0.17	ug/L	0.041	0.0081	1	10/12/17 12:41	10/13/17 17:03	129-00-0	
Total PAHs	0.95	ug/L			1	10/12/17 12:41	10/13/17 17:03		
Surrogates									
2-Fluorobiphenyl (S)	59	%	35-84		1	10/12/17 12:41	10/13/17 17:03	321-60-8	
Terphenyl-d14 (S)	76	%	10-129		1	10/12/17 12:41	10/13/17 17:03	1718-51-0	
8260 MSV Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		10/12/17 13:58	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		10/12/17 13:58	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		10/12/17 13:58	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		10/12/17 13:58	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		10/12/17 13:58	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	56-23-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-4 Lab ID: 40158427016 Collected: 10/10/17 10:10 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		10/12/17 13:58	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		10/12/17 13:58	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		10/12/17 13:58	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		10/12/17 13:58	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		10/12/17 13:58	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		10/12/17 13:58	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		10/12/17 13:58	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		10/12/17 13:58	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		10/12/17 13:58	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		10/12/17 13:58	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		10/12/17 13:58	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		10/12/17 13:58	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		10/12/17 13:58	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		10/12/17 13:58	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		10/12/17 13:58	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		10/12/17 13:58	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		10/12/17 13:58	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		10/12/17 13:58	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	99-87-6	
Methylene Chloride	0.46J	ug/L	1.0	0.23	1		10/12/17 13:58	75-09-2	B
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		10/12/17 13:58	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		10/12/17 13:58	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	100-42-5	L1
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		10/12/17 13:58	630-20-6	
1,1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		10/12/17 13:58	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		10/12/17 13:58	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		10/12/17 13:58	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		10/12/17 13:58	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		10/12/17 13:58	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		10/12/17 13:58	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	96-18-4	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-4 **Lab ID: 40158427016** Collected: 10/10/17 10:10 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		10/12/17 13:58	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/12/17 13:58	1330-20-7	LS
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		10/12/17 13:58	179601-23-1	L1
o-Xylene	<0.50	ug/L	1.0	0.50	1		10/12/17 13:58	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	82	%	61-130		1		10/12/17 13:58	460-00-4	
Dibromofluoromethane (S)	99	%	67-130		1		10/12/17 13:58	1868-53-7	
Toluene-d8 (S)	92	%	70-130		1		10/12/17 13:58	2037-26-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-3 **Lab ID: 40158427017** Collected: 10/10/17 10:30 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Arsenic	<8.3	ug/L	25.0	8.3	1	10/12/17 09:27	10/12/17 17:41	7440-38-2	
Barium	114	ug/L	5.0	1.5	1	10/12/17 09:27	10/12/17 17:41	7440-39-3	
Cadmium	<1.3	ug/L	5.0	1.3	1	10/12/17 09:27	10/12/17 17:41	7440-43-9	
Chromium	<2.5	ug/L	10.0	2.5	1	10/12/17 09:27	10/12/17 17:41	7440-47-3	
Lead	<4.3	ug/L	13.0	4.3	1	10/12/17 09:27	10/12/17 17:41	7439-92-1	
Selenium	<16.6	ug/L	50.0	16.6	1	10/12/17 09:27	10/12/17 17:41	7782-49-2	
Silver	<3.3	ug/L	10.0	3.3	1	10/12/17 09:27	10/12/17 17:41	7440-22-4	
7470 Mercury Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	<0.13	ug/L	0.42	0.13	1	10/13/17 11:00	10/16/17 09:04	7439-97-6	
8270 MSSV PAH by HVI Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510									
Acenaphthene	0.0084J	ug/L	0.039	0.0079	1	10/12/17 12:41	10/13/17 17:21	83-32-9	
Acenaphthylene	<0.0065	ug/L	0.032	0.0065	1	10/12/17 12:41	10/13/17 17:21	208-96-8	
Anthracene	<0.014	ug/L	0.068	0.014	1	10/12/17 12:41	10/13/17 17:21	120-12-7	
Benzo(a)anthracene	0.023J	ug/L	0.049	0.0098	1	10/12/17 12:41	10/13/17 17:21	56-55-3	
Benzo(a)pyrene	0.020J	ug/L	0.068	0.014	1	10/12/17 12:41	10/13/17 17:21	50-32-8	
Benzo(b)fluoranthene	0.043	ug/L	0.037	0.0075	1	10/12/17 12:41	10/13/17 17:21	205-99-2	
Benzo(g,h,i)perylene	0.033J	ug/L	0.044	0.0088	1	10/12/17 12:41	10/13/17 17:21	191-24-2	
Benzo(k)fluoranthene	0.026J	ug/L	0.049	0.0098	1	10/12/17 12:41	10/13/17 17:21	207-08-9	
Chrysene	0.066J	ug/L	0.085	0.017	1	10/12/17 12:41	10/13/17 17:21	218-01-9	
Dibenz(a,h)anthracene	<0.013	ug/L	0.065	0.013	1	10/12/17 12:41	10/13/17 17:21	53-70-3	
Fluoranthene	0.15	ug/L	0.069	0.014	1	10/12/17 12:41	10/13/17 17:21	206-44-0	
Fluorene	<0.010	ug/L	0.052	0.010	1	10/12/17 12:41	10/13/17 17:21	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.023	ug/L	0.11	0.023	1	10/12/17 12:41	10/13/17 17:21	193-39-5	
1-Methylnaphthalene	0.012J	ug/L	0.038	0.0077	1	10/12/17 12:41	10/13/17 17:21	90-12-0	
2-Methylnaphthalene	0.014J	ug/L	0.032	0.0064	1	10/12/17 12:41	10/13/17 17:21	91-57-6	
Naphthalene	<0.024	ug/L	0.12	0.024	1	10/12/17 12:41	10/13/17 17:21	91-20-3	
Phenanthrene	0.13	ug/L	0.090	0.018	1	10/12/17 12:41	10/13/17 17:21	85-01-8	
Pyrene	0.14	ug/L	0.050	0.0099	1	10/12/17 12:41	10/13/17 17:21	129-00-0	
Total PAHs	0.71	ug/L			1	10/12/17 12:41	10/13/17 17:21		
Surrogates									
2-Fluorobiphenyl (S)	58	%	35-84		1	10/12/17 12:41	10/13/17 17:21	321-60-8	
Terphenyl-d14 (S)	33	%	10-129		1	10/12/17 12:41	10/13/17 17:21	1718-51-0	
8260 MSV Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		10/12/17 14:42	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		10/12/17 14:42	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		10/12/17 14:42	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		10/12/17 14:42	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		10/12/17 14:42	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	56-23-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-3 **Lab ID: 40158427017** Collected: 10/10/17 10:30 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		10/12/17 14:42	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		10/12/17 14:42	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		10/12/17 14:42	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		10/12/17 14:42	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		10/12/17 14:42	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		10/12/17 14:42	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		10/12/17 14:42	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		10/12/17 14:42	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		10/12/17 14:42	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		10/12/17 14:42	75-35-4	
cis-1,2-Dichloroethene	3.3	ug/L	1.0	0.26	1		10/12/17 14:42	156-59-2	
trans-1,2-Dichloroethene	0.65J	ug/L	1.0	0.26	1		10/12/17 14:42	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		10/12/17 14:42	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		10/12/17 14:42	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		10/12/17 14:42	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		10/12/17 14:42	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		10/12/17 14:42	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		10/12/17 14:42	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	99-87-6	
Methylene Chloride	0.31J	ug/L	1.0	0.23	1		10/12/17 14:42	75-09-2	B
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		10/12/17 14:42	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		10/12/17 14:42	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	100-42-5	L1
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		10/12/17 14:42	630-20-6	
1,1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		10/12/17 14:42	79-34-5	
Tetrachloroethene	188	ug/L	1.0	0.50	1		10/12/17 14:42	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		10/12/17 14:42	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		10/12/17 14:42	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		10/12/17 14:42	79-00-5	
Trichloroethene	8.5	ug/L	1.0	0.33	1		10/12/17 14:42	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		10/12/17 14:42	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	96-18-4	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-3 **Lab ID: 40158427017** Collected: 10/10/17 10:30 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		10/12/17 14:42	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/12/17 14:42	1330-20-7	LS
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		10/12/17 14:42	179601-23-1	L1
o-Xylene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:42	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	81	%	61-130		1		10/12/17 14:42	460-00-4	pH
Dibromofluoromethane (S)	89	%	67-130		1		10/12/17 14:42	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		10/12/17 14:42	2037-26-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-5 **Lab ID: 40158427018** Collected: 10/10/17 11:05 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Arsenic	<8.3	ug/L	25.0	8.3	1	10/12/17 09:27	10/12/17 17:44	7440-38-2	
Barium	370	ug/L	5.0	1.5	1	10/12/17 09:27	10/12/17 17:44	7440-39-3	
Cadmium	<1.3	ug/L	5.0	1.3	1	10/12/17 09:27	10/12/17 17:44	7440-43-9	
Chromium	<2.5	ug/L	10.0	2.5	1	10/12/17 09:27	10/12/17 17:44	7440-47-3	
Lead	<4.3	ug/L	13.0	4.3	1	10/12/17 09:27	10/12/17 17:44	7439-92-1	
Selenium	<16.6	ug/L	50.0	16.6	1	10/12/17 09:27	10/12/17 17:44	7782-49-2	
Silver	<3.3	ug/L	10.0	3.3	1	10/12/17 09:27	10/12/17 17:44	7440-22-4	
7470 Mercury Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	<0.50	ug/L	1.7	0.50	1	10/17/17 12:45	10/18/17 11:17	7439-97-6	D3
8270 MSSV PAH by HVI Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510									
Acenaphthene	0.028J	ug/L	0.033	0.0065	1	10/12/17 12:41	10/13/17 21:01	83-32-9	
Acenaphthylene	0.0062J	ug/L	0.027	0.0054	1	10/12/17 12:41	10/13/17 21:01	208-96-8	
Anthracene	<0.011	ug/L	0.056	0.011	1	10/12/17 12:41	10/13/17 21:01	120-12-7	
Benzo(a)anthracene	0.0085J	ug/L	0.041	0.0081	1	10/12/17 12:41	10/13/17 21:01	56-55-3	
Benzo(a)pyrene	<0.011	ug/L	0.057	0.011	1	10/12/17 12:41	10/13/17 21:01	50-32-8	
Benzo(b)fluoranthene	<0.0062	ug/L	0.031	0.0062	1	10/12/17 12:41	10/13/17 21:01	205-99-2	
Benzo(g,h,i)perylene	<0.0073	ug/L	0.036	0.0073	1	10/12/17 12:41	10/13/17 21:01	191-24-2	
Benzo(k)fluoranthene	<0.0081	ug/L	0.041	0.0081	1	10/12/17 12:41	10/13/17 21:01	207-08-9	
Chrysene	0.031J	ug/L	0.070	0.014	1	10/12/17 12:41	10/13/17 21:01	218-01-9	
Dibenz(a,h)anthracene	<0.011	ug/L	0.054	0.011	1	10/12/17 12:41	10/13/17 21:01	53-70-3	
Fluoranthene	0.033J	ug/L	0.057	0.011	1	10/12/17 12:41	10/13/17 21:01	206-44-0	
Fluorene	0.017J	ug/L	0.043	0.0086	1	10/12/17 12:41	10/13/17 21:01	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.019	ug/L	0.095	0.019	1	10/12/17 12:41	10/13/17 21:01	193-39-5	
1-Methylnaphthalene	1.4	ug/L	0.032	0.0063	1	10/12/17 12:41	10/13/17 21:01	90-12-0	
2-Methylnaphthalene	0.041	ug/L	0.026	0.0053	1	10/12/17 12:41	10/13/17 21:01	91-57-6	
Naphthalene	2.5	ug/L	0.099	0.020	1	10/12/17 12:41	10/13/17 21:01	91-20-3	
Phenanthrene	0.073J	ug/L	0.074	0.015	1	10/12/17 12:41	10/13/17 21:01	85-01-8	
Pyrene	0.030J	ug/L	0.041	0.0082	1	10/12/17 12:41	10/13/17 21:01	129-00-0	
Total PAHs	4.2	ug/L			1	10/12/17 12:41	10/13/17 21:01		
Surrogates									
2-Fluorobiphenyl (S)	67	%	35-84		1	10/12/17 12:41	10/13/17 21:01	321-60-8	
Terphenyl-d14 (S)	69	%	10-129		1	10/12/17 12:41	10/13/17 21:01	1718-51-0	
8260 MSV Analytical Method: EPA 8260									
Benzene	12.3	ug/L	1.0	0.50	1		10/12/17 14:20	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		10/12/17 14:20	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		10/12/17 14:20	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		10/12/17 14:20	74-83-9	
n-Butylbenzene	13.5	ug/L	1.0	0.50	1		10/12/17 14:20	104-51-8	
sec-Butylbenzene	7.3	ug/L	5.0	2.2	1		10/12/17 14:20	135-98-8	
tert-Butylbenzene	0.67J	ug/L	1.0	0.18	1		10/12/17 14:20	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	56-23-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-5 **Lab ID: 40158427018** Collected: 10/10/17 11:05 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		10/12/17 14:20	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		10/12/17 14:20	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		10/12/17 14:20	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		10/12/17 14:20	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		10/12/17 14:20	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		10/12/17 14:20	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		10/12/17 14:20	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		10/12/17 14:20	75-34-3	
1,2-Dichloroethane	2.2	ug/L	1.0	0.17	1		10/12/17 14:20	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		10/12/17 14:20	75-35-4	
cis-1,2-Dichloroethene	3.4	ug/L	1.0	0.26	1		10/12/17 14:20	156-59-2	
trans-1,2-Dichloroethene	2.0	ug/L	1.0	0.26	1		10/12/17 14:20	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		10/12/17 14:20	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		10/12/17 14:20	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		10/12/17 14:20	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		10/12/17 14:20	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	108-20-3	
Ethylbenzene	23.6	ug/L	1.0	0.50	1		10/12/17 14:20	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		10/12/17 14:20	87-68-3	
Isopropylbenzene (Cumene)	12.7	ug/L	1.0	0.14	1		10/12/17 14:20	98-82-8	
p-Isopropyltoluene	3.2	ug/L	1.0	0.50	1		10/12/17 14:20	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		10/12/17 14:20	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		10/12/17 14:20	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		10/12/17 14:20	91-20-3	
n-Propylbenzene	47.7	ug/L	1.0	0.50	1		10/12/17 14:20	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	100-42-5	L1
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		10/12/17 14:20	630-20-6	
1,1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		10/12/17 14:20	79-34-5	
Tetrachloroethene	2.0	ug/L	1.0	0.50	1		10/12/17 14:20	127-18-4	
Toluene	0.68J	ug/L	1.0	0.50	1		10/12/17 14:20	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		10/12/17 14:20	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		10/12/17 14:20	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		10/12/17 14:20	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		10/12/17 14:20	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		10/12/17 14:20	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	96-18-4	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-5 **Lab ID: 40158427018** Collected: 10/10/17 11:05 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
1,2,4-Trimethylbenzene	17.9	ug/L	1.0	0.50	1		10/12/17 14:20	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	108-67-8	
Vinyl chloride	0.43J	ug/L	1.0	0.18	1		10/12/17 14:20	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/12/17 14:20	1330-20-7	LS
m&p-Xylene	1.2J	ug/L	2.0	1.0	1		10/12/17 14:20	179601-23-1	L1
o-Xylene	<0.50	ug/L	1.0	0.50	1		10/12/17 14:20	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	84	%	61-130		1		10/12/17 14:20	460-00-4	
Dibromofluoromethane (S)	89	%	67-130		1		10/12/17 14:20	1868-53-7	
Toluene-d8 (S)	96	%	70-130		1		10/12/17 14:20	2037-26-5	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

Sample: TW-6 **Lab ID: 40158427019** Collected: 10/10/17 11:35 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Arsenic	10.9J	ug/L	25.0	8.3	1	10/12/17 09:27	10/12/17 17:47	7440-38-2	
Barium	204	ug/L	5.0	1.5	1	10/12/17 09:27	10/12/17 17:47	7440-39-3	
Cadmium	<1.3	ug/L	5.0	1.3	1	10/12/17 09:27	10/12/17 17:47	7440-43-9	
Chromium	<2.5	ug/L	10.0	2.5	1	10/12/17 09:27	10/12/17 17:47	7440-47-3	
Lead	<4.3	ug/L	13.0	4.3	1	10/12/17 09:27	10/12/17 17:47	7439-92-1	
Selenium	<16.6	ug/L	50.0	16.6	1	10/12/17 09:27	10/12/17 17:47	7782-49-2	
Silver	<3.3	ug/L	10.0	3.3	1	10/12/17 09:27	10/12/17 17:47	7440-22-4	
7470 Mercury Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	<0.25	ug/L	0.84	0.25	1	10/17/17 12:45	10/18/17 11:19	7439-97-6	D3
8270 MSSV PAH by HVI Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510									
Acenaphthene	0.015J	ug/L	0.034	0.0067	1	10/12/17 12:41	10/13/17 20:43	83-32-9	
Acenaphthylene	0.0062J	ug/L	0.028	0.0055	1	10/12/17 12:41	10/13/17 20:43	208-96-8	
Anthracene	<0.012	ug/L	0.058	0.012	1	10/12/17 12:41	10/13/17 20:43	120-12-7	
Benzo(a)anthracene	0.0087J	ug/L	0.042	0.0084	1	10/12/17 12:41	10/13/17 20:43	56-55-3	
Benzo(a)pyrene	<0.012	ug/L	0.058	0.012	1	10/12/17 12:41	10/13/17 20:43	50-32-8	
Benzo(b)fluoranthene	<0.0064	ug/L	0.032	0.0064	1	10/12/17 12:41	10/13/17 20:43	205-99-2	
Benzo(g,h,i)perylene	<0.0075	ug/L	0.038	0.0075	1	10/12/17 12:41	10/13/17 20:43	191-24-2	
Benzo(k)fluoranthene	<0.0084	ug/L	0.042	0.0084	1	10/12/17 12:41	10/13/17 20:43	207-08-9	
Chrysene	<0.014	ug/L	0.072	0.014	1	10/12/17 12:41	10/13/17 20:43	218-01-9	
Dibenz(a,h)anthracene	<0.011	ug/L	0.056	0.011	1	10/12/17 12:41	10/13/17 20:43	53-70-3	
Fluoranthene	0.066	ug/L	0.059	0.012	1	10/12/17 12:41	10/13/17 20:43	206-44-0	
Fluorene	0.011J	ug/L	0.044	0.0089	1	10/12/17 12:41	10/13/17 20:43	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.020	ug/L	0.098	0.020	1	10/12/17 12:41	10/13/17 20:43	193-39-5	
1-Methylnaphthalene	3.2	ug/L	0.033	0.0066	1	10/12/17 12:41	10/13/17 20:43	90-12-0	
2-Methylnaphthalene	0.15	ug/L	0.027	0.0054	1	10/12/17 12:41	10/13/17 20:43	91-57-6	
Naphthalene	5.6	ug/L	0.10	0.020	1	10/12/17 12:41	10/13/17 20:43	91-20-3	
Phenanthrene	0.10	ug/L	0.077	0.015	1	10/12/17 12:41	10/13/17 20:43	85-01-8	
Pyrene	0.055	ug/L	0.043	0.0085	1	10/12/17 12:41	10/13/17 20:43	129-00-0	
Total PAHs	9.3	ug/L			1	10/12/17 12:41	10/13/17 20:43		
Surrogates									
2-Fluorobiphenyl (S)	53	%	35-84		1	10/12/17 12:41	10/13/17 20:43	321-60-8	
Terphenyl-d14 (S)	65	%	10-129		1	10/12/17 12:41	10/13/17 20:43	1718-51-0	
8260 MSV Analytical Method: EPA 8260									
Benzene	681	ug/L	10.0	5.0	10		10/13/17 10:47	71-43-2	
Bromobenzene	<2.3	ug/L	10.0	2.3	10		10/13/17 10:47	108-86-1	
Bromochloromethane	<3.4	ug/L	10.0	3.4	10		10/13/17 10:47	74-97-5	
Bromodichloromethane	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	75-27-4	
Bromoform	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	75-25-2	
Bromomethane	<24.3	ug/L	50.0	24.3	10		10/13/17 10:47	74-83-9	
n-Butylbenzene	5.8J	ug/L	10.0	5.0	10		10/13/17 10:47	104-51-8	
sec-Butylbenzene	<21.9	ug/L	50.0	21.9	10		10/13/17 10:47	135-98-8	
tert-Butylbenzene	<1.8	ug/L	10.0	1.8	10		10/13/17 10:47	98-06-6	
Carbon tetrachloride	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	56-23-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-6 **Lab ID: 40158427019** Collected: 10/10/17 11:35 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Chlorobenzene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	108-90-7	
Chloroethane	<3.7	ug/L	10.0	3.7	10		10/13/17 10:47	75-00-3	
Chloroform	<25.0	ug/L	50.0	25.0	10		10/13/17 10:47	67-66-3	
Chloromethane	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	74-87-3	
2-Chlorotoluene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	95-49-8	
4-Chlorotoluene	<2.1	ug/L	10.0	2.1	10		10/13/17 10:47	106-43-4	
1,2-Dibromo-3-chloropropane	<21.6	ug/L	50.0	21.6	10		10/13/17 10:47	96-12-8	
Dibromochloromethane	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	124-48-1	
1,2-Dibromoethane (EDB)	<1.8	ug/L	10.0	1.8	10		10/13/17 10:47	106-93-4	
Dibromomethane	<4.3	ug/L	10.0	4.3	10		10/13/17 10:47	74-95-3	
1,2-Dichlorobenzene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	95-50-1	
1,3-Dichlorobenzene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	541-73-1	
1,4-Dichlorobenzene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	106-46-7	
Dichlorodifluoromethane	<2.2	ug/L	10.0	2.2	10		10/13/17 10:47	75-71-8	
1,1-Dichloroethane	<2.4	ug/L	10.0	2.4	10		10/13/17 10:47	75-34-3	
1,2-Dichloroethane	<1.7	ug/L	10.0	1.7	10		10/13/17 10:47	107-06-2	
1,1-Dichloroethene	<4.1	ug/L	10.0	4.1	10		10/13/17 10:47	75-35-4	
cis-1,2-Dichloroethene	4.9J	ug/L	10.0	2.6	10		10/13/17 10:47	156-59-2	
trans-1,2-Dichloroethene	<2.6	ug/L	10.0	2.6	10		10/13/17 10:47	156-60-5	
1,2-Dichloropropane	<2.3	ug/L	10.0	2.3	10		10/13/17 10:47	78-87-5	
1,3-Dichloropropane	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	142-28-9	
2,2-Dichloropropane	<4.8	ug/L	10.0	4.8	10		10/13/17 10:47	594-20-7	
1,1-Dichloropropene	<4.4	ug/L	10.0	4.4	10		10/13/17 10:47	563-58-6	
cis-1,3-Dichloropropene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	10061-01-5	
trans-1,3-Dichloropropene	<2.3	ug/L	10.0	2.3	10		10/13/17 10:47	10061-02-6	
Diisopropyl ether	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	108-20-3	
Ethylbenzene	404	ug/L	10.0	5.0	10		10/13/17 10:47	100-41-4	
Hexachloro-1,3-butadiene	<21.1	ug/L	50.0	21.1	10		10/13/17 10:47	87-68-3	
Isopropylbenzene (Cumene)	9.3J	ug/L	10.0	1.4	10		10/13/17 10:47	98-82-8	
p-Isopropyltoluene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	99-87-6	
Methylene Chloride	<2.3	ug/L	10.0	2.3	10		10/13/17 10:47	75-09-2	
Methyl-tert-butyl ether	<1.7	ug/L	10.0	1.7	10		10/13/17 10:47	1634-04-4	
Naphthalene	<25.0	ug/L	50.0	25.0	10		10/13/17 10:47	91-20-3	
n-Propylbenzene	21.8	ug/L	10.0	5.0	10		10/13/17 10:47	103-65-1	
Styrene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	100-42-5	L1
1,1,1,2-Tetrachloroethane	<1.8	ug/L	10.0	1.8	10		10/13/17 10:47	630-20-6	
1,1,1,2,2-Tetrachloroethane	<2.5	ug/L	10.0	2.5	10		10/13/17 10:47	79-34-5	
Tetrachloroethene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	127-18-4	
Toluene	65.1	ug/L	10.0	5.0	10		10/13/17 10:47	108-88-3	
1,2,3-Trichlorobenzene	<21.3	ug/L	50.0	21.3	10		10/13/17 10:47	87-61-6	
1,2,4-Trichlorobenzene	<22.1	ug/L	50.0	22.1	10		10/13/17 10:47	120-82-1	
1,1,1-Trichloroethane	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	71-55-6	
1,1,2-Trichloroethane	<2.0	ug/L	10.0	2.0	10		10/13/17 10:47	79-00-5	
Trichloroethene	<3.3	ug/L	10.0	3.3	10		10/13/17 10:47	79-01-6	
Trichlorofluoromethane	<1.8	ug/L	10.0	1.8	10		10/13/17 10:47	75-69-4	
1,2,3-Trichloropropane	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	96-18-4	

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ANALYTICAL RESULTS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Sample: TW-6 **Lab ID: 40158427019** Collected: 10/10/17 11:35 Received: 10/11/17 09:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
1,2,4-Trimethylbenzene	154	ug/L	10.0	5.0	10		10/13/17 10:47	95-63-6	
1,3,5-Trimethylbenzene	7.5J	ug/L	10.0	5.0	10		10/13/17 10:47	108-67-8	
Vinyl chloride	<1.8	ug/L	10.0	1.8	10		10/13/17 10:47	75-01-4	
Xylene (Total)	250	ug/L	30.0	15.0	10		10/13/17 10:47	1330-20-7	LS
m&p-Xylene	246	ug/L	20.0	10.0	10		10/13/17 10:47	179601-23-1	L1
o-Xylene	<5.0	ug/L	10.0	5.0	10		10/13/17 10:47	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	84	%	61-130		10		10/13/17 10:47	460-00-4	
Dibromofluoromethane (S)	90	%	67-130		10		10/13/17 10:47	1868-53-7	
Toluene-d8 (S)	93	%	70-130		10		10/13/17 10:47	2037-26-5	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

QC Batch: 270522

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Associated Lab Samples: 40158427014, 40158427017

METHOD BLANK: 1589868

Matrix: Water

Associated Lab Samples: 40158427014, 40158427017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	10/16/17 08:46	

LABORATORY CONTROL SAMPLE: 1589869

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.6	93	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1589870 1589871

Parameter	Units	40158330009 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits		
Mercury	ug/L	<0.13	5	5	5.1	5.1	101	101	85-115	0	20

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

QC Batch: 270857

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Associated Lab Samples: 40158427015, 40158427016, 40158427018, 40158427019

METHOD BLANK: 1592216

Matrix: Water

Associated Lab Samples: 40158427015, 40158427016, 40158427018, 40158427019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	10/18/17 10:56	

LABORATORY CONTROL SAMPLE: 1592217

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.2	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1592218 1592219

Parameter	Units	1592218		1592219		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		40158646008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result					
Mercury	ug/L	<0.13	5	5	4.9	5.0	98	100	85-115	2 20

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

QC Batch: 270712 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 40158427011, 40158427012, 40158427013

METHOD BLANK: 1591634 Matrix: Solid

Associated Lab Samples: 40158427011, 40158427012, 40158427013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.011	0.037	10/17/17 12:10	

LABORATORY CONTROL SAMPLE: 1591635

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.83	0.82	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1591636 1591637

Parameter	Units	40158427011 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/kg	0.020J	1	1	0.78	0.79	74	75	85-115	1	20	M0

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

QC Batch: 270418 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 40158427001, 40158427002, 40158427003, 40158427004, 40158427005, 40158427006, 40158427008, 40158427009, 40158427010, 40158427011, 40158427012, 40158427013

METHOD BLANK: 1589201 Matrix: Solid
Associated Lab Samples: 40158427001, 40158427002, 40158427003, 40158427004, 40158427005, 40158427006, 40158427008, 40158427009, 40158427010, 40158427011, 40158427012, 40158427013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<1.0	5.0	10/13/17 21:15	
Barium	mg/kg	<0.15	0.50	10/13/17 21:15	
Cadmium	mg/kg	<0.13	0.50	10/13/17 21:15	
Chromium	mg/kg	<0.28	1.0	10/13/17 21:15	
Lead	mg/kg	<0.43	1.3	10/13/17 21:15	
Selenium	mg/kg	<1.1	5.0	10/13/17 21:15	
Silver	mg/kg	<0.34	1.0	10/13/17 21:15	

LABORATORY CONTROL SAMPLE: 1589202

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	50.0	100	80-120	
Barium	mg/kg	50	51.1	102	80-120	
Cadmium	mg/kg	50	51.5	103	80-120	
Chromium	mg/kg	50	50.6	101	80-120	
Lead	mg/kg	50	50.7	101	80-120	
Selenium	mg/kg	50	52.2	104	80-120	
Silver	mg/kg	25	25.4	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1589203 1589204

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40158436001 Result	Spike Conc.	Spike Conc.	MS Result						
Arsenic	mg/kg	8.5	58.6	59	65.9	67.2	98	100	75-125	2	20
Barium	mg/kg	60.8	58.6	59	128	133	115	122	75-125	3	20
Cadmium	mg/kg	<0.16	58.6	59	59.6	60.6	102	103	75-125	2	20
Chromium	mg/kg	28.4	58.6	59	86.8	85.0	100	96	75-125	2	20
Lead	mg/kg	13.8	58.6	59	65.6	66.0	88	89	75-125	1	20
Selenium	mg/kg	<1.3	58.6	59	59.8	59.7	102	101	75-125	0	20
Silver	mg/kg	<0.40	29.3	29.5	30.1	30.6	102	103	75-125	2	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

QC Batch: 270342 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 40158427014, 40158427015, 40158427016, 40158427017, 40158427018, 40158427019

METHOD BLANK: 1588846 Matrix: Water
Associated Lab Samples: 40158427014, 40158427015, 40158427016, 40158427017, 40158427018, 40158427019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<8.3	25.0	10/12/17 16:41	
Barium	ug/L	<1.5	5.0	10/12/17 16:41	
Cadmium	ug/L	<1.3	5.0	10/12/17 16:41	
Chromium	ug/L	<2.5	10.0	10/12/17 16:41	
Lead	ug/L	<4.3	13.0	10/12/17 16:41	
Selenium	ug/L	<16.6	50.0	10/12/17 16:41	
Silver	ug/L	<3.3	10.0	10/12/17 16:41	

LABORATORY CONTROL SAMPLE: 1588847

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	508	102	80-120	
Barium	ug/L	500	529	106	80-120	
Cadmium	ug/L	500	519	104	80-120	
Chromium	ug/L	500	525	105	80-120	
Lead	ug/L	500	506	101	80-120	
Selenium	ug/L	500	532	106	80-120	
Silver	ug/L	250	254	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1588848 1588849

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40158149001 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Arsenic	ug/L	<8.3	500	500	511	508	102	101	75-125	1	20	
Barium	ug/L	15.9	500	500	542	547	105	106	75-125	1	20	
Cadmium	ug/L	<1.3	500	500	519	525	104	105	75-125	1	20	
Chromium	ug/L	<2.5	500	500	535	536	107	107	75-125	0	20	
Lead	ug/L	<4.3	500	500	507	511	101	102	75-125	1	20	
Selenium	ug/L	<16.6	500	500	519	529	104	106	75-125	2	20	
Silver	ug/L	<3.3	250	250	258	259	103	104	75-125	1	20	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

QC Batch: 270402 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40158427002, 40158427003, 40158427004, 40158427005, 40158427006, 40158427007, 40158427008, 40158427009, 40158427010

METHOD BLANK: 1589146 Matrix: Solid
Associated Lab Samples: 40158427002, 40158427003, 40158427004, 40158427005, 40158427006, 40158427007, 40158427008, 40158427009, 40158427010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	10/12/17 09:24	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	10/12/17 09:24	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	10/12/17 09:24	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	10/12/17 09:24	
1,1-Dichloroethane	ug/kg	<17.6	50.0	10/12/17 09:24	
1,1-Dichloroethene	ug/kg	<17.6	50.0	10/12/17 09:24	
1,1-Dichloropropene	ug/kg	<14.0	50.0	10/12/17 09:24	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	10/12/17 09:24	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	10/12/17 09:24	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	10/12/17 09:24	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	10/12/17 09:24	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	10/12/17 09:24	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	10/12/17 09:24	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	10/12/17 09:24	
1,2-Dichloroethane	ug/kg	<15.0	50.0	10/12/17 09:24	
1,2-Dichloropropane	ug/kg	<16.8	50.0	10/12/17 09:24	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	10/12/17 09:24	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	10/12/17 09:24	
1,3-Dichloropropane	ug/kg	<12.0	50.0	10/12/17 09:24	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	10/12/17 09:24	
2,2-Dichloropropane	ug/kg	<12.6	50.0	10/12/17 09:24	
2-Chlorotoluene	ug/kg	<15.8	50.0	10/12/17 09:24	
4-Chlorotoluene	ug/kg	<13.0	50.0	10/12/17 09:24	
Benzene	ug/kg	<9.2	20.0	10/12/17 09:24	
Bromobenzene	ug/kg	<20.6	50.0	10/12/17 09:24	
Bromochloromethane	ug/kg	<21.4	50.0	10/12/17 09:24	
Bromodichloromethane	ug/kg	<9.8	50.0	10/12/17 09:24	
Bromoform	ug/kg	<19.8	50.0	10/12/17 09:24	
Bromomethane	ug/kg	<69.9	250	10/12/17 09:24	
Carbon tetrachloride	ug/kg	<12.1	50.0	10/12/17 09:24	
Chlorobenzene	ug/kg	<14.8	50.0	10/12/17 09:24	
Chloroethane	ug/kg	<67.0	250	10/12/17 09:24	
Chloroform	ug/kg	<46.4	250	10/12/17 09:24	
Chloromethane	ug/kg	<20.4	50.0	10/12/17 09:24	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	10/12/17 09:24	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	10/12/17 09:24	
Dibromochloromethane	ug/kg	<17.9	50.0	10/12/17 09:24	
Dibromomethane	ug/kg	<19.3	50.0	10/12/17 09:24	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	10/12/17 09:24	
Diisopropyl ether	ug/kg	<17.7	50.0	10/12/17 09:24	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

METHOD BLANK: 1589146

Matrix: Solid

Associated Lab Samples: 40158427002, 40158427003, 40158427004, 40158427005, 40158427006, 40158427007, 40158427008, 40158427009, 40158427010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/kg	<12.4	50.0	10/12/17 09:24	
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	10/12/17 09:24	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	10/12/17 09:24	
m&p-Xylene	ug/kg	<34.4	100	10/12/17 09:24	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	10/12/17 09:24	
Methylene Chloride	ug/kg	<16.2	50.0	10/12/17 09:24	
n-Butylbenzene	ug/kg	<10.5	50.0	10/12/17 09:24	
n-Propylbenzene	ug/kg	<11.6	50.0	10/12/17 09:24	
Naphthalene	ug/kg	<40.0	250	10/12/17 09:24	
o-Xylene	ug/kg	<14.0	50.0	10/12/17 09:24	
p-Isopropyltoluene	ug/kg	<12.0	50.0	10/12/17 09:24	
sec-Butylbenzene	ug/kg	<11.9	50.0	10/12/17 09:24	
Styrene	ug/kg	<9.0	50.0	10/12/17 09:24	
tert-Butylbenzene	ug/kg	<9.5	50.0	10/12/17 09:24	
Tetrachloroethene	ug/kg	<12.9	50.0	10/12/17 09:24	
Toluene	ug/kg	<11.2	50.0	10/12/17 09:24	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	10/12/17 09:24	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	10/12/17 09:24	
Trichloroethene	ug/kg	<23.6	50.0	10/12/17 09:24	
Trichlorofluoromethane	ug/kg	<24.7	50.0	10/12/17 09:24	
Vinyl chloride	ug/kg	<21.1	50.0	10/12/17 09:24	
Xylene (Total)	ug/kg	<48.4	150	10/12/17 09:24	
4-Bromofluorobenzene (S)	%	83	58-141	10/12/17 09:24	
Dibromofluoromethane (S)	%	95	68-130	10/12/17 09:24	
Toluene-d8 (S)	%	94	68-149	10/12/17 09:24	

LABORATORY CONTROL SAMPLE: 1589147

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2340	94	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2460	98	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2550	102	70-130	
1,1-Dichloroethane	ug/kg	2500	2270	91	63-124	
1,1-Dichloroethene	ug/kg	2500	2340	94	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	2050	82	78-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	1950	78	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2490	100	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2360	94	70-130	
1,2-Dichloroethane	ug/kg	2500	2250	90	56-135	
1,2-Dichloropropane	ug/kg	2500	2280	91	77-122	
1,3-Dichlorobenzene	ug/kg	2500	2330	93	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2420	97	70-130	
Benzene	ug/kg	2500	2450	98	66-130	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

LABORATORY CONTROL SAMPLE: 1589147

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/kg	2500	2370	95	62-135	
Bromoform	ug/kg	2500	2070	83	68-130	
Bromomethane	ug/kg	2500	2410	96	29-137	
Carbon tetrachloride	ug/kg	2500	2460	98	57-130	
Chlorobenzene	ug/kg	2500	2380	95	70-130	
Chloroethane	ug/kg	2500	2430	97	36-144	
Chloroform	ug/kg	2500	2380	95	69-115	
Chloromethane	ug/kg	2500	1680	67	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2360	94	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	2060	82	70-130	
Dibromochloromethane	ug/kg	2500	2170	87	70-130	
Dichlorodifluoromethane	ug/kg	2500	1480	59	10-99	
Ethylbenzene	ug/kg	2500	2400	96	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2420	97	70-130	
m&p-Xylene	ug/kg	5000	5020	100	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2340	93	63-134	
Methylene Chloride	ug/kg	2500	2370	95	56-123	
o-Xylene	ug/kg	2500	2500	100	70-130	
Styrene	ug/kg	2500	2610	104	70-130	
Tetrachloroethene	ug/kg	2500	2400	96	70-131	
Toluene	ug/kg	2500	2480	99	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2510	101	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	2080	83	68-130	
Trichloroethene	ug/kg	2500	2400	96	70-130	
Trichlorofluoromethane	ug/kg	2500	2360	95	37-149	
Vinyl chloride	ug/kg	2500	1890	76	43-128	
Xylene (Total)	ug/kg	7500	7510	100	70-130	
4-Bromofluorobenzene (S)	%			93	58-141	
Dibromofluoromethane (S)	%			100	68-130	
Toluene-d8 (S)	%			92	68-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1589148 1589149

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40158381004 Result	Spike Conc.	Spike Conc.	MSD Result								
1,1,1-Trichloroethane	ug/kg	<25.0	1370	1370	1110	1170	81	85	57-123	5	20		
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1370	1370	1410	1350	103	99	73-135	4	20		
1,1,2-Trichloroethane	ug/kg	<25.0	1370	1370	1370	1340	100	98	70-130	2	20		
1,1-Dichloroethane	ug/kg	<25.0	1370	1370	1140	1160	83	85	63-124	2	20		
1,1-Dichloroethene	ug/kg	<25.0	1370	1370	1030	1080	75	79	48-117	5	23		
1,2,4-Trichlorobenzene	ug/kg	<47.6	1370	1370	1220	1140	89	83	78-145	7	20		
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	1370	1370	1110	1060	81	77	38-168	5	22		
1,2-Dibromoethane (EDB)	ug/kg	<25.0	1370	1370	1330	1280	97	94	70-130	4	20		
1,2-Dichlorobenzene	ug/kg	<25.0	1370	1370	1360	1300	99	95	70-130	5	20		

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1589148		1589149		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		40158381004 Result	MS Spike Conc.	MSD Spike Conc.									
1,2-Dichloroethane	ug/kg	<25.0	1370	1370	1190	1180	87	86	56-145	1	20		
1,2-Dichloropropane	ug/kg	<25.0	1370	1370	1190	1250	87	92	77-123	6	20		
1,3-Dichlorobenzene	ug/kg	<25.0	1370	1370	1290	1250	95	91	70-130	4	20		
1,4-Dichlorobenzene	ug/kg	<25.0	1370	1370	1380	1320	101	97	70-130	4	20		
Benzene	ug/kg	<25.0	1370	1370	1240	1280	90	94	65-130	4	20		
Bromodichloromethane	ug/kg	<25.0	1370	1370	1180	1190	86	87	59-141	1	20		
Bromoform	ug/kg	<25.0	1370	1370	1230	1180	90	86	59-141	4	20		
Bromomethane	ug/kg	<69.9	1370	1370	1180	1160	86	85	28-139	1	20		
Carbon tetrachloride	ug/kg	<25.0	1370	1370	1030	1130	75	82	50-130	9	20		
Chlorobenzene	ug/kg	<25.0	1370	1370	1290	1250	94	91	70-130	3	20		
Chloroethane	ug/kg	<67.0	1370	1370	1100	1120	80	82	36-144	2	20		
Chloroform	ug/kg	<46.4	1370	1370	1240	1240	90	90	68-122	0	20		
Chloromethane	ug/kg	<25.0	1370	1370	815	853	60	62	30-126	4	20		
cis-1,2-Dichloroethene	ug/kg	<25.0	1370	1370	1210	1220	89	89	63-130	1	20		
cis-1,3-Dichloropropene	ug/kg	<25.0	1370	1370	1100	1080	80	79	70-130	2	20		
Dibromochloromethane	ug/kg	<25.0	1370	1370	1220	1190	89	87	66-136	3	20		
Dichlorodifluoromethane	ug/kg	<25.0	1370	1370	609	684	44	50	10-99	12	33		
Ethylbenzene	ug/kg	<25.0	1370	1370	1180	1170	86	85	80-122	1	20		
Isopropylbenzene (Cumene)	ug/kg	<25.0	1370	1370	1190	1190	87	87	70-130	0	20		
m&p-Xylene	ug/kg	<50.0	2740	2740	2540	2540	93	93	70-130	0	20		
Methyl-tert-butyl ether	ug/kg	<25.0	1370	1370	1260	1190	92	87	63-134	6	20		
Methylene Chloride	ug/kg	<25.0	1370	1370	1250	1240	90	89	56-127	1	20		
o-Xylene	ug/kg	<25.0	1370	1370	1240	1210	90	89	70-130	2	20		
Styrene	ug/kg	<25.0	1370	1370	1340	1320	98	96	70-130	2	20		
Tetrachloroethene	ug/kg	<25.0	1370	1370	1170	1160	85	85	70-131	0	20		
Toluene	ug/kg	<25.0	1370	1370	1260	1250	92	91	80-120	1	20		
trans-1,2-Dichloroethene	ug/kg	<25.0	1370	1370	1180	1260	86	92	60-130	7	20		
trans-1,3-Dichloropropene	ug/kg	<25.0	1370	1370	1130	1090	82	80	68-130	3	20		
Trichloroethene	ug/kg	<25.0	1370	1370	1210	1240	88	90	70-130	3	20		
Trichlorofluoromethane	ug/kg	<25.0	1370	1370	1010	1130	74	82	37-149	11	24		
Vinyl chloride	ug/kg	<25.0	1370	1370	776	818	57	60	39-128	5	20		
Xylene (Total)	ug/kg	<75.0	4110	4110	3780	3760	92	92	70-130	1	20		
4-Bromofluorobenzene (S)	%						100	98	58-141				
Dibromofluoromethane (S)	%						102	103	68-130				
Toluene-d8 (S)	%						102	100	68-149				

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

QC Batch: 270424 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40158427001, 40158427011, 40158427012, 40158427013

METHOD BLANK: 1589223 Matrix: Solid
Associated Lab Samples: 40158427001, 40158427011, 40158427012, 40158427013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	10/12/17 16:58	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	10/12/17 16:58	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	10/12/17 16:58	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	10/12/17 16:58	
1,1-Dichloroethane	ug/kg	<17.6	50.0	10/12/17 16:58	
1,1-Dichloroethene	ug/kg	<17.6	50.0	10/12/17 16:58	
1,1-Dichloropropene	ug/kg	<14.0	50.0	10/12/17 16:58	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	10/12/17 16:58	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	10/12/17 16:58	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	10/12/17 16:58	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	10/12/17 16:58	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	10/12/17 16:58	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	10/12/17 16:58	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	10/12/17 16:58	
1,2-Dichloroethane	ug/kg	<15.0	50.0	10/12/17 16:58	
1,2-Dichloropropane	ug/kg	<16.8	50.0	10/12/17 16:58	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	10/12/17 16:58	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	10/12/17 16:58	
1,3-Dichloropropane	ug/kg	<12.0	50.0	10/12/17 16:58	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	10/12/17 16:58	
2,2-Dichloropropane	ug/kg	<12.6	50.0	10/12/17 16:58	
2-Chlorotoluene	ug/kg	<15.8	50.0	10/12/17 16:58	
4-Chlorotoluene	ug/kg	<13.0	50.0	10/12/17 16:58	
Benzene	ug/kg	<9.2	20.0	10/12/17 16:58	
Bromobenzene	ug/kg	<20.6	50.0	10/12/17 16:58	
Bromochloromethane	ug/kg	<21.4	50.0	10/12/17 16:58	
Bromodichloromethane	ug/kg	<9.8	50.0	10/12/17 16:58	
Bromoform	ug/kg	<19.8	50.0	10/12/17 16:58	
Bromomethane	ug/kg	<69.9	250	10/12/17 16:58	
Carbon tetrachloride	ug/kg	<12.1	50.0	10/12/17 16:58	
Chlorobenzene	ug/kg	<14.8	50.0	10/12/17 16:58	
Chloroethane	ug/kg	<67.0	250	10/12/17 16:58	
Chloroform	ug/kg	<46.4	250	10/12/17 16:58	
Chloromethane	ug/kg	<20.4	50.0	10/12/17 16:58	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	10/12/17 16:58	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	10/12/17 16:58	
Dibromochloromethane	ug/kg	<17.9	50.0	10/12/17 16:58	
Dibromomethane	ug/kg	<19.3	50.0	10/12/17 16:58	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	10/12/17 16:58	
Diisopropyl ether	ug/kg	<17.7	50.0	10/12/17 16:58	
Ethylbenzene	ug/kg	<12.4	50.0	10/12/17 16:58	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

METHOD BLANK: 1589223

Matrix: Solid

Associated Lab Samples: 40158427001, 40158427011, 40158427012, 40158427013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	10/12/17 16:58	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	10/12/17 16:58	
m&p-Xylene	ug/kg	<34.4	100	10/12/17 16:58	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	10/12/17 16:58	
Methylene Chloride	ug/kg	<16.2	50.0	10/12/17 16:58	
n-Butylbenzene	ug/kg	<10.5	50.0	10/12/17 16:58	
n-Propylbenzene	ug/kg	<11.6	50.0	10/12/17 16:58	
Naphthalene	ug/kg	<40.0	250	10/12/17 16:58	
o-Xylene	ug/kg	<14.0	50.0	10/12/17 16:58	
p-Isopropyltoluene	ug/kg	<12.0	50.0	10/12/17 16:58	
sec-Butylbenzene	ug/kg	<11.9	50.0	10/12/17 16:58	
Styrene	ug/kg	<9.0	50.0	10/12/17 16:58	
tert-Butylbenzene	ug/kg	<9.5	50.0	10/12/17 16:58	
Tetrachloroethene	ug/kg	<12.9	50.0	10/12/17 16:58	
Toluene	ug/kg	<11.2	50.0	10/12/17 16:58	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	10/12/17 16:58	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	10/12/17 16:58	
Trichloroethene	ug/kg	<23.6	50.0	10/12/17 16:58	
Trichlorofluoromethane	ug/kg	<24.7	50.0	10/12/17 16:58	
Vinyl chloride	ug/kg	<21.1	50.0	10/12/17 16:58	
Xylene (Total)	ug/kg	<48.4	150	10/12/17 16:58	
4-Bromofluorobenzene (S)	%	78	58-141	10/12/17 16:58	
Dibromofluoromethane (S)	%	90	68-130	10/12/17 16:58	
Toluene-d8 (S)	%	90	68-149	10/12/17 16:58	

LABORATORY CONTROL SAMPLE: 1589224

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2330	93	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2380	95	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2390	96	70-130	
1,1-Dichloroethane	ug/kg	2500	2260	90	63-124	
1,1-Dichloroethene	ug/kg	2500	2310	92	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	2020	81	78-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	1870	75	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2460	98	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2250	90	70-130	
1,2-Dichloroethane	ug/kg	2500	2220	89	56-135	
1,2-Dichloropropane	ug/kg	2500	2220	89	77-122	
1,3-Dichlorobenzene	ug/kg	2500	2290	92	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2330	93	70-130	
Benzene	ug/kg	2500	2430	97	66-130	
Bromodichloromethane	ug/kg	2500	2220	89	62-135	
Bromoform	ug/kg	2500	1920	77	68-130	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

LABORATORY CONTROL SAMPLE: 1589224

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/kg	2500	2380	95	29-137	
Carbon tetrachloride	ug/kg	2500	2220	89	57-130	
Chlorobenzene	ug/kg	2500	2340	94	70-130	
Chloroethane	ug/kg	2500	2390	96	36-144	
Chloroform	ug/kg	2500	2340	94	69-115	
Chloromethane	ug/kg	2500	1710	68	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2360	95	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	1980	79	70-130	
Dibromochloromethane	ug/kg	2500	2090	84	70-130	
Dichlorodifluoromethane	ug/kg	2500	1330	53	10-99	
Ethylbenzene	ug/kg	2500	2260	90	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2350	94	70-130	
m&p-Xylene	ug/kg	5000	4760	95	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2360	95	63-134	
Methylene Chloride	ug/kg	2500	2310	92	56-123	
o-Xylene	ug/kg	2500	2400	96	70-130	
Styrene	ug/kg	2500	2470	99	70-130	
Tetrachloroethene	ug/kg	2500	2210	89	70-131	
Toluene	ug/kg	2500	2390	96	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2550	102	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	1970	79	68-130	
Trichloroethene	ug/kg	2500	2350	94	70-130	
Trichlorofluoromethane	ug/kg	2500	2220	89	37-149	
Vinyl chloride	ug/kg	2500	1930	77	43-128	
Xylene (Total)	ug/kg	7500	7160	95	70-130	
4-Bromofluorobenzene (S)	%			88	58-141	
Dibromofluoromethane (S)	%			92	68-130	
Toluene-d8 (S)	%			87	68-149	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

QC Batch: 270330 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40158427014, 40158427015, 40158427016, 40158427017, 40158427018, 40158427019

METHOD BLANK: 1588806 Matrix: Water
Associated Lab Samples: 40158427014, 40158427015, 40158427016, 40158427017, 40158427018, 40158427019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	10/12/17 08:49	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	10/12/17 08:49	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	10/12/17 08:49	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	10/12/17 08:49	
1,1-Dichloroethane	ug/L	<0.24	1.0	10/12/17 08:49	
1,1-Dichloroethene	ug/L	<0.41	1.0	10/12/17 08:49	
1,1-Dichloropropene	ug/L	<0.44	1.0	10/12/17 08:49	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	10/12/17 08:49	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	10/12/17 08:49	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	10/12/17 08:49	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	10/12/17 08:49	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	10/12/17 08:49	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	10/12/17 08:49	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	10/12/17 08:49	
1,2-Dichloroethane	ug/L	<0.17	1.0	10/12/17 08:49	
1,2-Dichloropropane	ug/L	<0.23	1.0	10/12/17 08:49	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	10/12/17 08:49	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	10/12/17 08:49	
1,3-Dichloropropane	ug/L	<0.50	1.0	10/12/17 08:49	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	10/12/17 08:49	
2,2-Dichloropropane	ug/L	<0.48	1.0	10/12/17 08:49	
2-Chlorotoluene	ug/L	<0.50	1.0	10/12/17 08:49	
4-Chlorotoluene	ug/L	<0.21	1.0	10/12/17 08:49	
Benzene	ug/L	<0.50	1.0	10/12/17 08:49	
Bromobenzene	ug/L	<0.23	1.0	10/12/17 08:49	
Bromochloromethane	ug/L	<0.34	1.0	10/12/17 08:49	
Bromodichloromethane	ug/L	<0.50	1.0	10/12/17 08:49	
Bromoform	ug/L	<0.50	1.0	10/12/17 08:49	
Bromomethane	ug/L	<2.4	5.0	10/12/17 08:49	
Carbon tetrachloride	ug/L	<0.50	1.0	10/12/17 08:49	
Chlorobenzene	ug/L	<0.50	1.0	10/12/17 08:49	
Chloroethane	ug/L	<0.37	1.0	10/12/17 08:49	
Chloroform	ug/L	<2.5	5.0	10/12/17 08:49	
Chloromethane	ug/L	<0.50	1.0	10/12/17 08:49	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	10/12/17 08:49	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	10/12/17 08:49	
Dibromochloromethane	ug/L	<0.50	1.0	10/12/17 08:49	
Dibromomethane	ug/L	<0.43	1.0	10/12/17 08:49	
Dichlorodifluoromethane	ug/L	<0.22	1.0	10/12/17 08:49	
Diisopropyl ether	ug/L	<0.50	1.0	10/12/17 08:49	
Ethylbenzene	ug/L	<0.50	1.0	10/12/17 08:49	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

METHOD BLANK: 1588806

Matrix: Water

Associated Lab Samples: 40158427014, 40158427015, 40158427016, 40158427017, 40158427018, 40158427019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	10/12/17 08:49	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	10/12/17 08:49	
m&p-Xylene	ug/L	<1.0	2.0	10/12/17 08:49	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	10/12/17 08:49	
Methylene Chloride	ug/L	0.38J	1.0	10/12/17 08:49	
n-Butylbenzene	ug/L	<0.50	1.0	10/12/17 08:49	
n-Propylbenzene	ug/L	<0.50	1.0	10/12/17 08:49	
Naphthalene	ug/L	<2.5	5.0	10/12/17 08:49	
o-Xylene	ug/L	<0.50	1.0	10/12/17 08:49	
p-Isopropyltoluene	ug/L	<0.50	1.0	10/12/17 08:49	
sec-Butylbenzene	ug/L	<2.2	5.0	10/12/17 08:49	
Styrene	ug/L	<0.50	1.0	10/12/17 08:49	
tert-Butylbenzene	ug/L	<0.18	1.0	10/12/17 08:49	
Tetrachloroethene	ug/L	<0.50	1.0	10/12/17 08:49	
Toluene	ug/L	<0.50	1.0	10/12/17 08:49	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	10/12/17 08:49	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	10/12/17 08:49	
Trichloroethene	ug/L	<0.33	1.0	10/12/17 08:49	
Trichlorofluoromethane	ug/L	<0.18	1.0	10/12/17 08:49	
Vinyl chloride	ug/L	<0.18	1.0	10/12/17 08:49	
Xylene (Total)	ug/L	<1.5	3.0	10/12/17 08:49	
4-Bromofluorobenzene (S)	%	83	61-130	10/12/17 08:49	
Dibromofluoromethane (S)	%	91	67-130	10/12/17 08:49	
Toluene-d8 (S)	%	94	70-130	10/12/17 08:49	

LABORATORY CONTROL SAMPLE: 1588807

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	49.0	98	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	56.9	114	70-130	
1,1,2-Trichloroethane	ug/L	50	51.3	103	70-130	
1,1-Dichloroethane	ug/L	50	51.3	103	71-132	
1,1-Dichloroethene	ug/L	50	57.5	115	75-130	
1,2,4-Trichlorobenzene	ug/L	50	61.6	123	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	46.3	93	63-123	
1,2-Dibromoethane (EDB)	ug/L	50	56.8	114	70-130	
1,2-Dichlorobenzene	ug/L	50	59.0	118	70-130	
1,2-Dichloroethane	ug/L	50	47.8	96	70-131	
1,2-Dichloropropane	ug/L	50	45.5	91	80-120	
1,3-Dichlorobenzene	ug/L	50	57.4	115	70-130	
1,4-Dichlorobenzene	ug/L	50	57.9	116	70-130	
Benzene	ug/L	50	47.3	95	73-145	
Bromodichloromethane	ug/L	50	51.9	104	70-130	
Bromoform	ug/L	50	56.4	113	67-130	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

LABORATORY CONTROL SAMPLE: 1588807

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	50	32.0	64	26-128	
Carbon tetrachloride	ug/L	50	45.2	90	70-133	
Chlorobenzene	ug/L	50	57.5	115	70-130	
Chloroethane	ug/L	50	40.4	81	58-120	
Chloroform	ug/L	50	45.9	92	80-121	
Chloromethane	ug/L	50	30.2	60	40-127	
cis-1,2-Dichloroethene	ug/L	50	48.7	97	70-130	
cis-1,3-Dichloropropene	ug/L	50	49.2	98	70-130	
Dibromochloromethane	ug/L	50	50.3	101	70-130	
Dichlorodifluoromethane	ug/L	50	14.9	30	20-135	
Ethylbenzene	ug/L	50	59.1	118	87-129	
Isopropylbenzene (Cumene)	ug/L	50	65.1	130	70-130	
m&p-Xylene	ug/L	100	133	133	70-130 L1	
Methyl-tert-butyl ether	ug/L	50	54.2	108	66-143	
Methylene Chloride	ug/L	50	58.9	118	70-130	
o-Xylene	ug/L	50	62.8	126	70-130	
Styrene	ug/L	50	67.3	135	70-130 L1	
Tetrachloroethene	ug/L	50	58.3	117	70-130	
Toluene	ug/L	50	54.2	108	82-130	
trans-1,2-Dichloroethene	ug/L	50	64.6	129	75-132	
trans-1,3-Dichloropropene	ug/L	50	42.8	86	70-130	
Trichloroethene	ug/L	50	53.7	107	70-130	
Trichlorofluoromethane	ug/L	50	53.3	107	76-133	
Vinyl chloride	ug/L	50	31.3	63	57-136	
Xylene (Total)	ug/L	150	195	130	70-130 LS	
4-Bromofluorobenzene (S)	%			101	61-130	
Dibromofluoromethane (S)	%			93	67-130	
Toluene-d8 (S)	%			91	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1588810 1588811

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40158432005 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
1,1,1-Trichloroethane	ug/L	<0.50	50	50	51.6	50.9	103	102	70-134	1	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	56.6	50.6	113	101	70-130	11	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	52.5	49.3	105	99	70-130	6	20	
1,1-Dichloroethane	ug/L	<0.24	50	50	53.3	51.7	107	103	71-133	3	20	
1,1-Dichloroethene	ug/L	<0.41	50	50	63.2	61.6	126	123	75-136	2	20	
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	62.0	57.0	124	114	70-130	8	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	45.8	43.1	92	86	63-123	6	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	57.4	55.7	115	111	70-130	3	20	
1,2-Dichlorobenzene	ug/L	<0.50	50	50	60.2	55.3	120	111	70-130	8	20	
1,2-Dichloroethane	ug/L	<0.17	50	50	49.1	47.2	98	94	70-131	4	20	
1,2-Dichloropropane	ug/L	<0.23	50	50	48.6	45.5	97	91	80-120	7	20	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

Parameter	Units	40158432005		1588810		1588811		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
1,3-Dichlorobenzene	ug/L	<0.50	50	50	58.7	54.5	117	109	70-130	8	20		
1,4-Dichlorobenzene	ug/L	<0.50	50	50	58.2	54.5	116	109	70-130	7	20		
Benzene	ug/L	<0.50	50	50	48.7	47.7	97	95	73-145	2	20		
Bromodichloromethane	ug/L	<0.50	50	50	53.0	51.1	106	102	70-130	4	20		
Bromoform	ug/L	<0.50	50	50	57.4	54.3	115	109	67-130	5	20		
Bromomethane	ug/L	<2.4	50	50	39.0	39.1	78	78	26-129	0	20		
Carbon tetrachloride	ug/L	<0.50	50	50	47.4	47.2	95	94	70-134	0	20		
Chlorobenzene	ug/L	<0.50	50	50	58.5	56.2	117	112	70-130	4	20		
Chloroethane	ug/L	<0.37	50	50	45.6	44.4	91	89	58-120	3	20		
Chloroform	ug/L	<2.5	50	50	47.8	53.1	96	106	80-121	11	20		
Chloromethane	ug/L	<0.50	50	50	42.5	41.5	85	83	40-128	2	20		
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	62.9	60.7	126	121	70-130	4	20		
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	50.9	49.7	102	99	70-130	2	20		
Dibromochloromethane	ug/L	<0.50	50	50	52.2	50.6	104	101	70-130	3	20		
Dichlorodifluoromethane	ug/L	<0.22	50	50	30.8	31.0	62	62	20-146	1	20		
Ethylbenzene	ug/L	<0.50	50	50	59.4	57.6	119	115	87-129	3	20		
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	66.0	63.3	132	127	70-130	4	20	M1	
m&p-Xylene	ug/L	<1.0	100	100	134	128	134	128	70-130	4	20	M0	
Methyl-tert-butyl ether	ug/L	<0.17	50	50	55.6	53.3	111	107	66-143	4	20		
Methylene Chloride	ug/L	0.25J	50	50	60.8	60.4	121	120	70-130	1	20		
o-Xylene	ug/L	<0.50	50	50	63.4	61.6	127	123	70-130	3	20		
Styrene	ug/L	<0.50	50	50	69.3	65.8	139	132	70-130	5	20	M0	
Tetrachloroethene	ug/L	<0.50	50	50	58.5	56.5	117	113	70-130	4	20		
Toluene	ug/L	<0.50	50	50	54.7	53.7	109	107	82-131	2	20		
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	67.6	66.0	135	132	75-135	2	20		
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	44.7	42.2	89	84	70-130	6	20		
Trichloroethene	ug/L	<0.33	50	50	54.3	53.3	109	107	70-130	2	20		
Trichlorofluoromethane	ug/L	<0.18	50	50	60.1	57.1	120	114	76-150	5	20		
Vinyl chloride	ug/L	<0.18	50	50	40.5	39.4	81	79	56-143	3	20		
Xylene (Total)	ug/L	<1.5	150	150	197	190	131	127	70-130	4	20	MS	
4-Bromofluorobenzene (S)	%						98	98	61-130				
Dibromofluoromethane (S)	%						92	95	67-130				
Toluene-d8 (S)	%						91	93	70-130				

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

QC Batch: 270485 Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 40158427001, 40158427002, 40158427003, 40158427004, 40158427005, 40158427006, 40158427008, 40158427009, 40158427010, 40158427011, 40158427012, 40158427013

METHOD BLANK: 1589777 Matrix: Solid
Associated Lab Samples: 40158427001, 40158427002, 40158427003, 40158427004, 40158427005, 40158427006, 40158427008, 40158427009, 40158427010, 40158427011, 40158427012, 40158427013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<4.0	13.4	10/13/17 12:05	
2-Methylnaphthalene	ug/kg	<5.0	16.7	10/13/17 12:05	
Acenaphthene	ug/kg	<3.9	12.9	10/13/17 12:05	
Acenaphthylene	ug/kg	<3.3	11.0	10/13/17 12:05	
Anthracene	ug/kg	<5.7	19.0	10/13/17 12:05	
Benzo(a)anthracene	ug/kg	<3.2	10.6	10/13/17 12:05	
Benzo(a)pyrene	ug/kg	<2.5	8.4	10/13/17 12:05	
Benzo(b)fluoranthene	ug/kg	<2.8	9.4	10/13/17 12:05	
Benzo(g,h,i)perylene	ug/kg	<2.0	6.8	10/13/17 12:05	
Benzo(k)fluoranthene	ug/kg	<2.5	8.4	10/13/17 12:05	
Chrysene	ug/kg	<3.4	11.2	10/13/17 12:05	
Dibenz(a,h)anthracene	ug/kg	<2.2	7.5	10/13/17 12:05	
Fluoranthene	ug/kg	<5.2	17.4	10/13/17 12:05	
Fluorene	ug/kg	<4.1	13.8	10/13/17 12:05	
Indeno(1,2,3-cd)pyrene	ug/kg	<2.2	7.3	10/13/17 12:05	
Naphthalene	ug/kg	<8.4	28.1	10/13/17 12:05	
Phenanthrene	ug/kg	<11.7	38.9	10/13/17 12:05	
Pyrene	ug/kg	<4.5	15.0	10/13/17 12:05	
2-Fluorobiphenyl (S)	%	78	23-106	10/13/17 12:05	
Terphenyl-d14 (S)	%	80	29-106	10/13/17 12:05	

LABORATORY CONTROL SAMPLE: 1589778

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	254	76	49-102	
2-Methylnaphthalene	ug/kg	333	245	74	47-91	
Acenaphthene	ug/kg	333	258	78	52-97	
Acenaphthylene	ug/kg	333	257	77	49-97	
Anthracene	ug/kg	333	259	78	62-101	
Benzo(a)anthracene	ug/kg	333	254	76	53-95	
Benzo(a)pyrene	ug/kg	333	262	79	57-108	
Benzo(b)fluoranthene	ug/kg	333	265	80	53-113	
Benzo(g,h,i)perylene	ug/kg	333	248	74	43-114	
Benzo(k)fluoranthene	ug/kg	333	263	79	66-116	
Chrysene	ug/kg	333	258	77	64-109	
Dibenz(a,h)anthracene	ug/kg	333	256	77	50-105	
Fluoranthene	ug/kg	333	255	77	58-107	
Fluorene	ug/kg	333	266	80	52-99	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

LABORATORY CONTROL SAMPLE: 1589778

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Indeno(1,2,3-cd)pyrene	ug/kg	333	259	78	51-113	
Naphthalene	ug/kg	333	238	71	50-91	
Phenanthrene	ug/kg	333	256	77	57-101	
Pyrene	ug/kg	333	256	77	50-102	
2-Fluorobiphenyl (S)	%			84	23-106	
Terphenyl-d14 (S)	%			85	29-106	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1589779 1589780

Parameter	Units	40158339003		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
1-Methylnaphthalene	ug/kg	<15.5	386	386	247	269	63	68	37-102	8	29		
2-Methylnaphthalene	ug/kg	<19.4	386	386	244	260	61	65	44-91	6	36		
Acenaphthene	ug/kg	<0.015	386	386	238	265	61	69	46-97	11	26		
Acenaphthylene	ug/kg	<0.013	386	386	240	266	62	69	47-97	10	29		
Anthracene	ug/kg	<0.022	386	386	225	261	58	68	50-101	15	28		
Benzo(a)anthracene	ug/kg	<0.012	386	386	221	251	57	65	48-95	13	28		
Benzo(a)pyrene	ug/kg	<0.0097	386	386	222	256	57	66	47-108	14	36		
Benzo(b)fluoranthene	ug/kg	<0.011	386	386	219	251	57	65	42-113	14	34		
Benzo(g,h,i)perylene	ug/kg	<0.0079	386	386	210	240	54	62	18-114	14	30		
Benzo(k)fluoranthene	ug/kg	<0.0097	386	386	227	266	59	69	50-116	16	27		
Chrysene	ug/kg	<0.013	386	386	218	252	56	65	55-109	15	28		
Dibenz(a,h)anthracene	ug/kg	<0.0086	386	386	216	250	56	65	39-105	15	29		
Fluoranthene	ug/kg	<0.020	386	386	222	255	57	65	41-107	14	28		
Fluorene	ug/kg	<0.016	386	386	241	275	62	71	48-99	13	28		
Indeno(1,2,3-cd)pyrene	ug/kg	<0.0085	386	386	217	251	56	65	27-113	15	30		
Naphthalene	ug/kg	0.10	386	386	241	257	35	40	40-91	6	37 M1		
Phenanthrene	ug/kg	<0.045	386	386	226	259	57	66	46-101	14	40		
Pyrene	ug/kg	<0.017	386	386	224	256	57	66	50-102	13	31		
2-Fluorobiphenyl (S)	%						60	69	23-106				
Terphenyl-d14 (S)	%						57	65	29-106				

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

QC Batch: 270350 Analysis Method: EPA 8270 by HVI
QC Batch Method: EPA 3510 Analysis Description: 8270 Water PAH by HVI
Associated Lab Samples: 40158427014, 40158427015, 40158427016, 40158427017, 40158427018, 40158427019

METHOD BLANK: 1588883 Matrix: Water
Associated Lab Samples: 40158427014, 40158427015, 40158427016, 40158427017, 40158427018, 40158427019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	<0.0059	0.030	10/13/17 12:27	
2-Methylnaphthalene	ug/L	<0.0049	0.024	10/13/17 12:27	
Acenaphthene	ug/L	<0.0061	0.030	10/13/17 12:27	
Acenaphthylene	ug/L	<0.0050	0.025	10/13/17 12:27	
Anthracene	ug/L	<0.010	0.052	10/13/17 12:27	
Benzo(a)anthracene	ug/L	<0.0076	0.038	10/13/17 12:27	
Benzo(a)pyrene	ug/L	<0.011	0.053	10/13/17 12:27	
Benzo(b)fluoranthene	ug/L	<0.0057	0.029	10/13/17 12:27	
Benzo(g,h,i)perylene	ug/L	<0.0068	0.034	10/13/17 12:27	
Benzo(k)fluoranthene	ug/L	<0.0076	0.038	10/13/17 12:27	
Chrysene	ug/L	<0.013	0.065	10/13/17 12:27	
Dibenz(a,h)anthracene	ug/L	<0.010	0.050	10/13/17 12:27	
Fluoranthene	ug/L	<0.011	0.053	10/13/17 12:27	
Fluorene	ug/L	<0.0080	0.040	10/13/17 12:27	
Indeno(1,2,3-cd)pyrene	ug/L	<0.018	0.088	10/13/17 12:27	
Naphthalene	ug/L	<0.018	0.092	10/13/17 12:27	
Phenanthrene	ug/L	<0.014	0.069	10/13/17 12:27	
Pyrene	ug/L	<0.0076	0.038	10/13/17 12:27	
Total PAHs	ug/L	0.0078		10/13/17 12:27	
2-Fluorobiphenyl (S)	%	53	35-84	10/13/17 12:27	
Terphenyl-d14 (S)	%	84	10-129	10/13/17 12:27	

LABORATORY CONTROL SAMPLE: 1588884

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/L	2	1.5	74	39-83	
2-Methylnaphthalene	ug/L	2	1.5	73	38-86	
Acenaphthene	ug/L	2	1.3	66	35-85	
Acenaphthylene	ug/L	2	1.3	66	31-88	
Anthracene	ug/L	2	1.6	79	47-104	
Benzo(a)anthracene	ug/L	2	1.5	75	36-105	
Benzo(a)pyrene	ug/L	2	1.7	84	69-117	
Benzo(b)fluoranthene	ug/L	2	1.6	80	54-107	
Benzo(g,h,i)perylene	ug/L	2	0.98	49	13-86	
Benzo(k)fluoranthene	ug/L	2	1.8	92	63-128	
Chrysene	ug/L	2	2.2	112	69-150	
Dibenz(a,h)anthracene	ug/L	2	0.73	36	10-87	
Fluoranthene	ug/L	2	1.9	96	57-103	
Fluorene	ug/L	2	1.4	71	38-85	
Indeno(1,2,3-cd)pyrene	ug/L	2	1.5	74	40-111	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

LABORATORY CONTROL SAMPLE: 1588884

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/L	2	1.3	65	39-82	
Phenanthrene	ug/L	2	1.6	82	46-96	
Pyrene	ug/L	2	2.0	99	57-110	
Total PAHs	ug/L		27.5			
2-Fluorobiphenyl (S)	%			63	35-84	
Terphenyl-d14 (S)	%			93	10-129	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1588885 1588886

Parameter	Units	40158407016		1588885		1588886		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS Result	MSD Result					
1-Methylnaphthalene	ug/L	4.7	2.1	2	6.1	6.5	66	90	27-86	7	29	M1
2-Methylnaphthalene	ug/L	0.033	2.1	2	1.6	1.7	74	83	30-86	8	35	
Acenaphthene	ug/L	0.49	2.1	2	1.8	1.8	61	66	28-85	3	29	
Acenaphthylene	ug/L	0.057	2.1	2	1.4	1.4	64	68	27-88	2	29	
Anthracene	ug/L	0.024J	2.1	2	1.6	1.6	74	75	38-104	3	35	
Benzo(a)anthracene	ug/L	<0.0079	2.1	2	1.5	1.5	70	71	10-105	2	28	
Benzo(a)pyrene	ug/L	<0.011	2.1	2	1.4	1.4	66	67	10-130	2	26	
Benzo(b)fluoranthene	ug/L	<0.0060	2.1	2	1.4	1.4	65	67	10-115	2	25	
Benzo(g,h,i)perylene	ug/L	<0.0071	2.1	2	0.63	0.60	29	29	10-87	4	42	
Benzo(k)fluoranthene	ug/L	<0.0079	2.1	2	1.3	1.3	61	62	10-133	3	25	
Chrysene	ug/L	<0.014	2.1	2	1.7	1.6	80	80	17-150	5	24	
Dibenz(a,h)anthracene	ug/L	<0.011	2.1	2	0.50	0.47	23	23	10-89	6	49	
Fluoranthene	ug/L	0.036J	2.1	2	1.8	1.7	81	81	41-103	4	32	
Fluorene	ug/L	0.34	2.1	2	1.8	1.8	67	71	32-85	2	28	
Indeno(1,2,3-cd)pyrene	ug/L	<0.019	2.1	2	1.0	0.97	47	48	10-111	3	37	
Naphthalene	ug/L	0.14	2.1	2	1.5	1.5	63	66	23-88	1	28	
Phenanthrene	ug/L	0.017J	2.1	2	1.6	1.5	75	75	33-96	4	25	
Pyrene	ug/L	0.044	2.1	2	1.8	1.7	83	83	38-110	5	28	
Total PAHs	ug/L	5.9			30.3	30.4					0	
2-Fluorobiphenyl (S)	%						59	62	35-84			
Terphenyl-d14 (S)	%						74	74	10-129			

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

QC Batch: 270684 Analysis Method: ASTM D2974-87

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

Associated Lab Samples: 40158427001, 40158427002, 40158427003, 40158427004

SAMPLE DUPLICATE: 1591555

Parameter	Units	40157957019 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	7.3	7.9	8	10	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

QC Batch: 270720 Analysis Method: ASTM D2974-87
 QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
 Associated Lab Samples: 40158427005, 40158427009, 40158427010, 40158427011, 40158427012, 40158427013

SAMPLE DUPLICATE: 1591644

Parameter	Units	40158509001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	<0.10	<0.10		10	

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QUALITY CONTROL DATA

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

QC Batch: 270737

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 40158427006, 40158427008

SAMPLE DUPLICATE: 1591681

Parameter	Units	40158509002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	<0.10	<0.10		10	

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QUALIFIERS

Project: 21-43145B MU PHASE II

Pace Project No.: 40158427

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

C4 Sample container did not meet EPA or method requirements.

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

HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.

LS Analyte recovery in the laboratory control sample (LCS) was outside QC limits for one or more of the constituent analytes used in the calculated result.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

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

MS Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.

W Non-detect results are reported on a wet weight basis.

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40158427001	B-2 (3-4')	EPA 3050	270418	EPA 6010	270576
40158427002	B-2 (12-13')	EPA 3050	270418	EPA 6010	270576
40158427003	B-1 (3-4')	EPA 3050	270418	EPA 6010	270576
40158427004	B-1 (11.5-12.5')	EPA 3050	270418	EPA 6010	270576
40158427005	B-4 (2-3')	EPA 3050	270418	EPA 6010	270576
40158427006	B-4 (10-11')	EPA 3050	270418	EPA 6010	270576
40158427008	B-3 (3-4')	EPA 3050	270418	EPA 6010	270576
40158427009	B-3 (11-12')	EPA 3050	270418	EPA 6010	270576
40158427010	B-5 (12.5-13.5')	EPA 3050	270418	EPA 6010	270576
40158427011	B-5 (14-15')	EPA 3050	270418	EPA 6010	270576
40158427012	B-6 (3-4')	EPA 3050	270418	EPA 6010	270576
40158427013	B-6 (11-12')	EPA 3050	270418	EPA 6010	270576
40158427014	TW-2	EPA 3010	270342	EPA 6010	270455
40158427015	TW-1	EPA 3010	270342	EPA 6010	270455
40158427016	TW-4	EPA 3010	270342	EPA 6010	270455
40158427017	TW-3	EPA 3010	270342	EPA 6010	270455
40158427018	TW-5	EPA 3010	270342	EPA 6010	270455
40158427019	TW-6	EPA 3010	270342	EPA 6010	270455
40158427014	TW-2	EPA 7470	270522	EPA 7470	270564
40158427015	TW-1	EPA 7470	270857	EPA 7470	270967
40158427016	TW-4	EPA 7470	270857	EPA 7470	270967
40158427017	TW-3	EPA 7470	270522	EPA 7470	270564
40158427018	TW-5	EPA 7470	270857	EPA 7470	270967
40158427019	TW-6	EPA 7470	270857	EPA 7470	270967
40158427001	B-2 (3-4')	EPA 7471	270711	EPA 7471	270796
40158427002	B-2 (12-13')	EPA 7471	270711	EPA 7471	270796
40158427003	B-1 (3-4')	EPA 7471	270711	EPA 7471	270796
40158427004	B-1 (11.5-12.5')	EPA 7471	270711	EPA 7471	270796
40158427005	B-4 (2-3')	EPA 7471	270711	EPA 7471	270796
40158427006	B-4 (10-11')	EPA 7471	270711	EPA 7471	270796
40158427008	B-3 (3-4')	EPA 7471	270711	EPA 7471	270796
40158427009	B-3 (11-12')	EPA 7471	270711	EPA 7471	270796
40158427010	B-5 (12.5-13.5')	EPA 7471	270711	EPA 7471	270796
40158427011	B-5 (14-15')	EPA 7471	270712	EPA 7471	270797
40158427012	B-6 (3-4')	EPA 7471	270712	EPA 7471	270797
40158427013	B-6 (11-12')	EPA 7471	270712	EPA 7471	270797
40158427001	B-2 (3-4')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427002	B-2 (12-13')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427003	B-1 (3-4')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427004	B-1 (11.5-12.5')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427005	B-4 (2-3')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427006	B-4 (10-11')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427008	B-3 (3-4')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427009	B-3 (11-12')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427010	B-5 (12.5-13.5')	EPA 3546	270485	EPA 8270 by SIM	270534

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 21-43145B MU PHASE II
Pace Project No.: 40158427

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40158427011	B-5 (14-15')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427012	B-6 (3-4')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427013	B-6 (11-12')	EPA 3546	270485	EPA 8270 by SIM	270534
40158427014	TW-2	EPA 3510	270350	EPA 8270 by HVI	270442
40158427015	TW-1	EPA 3510	270350	EPA 8270 by HVI	270442
40158427016	TW-4	EPA 3510	270350	EPA 8270 by HVI	270442
40158427017	TW-3	EPA 3510	270350	EPA 8270 by HVI	270442
40158427018	TW-5	EPA 3510	270350	EPA 8270 by HVI	270442
40158427019	TW-6	EPA 3510	270350	EPA 8270 by HVI	270442
40158427001	B-2 (3-4')	EPA 5035/5030B	270424	EPA 8260	270427
40158427002	B-2 (12-13')	EPA 5035/5030B	270402	EPA 8260	270403
40158427003	B-1 (3-4')	EPA 5035/5030B	270402	EPA 8260	270403
40158427004	B-1 (11.5-12.5')	EPA 5035/5030B	270402	EPA 8260	270403
40158427005	B-4 (2-3')	EPA 5035/5030B	270402	EPA 8260	270403
40158427006	B-4 (10-11')	EPA 5035/5030B	270402	EPA 8260	270403
40158427007	TRIP BLANK	EPA 5035/5030B	270402	EPA 8260	270403
40158427008	B-3 (3-4')	EPA 5035/5030B	270402	EPA 8260	270403
40158427009	B-3 (11-12')	EPA 5035/5030B	270402	EPA 8260	270403
40158427010	B-5 (12.5-13.5')	EPA 5035/5030B	270402	EPA 8260	270403
40158427011	B-5 (14-15')	EPA 5035/5030B	270424	EPA 8260	270427
40158427012	B-6 (3-4')	EPA 5035/5030B	270424	EPA 8260	270427
40158427013	B-6 (11-12')	EPA 5035/5030B	270424	EPA 8260	270427
40158427014	TW-2	EPA 8260	270330		
40158427015	TW-1	EPA 8260	270330		
40158427016	TW-4	EPA 8260	270330		
40158427017	TW-3	EPA 8260	270330		
40158427018	TW-5	EPA 8260	270330		
40158427019	TW-6	EPA 8260	270330		
40158427001	B-2 (3-4')	ASTM D2974-87	270684		
40158427002	B-2 (12-13')	ASTM D2974-87	270684		
40158427003	B-1 (3-4')	ASTM D2974-87	270684		
40158427004	B-1 (11.5-12.5')	ASTM D2974-87	270684		
40158427005	B-4 (2-3')	ASTM D2974-87	270720		
40158427006	B-4 (10-11')	ASTM D2974-87	270737		
40158427008	B-3 (3-4')	ASTM D2974-87	270737		
40158427009	B-3 (11-12')	ASTM D2974-87	270720		
40158427010	B-5 (12.5-13.5')	ASTM D2974-87	270720		
40158427011	B-5 (14-15')	ASTM D2974-87	270720		
40158427012	B-6 (3-4')	ASTM D2974-87	270720		
40158427013	B-6 (11-12')	ASTM D2974-87	270720		

REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

UPPER MIDWEST REGION

MN: 612-607-1700 WI: 920-469-2436



40158427

Page 99 of 100

Company Name: **Ramboll Environ**
 Branch/Location: **Brookfield, WI**
 Project Contact: **Susan Petrofske**
 Phone: **262-901-3501**
 Project Number: **21-43145B**
 Project Name: **MI Phase II**
 Project State: **WI**
 Sampled By (Print): **Michelle Peter**
 Sampled By (Sign): *[Signature]*
 PO #: _____ Regulatory Program: _____

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

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

Y/N	N	N	Y						
Pick Letter	B	A	D						
Analyses Requested	VOCs	PAHs	RCRA 8 METALS						

[Handwritten signature across the table]

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX
		DATE	TIME	
014	TW-2	10/10/17	0855	GW
015	TW-1	10/10/17	0940	GW
016	TW-4	10/10/17	1010	GW
017	TW-3	10/10/17	1030	GW
018	TW-5	10/10/17	1105	GW
019	TW-6	10/10/17	1135	GW

Quote #: _____

Mail To Contact: **Susan Petrofske**

Mail To Company: **Ramboll Environ**

Mail To Address: **175 N. Corporate Dr. Ste. 1100 Brookfield, WI 53045**

Invoice To Contact: (same)

Invoice To Company: _____

Invoice To Address: _____

Invoice To Phone: (262) 901-3501

CLIENT COMMENTS: 3-40ml^B 2-100ml^A 1-250ml^D

LAB COMMENTS (Lab Use Only): _____

Profile #: _____

Rush Turnaround Time Requested - Prelims
 (Rush TAT subject to approval/surcharge)
 Date Needed: **5-day TAT**

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: *[Signature]* Date/Time: 10/10/17 2:15PM

Relinquished By: *[Signature]* Date/Time: 10/10/17 1800

Relinquished By: *[Signature]* Date/Time: 10/11/17 0925

Relinquished By: _____ Date/Time: _____

Received By: *[Signature]* Date/Time: 10/10/17 1505

Received By: *[Signature]* Date/Time: _____

Received By: *[Signature]* Date/Time: 0925

Received By: *[Signature]* Date/Time: 10/11/17

Received By: _____ Date/Time: _____

PACE Project No. 40158427

Receipt Temp = 20.1 °C

Sample Receipt pH
 OK / Adjusted

Cooler Custody Seal
 Present / Not Present
 Intact / Not Intact



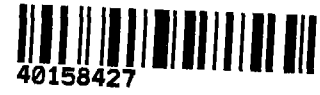
Sample Condition Upon Receipt

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

Project #: **WO# : 40158427**

Client Name: Ramboll Env

Courier: Fed Ex UPS Client Pace Other: CS Logistics



Tracking #: _____

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 NA Type of Ice: Wet Blue Dry None Samples on ice, cooling process has begun

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

Temp Blank Present: yes no

Person examining contents:
Date: 10/11/17
Initials: KA

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8. <u>no MS/MSD volume as 10/11/17</u>
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	9. <u>all soil vials tare weight covered by client</u>
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>004+006 no PAH containers</u>
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<u>KA 10/11/17</u>
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>WTS</u>		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <input checked="" type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, Poliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed: <u>KA</u> Lab Std #/D of preservative: _____ Date/Time: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. <u>014x3 (all vials have excessive sediment)</u>
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15. <u>KA 10/11/17</u>
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>67-56-17/KA 10/11/17</u>		

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: 10/12/17

January 26, 2018

Jeanne Tarvin
Ramboll Environ
175 North Corporate Drive
Suite 160
Brookfield, WI 53045

RE: Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Dear Jeanne Tarvin:

Enclosed are the analytical results for sample(s) received by the laboratory on January 13, 2018. 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,



Steven Mleczo
steve.mleczo@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Jim Hutchens, Ramboll Environ
Jim Kane, Ramboll Environ
Snejana Karakis, Environ
David L. Markelz, Ramboll Environ
Michelle Murphy, Environ
Susan Petrofske, Ramboll Environ
Scott Tarmann, Ramboll Environ
Abigail M. Wedig, Environ International Corp



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40163468001	B-7-3	Solid	01/10/18 09:45	01/13/18 08:45
40163468002	B-7-7.5	Solid	01/10/18 09:55	01/13/18 08:45
40163468003	B-14-3	Solid	01/10/18 11:38	01/13/18 08:45
40163468004	B-14-8	Solid	01/10/18 11:42	01/13/18 08:45
40163468005	B-12-3	Solid	01/10/18 12:43	01/13/18 08:45
40163468006	B-12-8	Solid	01/10/18 12:45	01/13/18 08:45
40163468007	B-10-3	Solid	01/10/18 13:00	01/13/18 08:45
40163468008	B-10-8	Solid	01/10/18 13:05	01/13/18 08:45
40163468009	B-9-3	Solid	01/10/18 13:30	01/13/18 08:45
40163468010	B-9-8	Solid	01/10/18 13:35	01/13/18 08:45
40163468011	B-8-3	Solid	01/10/18 13:50	01/13/18 08:45
40163468012	B-8-8	Solid	01/10/18 13:55	01/13/18 08:45
40163468013	B-11-3	Solid	01/10/18 14:20	01/13/18 08:45
40163468014	B-11-8	Solid	01/10/18 14:25	01/13/18 08:45
40163468015	B-13-3	Solid	01/10/18 14:40	01/13/18 08:45
40163468016	B-13-8	Solid	01/10/18 14:45	01/13/18 08:45
40163468017	B-16-3	Solid	01/10/18 15:00	01/13/18 08:45
40163468018	B-16-8	Solid	01/10/18 15:05	01/13/18 08:45
40163468019	B-15-3	Solid	01/10/18 15:15	01/13/18 08:45
40163468020	B-15-8	Solid	01/10/18 15:20	01/13/18 08:45
40163468021	TW-7	Water	01/11/18 11:05	01/13/18 08:45
40163468022	TRIP BLANK	Water	01/11/18 00:00	01/13/18 08:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40163468001	B-7-3	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468002	B-7-7.5	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468003	B-14-3	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468004	B-14-8	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468005	B-12-3	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468006	B-12-8	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468007	B-10-3	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468008	B-10-8	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468009	B-9-3	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468010	B-9-8	EPA 6010	JLD	7	PASI-G

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SAMPLE ANALYTE COUNT

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40163468011	B-8-3	EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
40163468012	B-8-8	ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
40163468013	B-11-3	EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
40163468014	B-11-8	ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
40163468015	B-13-3	EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
40163468016	B-13-8	ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
40163468017	B-16-3	EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
40163468018	B-16-8	ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
40163468019	B-15-3	EPA 7471	AJT	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G

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SAMPLE ANALYTE COUNT

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40163468020	B-15-8	EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
40163468021	TW-7	ASTM D2974-87	SKW	1	PASI-G
		EPA 6010	JLD	7	PASI-G
		EPA 7470	AJT	1	PASI-G
40163468022	TRIP BLANK	EPA 8260	HNW	65	PASI-G
		EPA 8260	HNW	65	PASI-G

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40163468001	B-7-3					
EPA 6010	Arsenic	4.4J	mg/kg	5.9	01/19/18 00:06	
EPA 6010	Barium	335	mg/kg	0.59	01/19/18 00:06	
EPA 6010	Cadmium	0.31J	mg/kg	0.59	01/19/18 00:06	
EPA 6010	Chromium	12.4	mg/kg	1.2	01/19/18 00:06	
EPA 6010	Lead	491	mg/kg	1.5	01/19/18 00:06	
EPA 7471	Mercury	0.96	mg/kg	0.040	01/24/18 11:20	
ASTM D2974-87	Percent Moisture	16.9	%	0.10	01/15/18 11:00	
40163468002	B-7-7.5					
EPA 6010	Arsenic	3.0J	mg/kg	5.0	01/19/18 00:09	
EPA 6010	Barium	10.8	mg/kg	0.50	01/19/18 00:09	
EPA 6010	Chromium	6.2	mg/kg	1.0	01/19/18 00:09	
EPA 6010	Lead	5.2	mg/kg	1.3	01/19/18 00:09	
EPA 8260	Tetrachloroethene	29.5J	ug/kg	64.1	01/16/18 12:43	
ASTM D2974-87	Percent Moisture	6.5	%	0.10	01/15/18 11:00	
40163468003	B-14-3					
EPA 6010	Arsenic	5.5J	mg/kg	5.9	01/19/18 00:11	
EPA 6010	Barium	58.4	mg/kg	0.59	01/19/18 00:11	
EPA 6010	Cadmium	0.22J	mg/kg	0.59	01/19/18 00:11	
EPA 6010	Chromium	25.8	mg/kg	1.2	01/19/18 00:11	
EPA 6010	Lead	11.5	mg/kg	1.5	01/19/18 00:11	
EPA 7471	Mercury	0.020J	mg/kg	0.044	01/24/18 11:29	
ASTM D2974-87	Percent Moisture	17.1	%	0.10	01/15/18 11:00	
40163468004	B-14-8					
EPA 6010	Arsenic	4.8J	mg/kg	5.4	01/19/18 00:18	
EPA 6010	Barium	74.2	mg/kg	0.54	01/19/18 00:18	
EPA 6010	Cadmium	0.24J	mg/kg	0.54	01/19/18 00:18	
EPA 6010	Chromium	19.7	mg/kg	1.1	01/19/18 00:18	
EPA 6010	Lead	8.7	mg/kg	1.4	01/19/18 00:18	
EPA 7471	Mercury	0.014J	mg/kg	0.040	01/24/18 11:32	
ASTM D2974-87	Percent Moisture	17.0	%	0.10	01/15/18 11:34	
40163468005	B-12-3					
EPA 6010	Arsenic	4.5J	mg/kg	5.7	01/19/18 00:21	
EPA 6010	Barium	46.5	mg/kg	0.57	01/19/18 00:21	
EPA 6010	Cadmium	0.16J	mg/kg	0.57	01/19/18 00:21	
EPA 6010	Chromium	16.2	mg/kg	1.1	01/19/18 00:21	
EPA 6010	Lead	8.5	mg/kg	1.5	01/19/18 00:21	
EPA 6010	Selenium	1.4J	mg/kg	5.7	01/19/18 00:21	
EPA 7471	Mercury	0.018J	mg/kg	0.040	01/24/18 11:34	
ASTM D2974-87	Percent Moisture	15.0	%	0.10	01/15/18 11:34	
40163468006	B-12-8					
EPA 6010	Arsenic	3.8J	mg/kg	5.9	01/17/18 16:19	
EPA 6010	Barium	61.8	mg/kg	0.59	01/17/18 16:19	
EPA 6010	Cadmium	0.20J	mg/kg	0.59	01/17/18 16:19	
EPA 6010	Chromium	17.6	mg/kg	1.2	01/17/18 16:19	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40163468006	B-12-8					
EPA 6010	Lead	5.8	mg/kg	1.5	01/17/18 16:19	1q
EPA 8260	Tetrachloroethene	38.6J	ug/kg	71.5	01/16/18 14:36	
ASTM D2974-87	Percent Moisture	16.1	%	0.10	01/15/18 11:34	
40163468007	B-10-3					
EPA 6010	Arsenic	9.3	mg/kg	5.8	01/17/18 16:22	
EPA 6010	Barium	83.1	mg/kg	0.58	01/17/18 16:22	
EPA 6010	Cadmium	0.43J	mg/kg	0.58	01/17/18 16:22	
EPA 6010	Chromium	17.2	mg/kg	1.2	01/17/18 16:22	
EPA 6010	Lead	166	mg/kg	1.5	01/17/18 16:22	
EPA 7471	Mercury	0.32	mg/kg	0.042	01/24/18 11:39	
EPA 8260	Tetrachloroethene	19600	ug/kg	221	01/16/18 19:52	
EPA 8260	Trichloroethene	350	ug/kg	221	01/16/18 19:52	
ASTM D2974-87	Percent Moisture	15.1	%	0.10	01/15/18 11:34	
40163468008	B-10-8					
EPA 6010	Arsenic	5.3J	mg/kg	5.6	01/17/18 16:12	
EPA 6010	Barium	17.7	mg/kg	0.56	01/17/18 16:12	
EPA 6010	Cadmium	0.20J	mg/kg	0.56	01/17/18 16:12	
EPA 6010	Chromium	10.2	mg/kg	1.1	01/17/18 16:12	
EPA 6010	Lead	6.4	mg/kg	1.5	01/17/18 16:12	1q
EPA 7471	Mercury	0.019J	mg/kg	0.042	01/24/18 11:41	
EPA 8260	Tetrachloroethene	340	ug/kg	68.1	01/16/18 14:58	
ASTM D2974-87	Percent Moisture	11.9	%	0.10	01/15/18 11:34	
40163468009	B-9-3					
EPA 6010	Arsenic	4.2J	mg/kg	5.3	01/17/18 16:24	
EPA 6010	Barium	17.2	mg/kg	0.53	01/17/18 16:24	
EPA 6010	Chromium	8.2	mg/kg	1.1	01/17/18 16:24	
EPA 6010	Lead	5.2	mg/kg	1.4	01/17/18 16:24	1q
EPA 8260	Tetrachloroethene	80.7J	ug/kg	108	01/16/18 15:21	
ASTM D2974-87	Percent Moisture	15.5	%	0.10	01/15/18 11:34	
40163468010	B-9-8					
EPA 6010	Arsenic	4.6J	mg/kg	5.6	01/19/18 11:06	
EPA 6010	Barium	48.5	mg/kg	0.56	01/19/18 11:06	
EPA 6010	Cadmium	0.19J	mg/kg	0.56	01/19/18 11:06	
EPA 6010	Chromium	23.5	mg/kg	1.1	01/19/18 11:06	
EPA 6010	Lead	8.2	mg/kg	1.5	01/19/18 11:06	
EPA 8260	Tetrachloroethene	3650	ug/kg	95.2	01/16/18 15:44	
ASTM D2974-87	Percent Moisture	16.0	%	0.10	01/15/18 11:34	
40163468011	B-8-3					
EPA 6010	Arsenic	5.1J	mg/kg	5.4	01/17/18 16:29	
EPA 6010	Barium	80.4	mg/kg	0.54	01/17/18 16:29	
EPA 6010	Cadmium	0.18J	mg/kg	0.54	01/17/18 16:29	
EPA 6010	Chromium	29.0	mg/kg	1.1	01/17/18 16:29	
EPA 6010	Lead	12.5	mg/kg	1.4	01/17/18 16:29	
EPA 7471	Mercury	0.042	mg/kg	0.040	01/24/18 11:48	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
40163468011	B-8-3					
ASTM D2974-87	Percent Moisture	17.2	%	0.10	01/15/18 11:34	
40163468012	B-8-8					
EPA 6010	Arsenic	10.4	mg/kg	5.6	01/17/18 16:36	
EPA 6010	Barium	73.4	mg/kg	0.56	01/17/18 16:36	
EPA 6010	Cadmium	0.21J	mg/kg	0.56	01/17/18 16:36	
EPA 6010	Chromium	20.7	mg/kg	1.1	01/17/18 16:36	
EPA 6010	Lead	8.3	mg/kg	1.5	01/17/18 16:36	
EPA 7471	Mercury	0.016J	mg/kg	0.041	01/24/18 11:50	
ASTM D2974-87	Percent Moisture	18.1	%	0.10	01/15/18 11:35	
40163468013	B-11-3					
EPA 6010	Arsenic	5.1J	mg/kg	5.4	01/17/18 16:39	
EPA 6010	Barium	91.9	mg/kg	0.54	01/17/18 16:39	
EPA 6010	Cadmium	0.17J	mg/kg	0.54	01/17/18 16:39	
EPA 6010	Chromium	19.1	mg/kg	1.1	01/17/18 16:39	
EPA 6010	Lead	96.3	mg/kg	1.4	01/17/18 16:39	
EPA 7471	Mercury	0.38	mg/kg	0.039	01/24/18 11:57	
EPA 8260	Tetrachloroethene	50.6J	ug/kg	115	01/16/18 16:52	
ASTM D2974-87	Percent Moisture	15.7	%	0.10	01/15/18 11:35	
40163468014	B-11-8					
EPA 6010	Arsenic	6.9	mg/kg	5.8	01/17/18 16:41	
EPA 6010	Barium	71.9	mg/kg	0.58	01/17/18 16:41	
EPA 6010	Cadmium	0.24J	mg/kg	0.58	01/17/18 16:41	
EPA 6010	Chromium	26.4	mg/kg	1.2	01/17/18 16:41	
EPA 6010	Lead	8.1	mg/kg	1.5	01/17/18 16:41	
EPA 7471	Mercury	0.019J	mg/kg	0.044	01/24/18 11:59	
ASTM D2974-87	Percent Moisture	17.0	%	0.10	01/15/18 11:35	
40163468015	B-13-3					
EPA 6010	Arsenic	4.0J	mg/kg	5.6	01/17/18 16:44	
EPA 6010	Barium	21.8	mg/kg	0.56	01/17/18 16:44	
EPA 6010	Cadmium	0.28J	mg/kg	0.56	01/17/18 16:44	
EPA 6010	Chromium	10.1	mg/kg	1.1	01/17/18 16:44	
EPA 6010	Lead	7.6	mg/kg	1.5	01/17/18 16:44	
EPA 7471	Mercury	0.029J	mg/kg	0.041	01/24/18 12:02	
ASTM D2974-87	Percent Moisture	12.7	%	0.10	01/15/18 11:35	
40163468016	B-13-8					
EPA 6010	Arsenic	5.0J	mg/kg	5.6	01/17/18 16:46	
EPA 6010	Barium	49.5	mg/kg	0.56	01/17/18 16:46	
EPA 6010	Cadmium	0.23J	mg/kg	0.56	01/17/18 16:46	
EPA 6010	Chromium	20.6	mg/kg	1.1	01/17/18 16:46	
EPA 6010	Lead	7.6	mg/kg	1.5	01/17/18 16:46	
EPA 7471	Mercury	0.013J	mg/kg	0.042	01/24/18 12:04	
ASTM D2974-87	Percent Moisture	13.9	%	0.10	01/15/18 11:35	
40163468017	B-16-3					
EPA 6010	Arsenic	4.6J	mg/kg	6.0	01/17/18 16:49	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40163468017	B-16-3					
EPA 6010	Barium	59.8	mg/kg	0.60	01/17/18 16:49	
EPA 6010	Cadmium	0.18J	mg/kg	0.60	01/17/18 16:49	
EPA 6010	Chromium	26.1	mg/kg	1.2	01/17/18 16:49	
EPA 6010	Lead	10.3	mg/kg	1.6	01/17/18 16:49	
EPA 7471	Mercury	0.055	mg/kg	0.041	01/24/18 12:18	
ASTM D2974-87	Percent Moisture	18.2	%	0.10	01/15/18 11:35	
40163468018	B-16-8					
EPA 6010	Arsenic	5.6	mg/kg	5.2	01/17/18 16:51	
EPA 6010	Barium	61.2	mg/kg	0.52	01/17/18 16:51	
EPA 6010	Cadmium	0.15J	mg/kg	0.52	01/17/18 16:51	
EPA 6010	Chromium	18.0	mg/kg	1.0	01/17/18 16:51	
EPA 6010	Lead	7.1	mg/kg	1.4	01/17/18 16:51	
ASTM D2974-87	Percent Moisture	12.8	%	0.10	01/15/18 11:35	
40163468019	B-15-3					
EPA 6010	Arsenic	4.8J	mg/kg	5.9	01/17/18 16:54	
EPA 6010	Barium	71.1	mg/kg	0.59	01/17/18 16:54	
EPA 6010	Chromium	22.2	mg/kg	1.2	01/17/18 16:54	
EPA 6010	Lead	11.2	mg/kg	1.5	01/17/18 16:54	
EPA 7471	Mercury	0.016J	mg/kg	0.044	01/24/18 12:27	
ASTM D2974-87	Percent Moisture	17.2	%	0.10	01/15/18 11:35	
40163468020	B-15-8					
EPA 6010	Arsenic	6.5	mg/kg	6.0	01/19/18 11:08	
EPA 6010	Barium	67.3	mg/kg	0.60	01/19/18 11:08	
EPA 6010	Cadmium	0.29J	mg/kg	0.60	01/19/18 11:08	
EPA 6010	Chromium	27.3	mg/kg	1.2	01/19/18 11:08	
EPA 6010	Lead	9.8	mg/kg	1.6	01/19/18 11:08	
EPA 7471	Mercury	0.045	mg/kg	0.042	01/24/18 12:29	
ASTM D2974-87	Percent Moisture	18.6	%	0.10	01/15/18 11:35	
40163468021	TW-7					
EPA 6010	Barium, Dissolved	170	ug/L	5.0	01/16/18 15:46	
EPA 6010	Silver, Dissolved	3.4J	ug/L	10.0	01/16/18 15:46	
EPA 8260	Chloromethane	1.7	ug/L	1.0	01/15/18 19:02	
EPA 8260	cis-1,2-Dichloroethene	0.49J	ug/L	1.0	01/15/18 19:02	
EPA 8260	Tetrachloroethene	61.8	ug/L	1.0	01/15/18 19:02	
EPA 8260	Trichloroethene	1.7	ug/L	1.0	01/15/18 19:02	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-7-3 Lab ID: 40163468001 Collected: 01/10/18 09:45 Received: 01/13/18 08:45 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									
Arsenic	4.4J	mg/kg	5.9	1.2	1	01/17/18 13:10	01/19/18 00:06	7440-38-2	
Barium	335	mg/kg	0.59	0.18	1	01/17/18 13:10	01/19/18 00:06	7440-39-3	
Cadmium	0.31J	mg/kg	0.59	0.16	1	01/17/18 13:10	01/19/18 00:06	7440-43-9	
Chromium	12.4	mg/kg	1.2	0.33	1	01/17/18 13:10	01/19/18 00:06	7440-47-3	
Lead	491	mg/kg	1.5	0.51	1	01/17/18 13:10	01/19/18 00:06	7439-92-1	
Selenium	<1.3	mg/kg	5.9	1.3	1	01/17/18 13:10	01/19/18 00:06	7782-49-2	
Silver	<0.41	mg/kg	1.2	0.41	1	01/17/18 13:10	01/19/18 00:06	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.96	mg/kg	0.040	0.012	1	01/24/18 06:29	01/24/18 11:20	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	630-20-6	W
1,1,1-Trichloroethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	71-55-6	W
1,1,2,2-Tetrachloroethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	79-34-5	W
1,1,2-Trichloroethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	79-00-5	W
1,1-Dichloroethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-34-3	W
1,1-Dichloroethene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-35-4	W
1,1-Dichloropropene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	563-58-6	W
1,2,3-Trichlorobenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	87-61-6	W
1,2,3-Trichloropropane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	96-18-4	W
1,2,4-Trichlorobenzene	<53.4	ug/kg	281	53.4	1	01/16/18 08:45	01/16/18 13:05	120-82-1	L2,W
1,2,4-Trimethylbenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	95-63-6	W
1,2-Dibromo-3-chloropropane	<103	ug/kg	281	103	1	01/16/18 08:45	01/16/18 13:05	96-12-8	W
1,2-Dibromoethane (EDB)	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	106-93-4	W
1,2-Dichlorobenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	95-50-1	W
1,2-Dichloroethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	107-06-2	W
1,2-Dichloropropane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	78-87-5	W
1,3,5-Trimethylbenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	108-67-8	W
1,3-Dichlorobenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	541-73-1	W
1,3-Dichloropropane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	142-28-9	W
1,4-Dichlorobenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	106-46-7	W
2,2-Dichloropropane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	594-20-7	W
2-Chlorotoluene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	95-49-8	W
4-Chlorotoluene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	106-43-4	W
Benzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	71-43-2	W
Bromobenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	108-86-1	W
Bromochloromethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	74-97-5	W
Bromodichloromethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-27-4	W
Bromoform	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-25-2	W
Bromomethane	<78.5	ug/kg	281	78.5	1	01/16/18 08:45	01/16/18 13:05	74-83-9	W
Carbon tetrachloride	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	56-23-5	W
Chlorobenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	108-90-7	W
Chloroethane	<75.3	ug/kg	281	75.3	1	01/16/18 08:45	01/16/18 13:05	75-00-3	W
Chloroform	<52.2	ug/kg	281	52.2	1	01/16/18 08:45	01/16/18 13:05	67-66-3	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-7-3 **Lab ID: 40163468001** Collected: 01/10/18 09:45 Received: 01/13/18 08:45 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									
Chloromethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	74-87-3	W
Dibromochloromethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	124-48-1	W
Dibromomethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	74-95-3	W
Dichlorodifluoromethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-71-8	W
Diisopropyl ether	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	108-20-3	W
Ethylbenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	100-41-4	W
Hexachloro-1,3-butadiene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	87-68-3	W
Isopropylbenzene (Cumene)	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	98-82-8	W
Methyl-tert-butyl ether	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	1634-04-4	W
Methylene Chloride	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-09-2	W
Naphthalene	<45.0	ug/kg	281	45.0	1	01/16/18 08:45	01/16/18 13:05	91-20-3	W
Styrene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	100-42-5	W
Tetrachloroethene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	127-18-4	W
Toluene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	108-88-3	W
Trichloroethene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	79-01-6	W
Trichlorofluoromethane	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-69-4	W
Vinyl chloride	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-01-4	W
Xylene (Total)	<84.3	ug/kg	202	84.3	1	01/16/18 08:45	01/16/18 13:05	1330-20-7	W
cis-1,2-Dichloroethene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	156-59-2	W
cis-1,3-Dichloropropene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	10061-01-5	W
m&p-Xylene	<56.2	ug/kg	135	56.2	1	01/16/18 08:45	01/16/18 13:05	179601-23-1	W
n-Butylbenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	104-51-8	W
n-Propylbenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	103-65-1	W
o-Xylene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	95-47-6	W
p-Isopropyltoluene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	99-87-6	W
sec-Butylbenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	135-98-8	W
tert-Butylbenzene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	98-06-6	W
trans-1,2-Dichloroethene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	156-60-5	W
trans-1,3-Dichloropropene	<28.1	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	121	%	68-130		1	01/16/18 08:45	01/16/18 13:05	1868-53-7	
Toluene-d8 (S)	105	%	68-149		1	01/16/18 08:45	01/16/18 13:05	2037-26-5	
4-Bromofluorobenzene (S)	88	%	58-141		1	01/16/18 08:45	01/16/18 13:05	460-00-4	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	16.9	%	0.10	0.10	1		01/15/18 11:00		
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-7-7.5 Lab ID: 40163468002 Collected: 01/10/18 09:55 Received: 01/13/18 08:45 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									
Arsenic	3.0J	mg/kg	5.0	1.0	1	01/17/18 13:10	01/19/18 00:09	7440-38-2	
Barium	10.8	mg/kg	0.50	0.15	1	01/17/18 13:10	01/19/18 00:09	7440-39-3	
Cadmium	<0.13	mg/kg	0.50	0.13	1	01/17/18 13:10	01/19/18 00:09	7440-43-9	
Chromium	6.2	mg/kg	1.0	0.28	1	01/17/18 13:10	01/19/18 00:09	7440-47-3	
Lead	5.2	mg/kg	1.3	0.43	1	01/17/18 13:10	01/19/18 00:09	7439-92-1	
Selenium	<1.1	mg/kg	5.0	1.1	1	01/17/18 13:10	01/19/18 00:09	7782-49-2	
Silver	<0.34	mg/kg	1.0	0.34	1	01/17/18 13:10	01/19/18 00:09	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.039	0.012	1	01/24/18 06:29	01/24/18 11:22	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 12:43	120-82-1	L2,W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 12:43	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 12:43	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 12:43	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 12:43	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-7-7.5 Lab ID: 40163468002 Collected: 01/10/18 09:55 Received: 01/13/18 08:45 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									
Chloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 12:43	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	100-42-5	W
Tetrachloroethene	29.5J	ug/kg	64.1	26.7	1	01/16/18 08:45	01/16/18 12:43	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 12:43	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 12:43	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	125	%	68-130		1	01/16/18 08:45	01/16/18 12:43	1868-53-7	
Toluene-d8 (S)	106	%	68-149		1	01/16/18 08:45	01/16/18 12:43	2037-26-5	
4-Bromofluorobenzene (S)	90	%	58-141		1	01/16/18 08:45	01/16/18 12:43	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	6.5	%	0.10	0.10	1		01/15/18 11:00		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-14-3 **Lab ID: 40163468003** Collected: 01/10/18 11:38 Received: 01/13/18 08:45 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									
Arsenic	5.5J	mg/kg	5.9	1.2	1	01/17/18 13:10	01/19/18 00:11	7440-38-2	
Barium	58.4	mg/kg	0.59	0.18	1	01/17/18 13:10	01/19/18 00:11	7440-39-3	
Cadmium	0.22J	mg/kg	0.59	0.16	1	01/17/18 13:10	01/19/18 00:11	7440-43-9	
Chromium	25.8	mg/kg	1.2	0.33	1	01/17/18 13:10	01/19/18 00:11	7440-47-3	
Lead	11.5	mg/kg	1.5	0.51	1	01/17/18 13:10	01/19/18 00:11	7439-92-1	
Selenium	<1.3	mg/kg	5.9	1.3	1	01/17/18 13:10	01/19/18 00:11	7782-49-2	
Silver	<0.41	mg/kg	1.2	0.41	1	01/17/18 13:10	01/19/18 00:11	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.020J	mg/kg	0.044	0.013	1	01/24/18 06:29	01/24/18 11:29	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	630-20-6	W
1,1,1-Trichloroethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	71-55-6	W
1,1,2,2-Tetrachloroethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	79-34-5	W
1,1,2-Trichloroethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	79-00-5	W
1,1-Dichloroethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-34-3	W
1,1-Dichloroethene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-35-4	W
1,1-Dichloropropene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	563-58-6	W
1,2,3-Trichlorobenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	87-61-6	W
1,2,3-Trichloropropane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	96-18-4	W
1,2,4-Trichlorobenzene	<61.8	ug/kg	325	61.8	1	01/16/18 08:45	01/16/18 13:28	120-82-1	L2,W
1,2,4-Trimethylbenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	95-63-6	W
1,2-Dibromo-3-chloropropane	<118	ug/kg	325	118	1	01/16/18 08:45	01/16/18 13:28	96-12-8	W
1,2-Dibromoethane (EDB)	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	106-93-4	W
1,2-Dichlorobenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	95-50-1	W
1,2-Dichloroethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	107-06-2	W
1,2-Dichloropropane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	78-87-5	W
1,3,5-Trimethylbenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	108-67-8	W
1,3-Dichlorobenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	541-73-1	W
1,3-Dichloropropane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	142-28-9	W
1,4-Dichlorobenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	106-46-7	W
2,2-Dichloropropane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	594-20-7	W
2-Chlorotoluene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	95-49-8	W
4-Chlorotoluene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	106-43-4	W
Benzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	71-43-2	W
Bromobenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	108-86-1	W
Bromochloromethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	74-97-5	W
Bromodichloromethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-27-4	W
Bromoform	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-25-2	W
Bromomethane	<90.8	ug/kg	325	90.8	1	01/16/18 08:45	01/16/18 13:28	74-83-9	W
Carbon tetrachloride	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	56-23-5	W
Chlorobenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	108-90-7	W
Chloroethane	<87.0	ug/kg	325	87.0	1	01/16/18 08:45	01/16/18 13:28	75-00-3	W
Chloroform	<60.3	ug/kg	325	60.3	1	01/16/18 08:45	01/16/18 13:28	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-14-3 **Lab ID: 40163468003** Collected: 01/10/18 11:38 Received: 01/13/18 08:45 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									
Chloromethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	74-87-3	W
Dibromochloromethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	124-48-1	W
Dibromomethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	74-95-3	W
Dichlorodifluoromethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-71-8	W
Diisopropyl ether	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	108-20-3	W
Ethylbenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	100-41-4	W
Hexachloro-1,3-butadiene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	87-68-3	W
Isopropylbenzene (Cumene)	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	98-82-8	W
Methyl-tert-butyl ether	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	1634-04-4	W
Methylene Chloride	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-09-2	W
Naphthalene	<52.0	ug/kg	325	52.0	1	01/16/18 08:45	01/16/18 13:28	91-20-3	W
Styrene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	100-42-5	W
Tetrachloroethene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	127-18-4	W
Toluene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	108-88-3	W
Trichloroethene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	79-01-6	W
Trichlorofluoromethane	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-69-4	W
Vinyl chloride	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-01-4	W
Xylene (Total)	<97.4	ug/kg	234	97.4	1	01/16/18 08:45	01/16/18 13:28	1330-20-7	W
cis-1,2-Dichloroethene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	156-59-2	W
cis-1,3-Dichloropropene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	10061-01-5	W
m&p-Xylene	<64.9	ug/kg	156	64.9	1	01/16/18 08:45	01/16/18 13:28	179601-23-1	W
n-Butylbenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	104-51-8	W
n-Propylbenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	103-65-1	W
o-Xylene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	95-47-6	W
p-Isopropyltoluene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	99-87-6	W
sec-Butylbenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	135-98-8	W
tert-Butylbenzene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	98-06-6	W
trans-1,2-Dichloroethene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	156-60-5	W
trans-1,3-Dichloropropene	<32.5	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	124	%	68-130		1	01/16/18 08:45	01/16/18 13:28	1868-53-7	
Toluene-d8 (S)	104	%	68-149		1	01/16/18 08:45	01/16/18 13:28	2037-26-5	
4-Bromofluorobenzene (S)	89	%	58-141		1	01/16/18 08:45	01/16/18 13:28	460-00-4	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	17.1	%	0.10	0.10	1		01/15/18 11:00		
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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-14-8 **Lab ID: 40163468004** Collected: 01/10/18 11:42 Received: 01/13/18 08:45 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									
Arsenic	4.8J	mg/kg	5.4	1.1	1	01/17/18 13:10	01/19/18 00:18	7440-38-2	
Barium	74.2	mg/kg	0.54	0.16	1	01/17/18 13:10	01/19/18 00:18	7440-39-3	
Cadmium	0.24J	mg/kg	0.54	0.14	1	01/17/18 13:10	01/19/18 00:18	7440-43-9	
Chromium	19.7	mg/kg	1.1	0.30	1	01/17/18 13:10	01/19/18 00:18	7440-47-3	
Lead	8.7	mg/kg	1.4	0.47	1	01/17/18 13:10	01/19/18 00:18	7439-92-1	
Selenium	<1.2	mg/kg	5.4	1.2	1	01/17/18 13:10	01/19/18 00:18	7782-49-2	
Silver	<0.37	mg/kg	1.1	0.37	1	01/17/18 13:10	01/19/18 00:18	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.014J	mg/kg	0.040	0.012	1	01/24/18 06:29	01/24/18 11:32	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 13:51	120-82-1	L2,W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 13:51	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 13:51	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 13:51	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 13:51	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-14-8 **Lab ID: 40163468004** Collected: 01/10/18 11:42 Received: 01/13/18 08:45 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									
Chloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 13:51	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 13:51	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 13:51	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	125	%	68-130		1	01/16/18 08:45	01/16/18 13:51	1868-53-7	
Toluene-d8 (S)	107	%	68-149		1	01/16/18 08:45	01/16/18 13:51	2037-26-5	
4-Bromofluorobenzene (S)	90	%	58-141		1	01/16/18 08:45	01/16/18 13:51	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	17.0	%	0.10	0.10	1		01/15/18 11:34		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-12-3 Lab ID: 40163468005 Collected: 01/10/18 12:43 Received: 01/13/18 08:45 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									
Arsenic	4.5J	mg/kg	5.7	1.2	1	01/17/18 13:10	01/19/18 00:21	7440-38-2	
Barium	46.5	mg/kg	0.57	0.17	1	01/17/18 13:10	01/19/18 00:21	7440-39-3	
Cadmium	0.16J	mg/kg	0.57	0.15	1	01/17/18 13:10	01/19/18 00:21	7440-43-9	
Chromium	16.2	mg/kg	1.1	0.32	1	01/17/18 13:10	01/19/18 00:21	7440-47-3	
Lead	8.5	mg/kg	1.5	0.50	1	01/17/18 13:10	01/19/18 00:21	7439-92-1	
Selenium	1.4J	mg/kg	5.7	1.3	1	01/17/18 13:10	01/19/18 00:21	7782-49-2	
Silver	<0.40	mg/kg	1.1	0.40	1	01/17/18 13:10	01/19/18 00:21	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.018J	mg/kg	0.040	0.012	1	01/24/18 06:29	01/24/18 11:34	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	630-20-6	W
1,1,1-Trichloroethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	71-55-6	W
1,1,2,2-Tetrachloroethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	79-34-5	W
1,1,2-Trichloroethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	79-00-5	W
1,1-Dichloroethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-34-3	W
1,1-Dichloroethene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-35-4	W
1,1-Dichloropropene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	563-58-6	W
1,2,3-Trichlorobenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	87-61-6	W
1,2,3-Trichloropropane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	96-18-4	W
1,2,4-Trichlorobenzene	<67.0	ug/kg	352	67.0	1	01/16/18 08:45	01/16/18 14:13	120-82-1	L2,W
1,2,4-Trimethylbenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	95-63-6	W
1,2-Dibromo-3-chloropropane	<129	ug/kg	352	129	1	01/16/18 08:45	01/16/18 14:13	96-12-8	W
1,2-Dibromoethane (EDB)	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	106-93-4	W
1,2-Dichlorobenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	95-50-1	W
1,2-Dichloroethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	107-06-2	W
1,2-Dichloropropane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	78-87-5	W
1,3,5-Trimethylbenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	108-67-8	W
1,3-Dichlorobenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	541-73-1	W
1,3-Dichloropropane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	142-28-9	W
1,4-Dichlorobenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	106-46-7	W
2,2-Dichloropropane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	594-20-7	W
2-Chlorotoluene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	95-49-8	W
4-Chlorotoluene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	106-43-4	W
Benzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	71-43-2	W
Bromobenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	108-86-1	W
Bromochloromethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	74-97-5	W
Bromodichloromethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-27-4	W
Bromoform	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-25-2	W
Bromomethane	<98.5	ug/kg	352	98.5	1	01/16/18 08:45	01/16/18 14:13	74-83-9	W
Carbon tetrachloride	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	56-23-5	W
Chlorobenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	108-90-7	W
Chloroethane	<94.4	ug/kg	352	94.4	1	01/16/18 08:45	01/16/18 14:13	75-00-3	W
Chloroform	<65.4	ug/kg	352	65.4	1	01/16/18 08:45	01/16/18 14:13	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-12-3 **Lab ID: 40163468005** Collected: 01/10/18 12:43 Received: 01/13/18 08:45 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									
Chloromethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	74-87-3	W
Dibromochloromethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	124-48-1	W
Dibromomethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	74-95-3	W
Dichlorodifluoromethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-71-8	W
Diisopropyl ether	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	108-20-3	W
Ethylbenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	100-41-4	W
Hexachloro-1,3-butadiene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	87-68-3	W
Isopropylbenzene (Cumene)	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	98-82-8	W
Methyl-tert-butyl ether	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	1634-04-4	W
Methylene Chloride	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-09-2	W
Naphthalene	<56.4	ug/kg	352	56.4	1	01/16/18 08:45	01/16/18 14:13	91-20-3	W
Styrene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	100-42-5	W
Tetrachloroethene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	127-18-4	W
Toluene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	108-88-3	W
Trichloroethene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	79-01-6	W
Trichlorofluoromethane	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-69-4	W
Vinyl chloride	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-01-4	W
Xylene (Total)	<106	ug/kg	254	106	1	01/16/18 08:45	01/16/18 14:13	1330-20-7	W
cis-1,2-Dichloroethene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	156-59-2	W
cis-1,3-Dichloropropene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	10061-01-5	W
m&p-Xylene	<70.4	ug/kg	169	70.4	1	01/16/18 08:45	01/16/18 14:13	179601-23-1	W
n-Butylbenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	104-51-8	W
n-Propylbenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	103-65-1	W
o-Xylene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	95-47-6	W
p-Isopropyltoluene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	99-87-6	W
sec-Butylbenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	135-98-8	W
tert-Butylbenzene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	98-06-6	W
trans-1,2-Dichloroethene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	156-60-5	W
trans-1,3-Dichloropropene	<35.2	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	130	%	68-130		1	01/16/18 08:45	01/16/18 14:13	1868-53-7	
Toluene-d8 (S)	106	%	68-149		1	01/16/18 08:45	01/16/18 14:13	2037-26-5	
4-Bromofluorobenzene (S)	89	%	58-141		1	01/16/18 08:45	01/16/18 14:13	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	15.0	%	0.10	0.10	1		01/15/18 11:34		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-12-8 **Lab ID: 40163468006** Collected: 01/10/18 12:45 Received: 01/13/18 08:45 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									
Arsenic	3.8J	mg/kg	5.9	1.2	1	01/16/18 13:32	01/17/18 16:19	7440-38-2	
Barium	61.8	mg/kg	0.59	0.18	1	01/16/18 13:32	01/17/18 16:19	7440-39-3	
Cadmium	0.20J	mg/kg	0.59	0.16	1	01/16/18 13:32	01/17/18 16:19	7440-43-9	
Chromium	17.6	mg/kg	1.2	0.33	1	01/16/18 13:32	01/17/18 16:19	7440-47-3	
Lead	5.8	mg/kg	1.5	0.51	1	01/16/18 13:32	01/17/18 16:19	7439-92-1	1q
Selenium	<1.3	mg/kg	5.9	1.3	1	01/16/18 13:32	01/17/18 16:19	7782-49-2	
Silver	<0.41	mg/kg	1.2	0.41	1	01/16/18 13:32	01/17/18 16:19	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.040	0.012	1	01/24/18 06:29	01/24/18 11:36	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 14:36	120-82-1	L2,W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 14:36	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 14:36	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 14:36	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 14:36	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-12-8 **Lab ID: 40163468006** Collected: 01/10/18 12:45 Received: 01/13/18 08:45 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									
Chloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 14:36	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	100-42-5	W
Tetrachloroethene	38.6J	ug/kg	71.5	29.8	1	01/16/18 08:45	01/16/18 14:36	127-18-4	
Toluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 14:36	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 14:36	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	138	%	68-130		1	01/16/18 08:45	01/16/18 14:36	1868-53-7	S3
Toluene-d8 (S)	115	%	68-149		1	01/16/18 08:45	01/16/18 14:36	2037-26-5	
4-Bromofluorobenzene (S)	94	%	58-141		1	01/16/18 08:45	01/16/18 14:36	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	16.1	%	0.10	0.10	1		01/15/18 11:34		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-10-3 **Lab ID: 40163468007** Collected: 01/10/18 13:00 Received: 01/13/18 08:45 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									
Arsenic	9.3	mg/kg	5.8	1.2	1	01/16/18 13:32	01/17/18 16:22	7440-38-2	
Barium	83.1	mg/kg	0.58	0.17	1	01/16/18 13:32	01/17/18 16:22	7440-39-3	
Cadmium	0.43J	mg/kg	0.58	0.15	1	01/16/18 13:32	01/17/18 16:22	7440-43-9	
Chromium	17.2	mg/kg	1.2	0.32	1	01/16/18 13:32	01/17/18 16:22	7440-47-3	
Lead	166	mg/kg	1.5	0.50	1	01/16/18 13:32	01/17/18 16:22	7439-92-1	
Selenium	<1.3	mg/kg	5.8	1.3	1	01/16/18 13:32	01/17/18 16:22	7782-49-2	
Silver	<0.40	mg/kg	1.2	0.40	1	01/16/18 13:32	01/17/18 16:22	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.32	mg/kg	0.042	0.013	1	01/24/18 06:29	01/24/18 11:39	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	630-20-6	W
1,1,1-Trichloroethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	71-55-6	W
1,1,2,2-Tetrachloroethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	79-34-5	W
1,1,2-Trichloroethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	79-00-5	W
1,1-Dichloroethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-34-3	W
1,1-Dichloroethene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-35-4	W
1,1-Dichloropropene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	563-58-6	W
1,2,3-Trichlorobenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	87-61-6	W
1,2,3-Trichloropropane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	96-18-4	W
1,2,4-Trichlorobenzene	<149	ug/kg	781	149	2	01/16/18 08:45	01/16/18 19:52	120-82-1	L2,W
1,2,4-Trimethylbenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	95-63-6	W
1,2-Dibromo-3-chloropropane	<285	ug/kg	781	285	2	01/16/18 08:45	01/16/18 19:52	96-12-8	W
1,2-Dibromoethane (EDB)	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	106-93-4	W
1,2-Dichlorobenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	95-50-1	W
1,2-Dichloroethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	107-06-2	W
1,2-Dichloropropane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	78-87-5	W
1,3,5-Trimethylbenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	108-67-8	W
1,3-Dichlorobenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	541-73-1	W
1,3-Dichloropropane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	142-28-9	W
1,4-Dichlorobenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	106-46-7	W
2,2-Dichloropropane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	594-20-7	W
2-Chlorotoluene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	95-49-8	W
4-Chlorotoluene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	106-43-4	W
Benzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	71-43-2	W
Bromobenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	108-86-1	W
Bromochloromethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	74-97-5	W
Bromodichloromethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-27-4	W
Bromoform	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-25-2	W
Bromomethane	<218	ug/kg	781	218	2	01/16/18 08:45	01/16/18 19:52	74-83-9	W
Carbon tetrachloride	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	56-23-5	W
Chlorobenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	108-90-7	W
Chloroethane	<209	ug/kg	781	209	2	01/16/18 08:45	01/16/18 19:52	75-00-3	W
Chloroform	<145	ug/kg	781	145	2	01/16/18 08:45	01/16/18 19:52	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-10-3 **Lab ID: 40163468007** Collected: 01/10/18 13:00 Received: 01/13/18 08:45 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									
Chloromethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	74-87-3	W
Dibromochloromethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	124-48-1	W
Dibromomethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	74-95-3	W
Dichlorodifluoromethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-71-8	W
Diisopropyl ether	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	108-20-3	W
Ethylbenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	100-41-4	W
Hexachloro-1,3-butadiene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	87-68-3	W
Isopropylbenzene (Cumene)	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	98-82-8	W
Methyl-tert-butyl ether	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	1634-04-4	W
Methylene Chloride	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-09-2	W
Naphthalene	<125	ug/kg	781	125	2	01/16/18 08:45	01/16/18 19:52	91-20-3	W
Styrene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	100-42-5	W
Tetrachloroethene	19600	ug/kg	221	92.1	2	01/16/18 08:45	01/16/18 19:52	127-18-4	
Toluene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	108-88-3	W
Trichloroethene	350	ug/kg	221	92.1	2	01/16/18 08:45	01/16/18 19:52	79-01-6	
Trichlorofluoromethane	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-69-4	W
Vinyl chloride	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-01-4	W
Xylene (Total)	<234	ug/kg	562	234	2	01/16/18 08:45	01/16/18 19:52	1330-20-7	W
cis-1,2-Dichloroethene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	156-59-2	W
cis-1,3-Dichloropropene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	10061-01-5	W
m&p-Xylene	<156	ug/kg	375	156	2	01/16/18 08:45	01/16/18 19:52	179601-23-1	W
n-Butylbenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	104-51-8	W
n-Propylbenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	103-65-1	W
o-Xylene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	95-47-6	W
p-Isopropyltoluene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	99-87-6	W
sec-Butylbenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	135-98-8	W
tert-Butylbenzene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	98-06-6	W
trans-1,2-Dichloroethene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	156-60-5	W
trans-1,3-Dichloropropene	<78.1	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	123	%	68-130		2	01/16/18 08:45	01/16/18 19:52	1868-53-7	
Toluene-d8 (S)	96	%	68-149		2	01/16/18 08:45	01/16/18 19:52	2037-26-5	
4-Bromofluorobenzene (S)	76	%	58-141		2	01/16/18 08:45	01/16/18 19:52	460-00-4	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	15.1	%	0.10	0.10	1		01/15/18 11:34		
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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-10-8 Lab ID: 40163468008 Collected: 01/10/18 13:05 Received: 01/13/18 08:45 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									
Arsenic	5.3J	mg/kg	5.6	1.2	1	01/16/18 13:32	01/17/18 16:12	7440-38-2	
Barium	17.7	mg/kg	0.56	0.17	1	01/16/18 13:32	01/17/18 16:12	7440-39-3	
Cadmium	0.20J	mg/kg	0.56	0.15	1	01/16/18 13:32	01/17/18 16:12	7440-43-9	
Chromium	10.2	mg/kg	1.1	0.31	1	01/16/18 13:32	01/17/18 16:12	7440-47-3	
Lead	6.4	mg/kg	1.5	0.49	1	01/16/18 13:32	01/17/18 16:12	7439-92-1	1q
Selenium	<1.3	mg/kg	5.6	1.3	1	01/16/18 13:32	01/17/18 16:12	7782-49-2	
Silver	<0.39	mg/kg	1.1	0.39	1	01/16/18 13:32	01/17/18 16:12	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.019J	mg/kg	0.042	0.012	1	01/24/18 06:29	01/24/18 11:41	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 14:58	120-82-1	L2,W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 14:58	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 14:58	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 14:58	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 14:58	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-10-8 **Lab ID: 40163468008** Collected: 01/10/18 13:05 Received: 01/13/18 08:45 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							
Chloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 14:58	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	100-42-5	W
Tetrachloroethene	340	ug/kg	68.1	28.4	1	01/16/18 08:45	01/16/18 14:58	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 14:58	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 14:58	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	126	%	68-130		1	01/16/18 08:45	01/16/18 14:58	1868-53-7	
Toluene-d8 (S)	104	%	68-149		1	01/16/18 08:45	01/16/18 14:58	2037-26-5	
4-Bromofluorobenzene (S)	87	%	58-141		1	01/16/18 08:45	01/16/18 14:58	460-00-4	
Percent Moisture		Analytical Method: ASTM D2974-87							
Percent Moisture	11.9	%	0.10	0.10	1		01/15/18 11:34		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-9-3 Lab ID: 40163468009 Collected: 01/10/18 13:30 Received: 01/13/18 08:45 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									
Arsenic	4.2J	mg/kg	5.3	1.1	1	01/16/18 13:32	01/17/18 16:24	7440-38-2	
Barium	17.2	mg/kg	0.53	0.16	1	01/16/18 13:32	01/17/18 16:24	7440-39-3	
Cadmium	<0.14	mg/kg	0.53	0.14	1	01/16/18 13:32	01/17/18 16:24	7440-43-9	
Chromium	8.2	mg/kg	1.1	0.29	1	01/16/18 13:32	01/17/18 16:24	7440-47-3	
Lead	5.2	mg/kg	1.4	0.46	1	01/16/18 13:32	01/17/18 16:24	7439-92-1	1q
Selenium	<1.2	mg/kg	5.3	1.2	1	01/16/18 13:32	01/17/18 16:24	7782-49-2	
Silver	<0.36	mg/kg	1.1	0.36	1	01/16/18 13:32	01/17/18 16:24	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.039	0.012	1	01/24/18 06:29	01/24/18 11:43	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	630-20-6	W
1,1,1-Trichloroethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	71-55-6	W
1,1,2,2-Tetrachloroethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	79-34-5	W
1,1,2-Trichloroethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	79-00-5	W
1,1-Dichloroethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-34-3	W
1,1-Dichloroethene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-35-4	W
1,1-Dichloropropene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	563-58-6	W
1,2,3-Trichlorobenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	87-61-6	W
1,2,3-Trichloropropane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	96-18-4	W
1,2,4-Trichlorobenzene	<72.0	ug/kg	379	72.0	1	01/16/18 08:45	01/16/18 15:21	120-82-1	L2,W
1,2,4-Trimethylbenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	95-63-6	W
1,2-Dibromo-3-chloropropane	<138	ug/kg	379	138	1	01/16/18 08:45	01/16/18 15:21	96-12-8	W
1,2-Dibromoethane (EDB)	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	106-93-4	W
1,2-Dichlorobenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	95-50-1	W
1,2-Dichloroethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	107-06-2	W
1,2-Dichloropropane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	78-87-5	W
1,3,5-Trimethylbenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	108-67-8	W
1,3-Dichlorobenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	541-73-1	W
1,3-Dichloropropane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	142-28-9	W
1,4-Dichlorobenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	106-46-7	W
2,2-Dichloropropane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	594-20-7	W
2-Chlorotoluene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	95-49-8	W
4-Chlorotoluene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	106-43-4	W
Benzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	71-43-2	W
Bromobenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	108-86-1	W
Bromochloromethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	74-97-5	W
Bromodichloromethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-27-4	W
Bromoform	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-25-2	W
Bromomethane	<106	ug/kg	379	106	1	01/16/18 08:45	01/16/18 15:21	74-83-9	W
Carbon tetrachloride	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	56-23-5	W
Chlorobenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	108-90-7	W
Chloroethane	<102	ug/kg	379	102	1	01/16/18 08:45	01/16/18 15:21	75-00-3	W
Chloroform	<70.4	ug/kg	379	70.4	1	01/16/18 08:45	01/16/18 15:21	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-9-3 **Lab ID: 40163468009** Collected: 01/10/18 13:30 Received: 01/13/18 08:45 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							
Chloromethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	74-87-3	W
Dibromochloromethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	124-48-1	W
Dibromomethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	74-95-3	W
Dichlorodifluoromethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-71-8	W
Diisopropyl ether	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	108-20-3	W
Ethylbenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	100-41-4	W
Hexachloro-1,3-butadiene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	87-68-3	W
Isopropylbenzene (Cumene)	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	98-82-8	W
Methyl-tert-butyl ether	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	1634-04-4	W
Methylene Chloride	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-09-2	W
Naphthalene	<60.7	ug/kg	379	60.7	1	01/16/18 08:45	01/16/18 15:21	91-20-3	W
Styrene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	100-42-5	W
Tetrachloroethene	80.7J	ug/kg	108	44.8	1	01/16/18 08:45	01/16/18 15:21	127-18-4	
Toluene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	108-88-3	W
Trichloroethene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	79-01-6	W
Trichlorofluoromethane	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-69-4	W
Vinyl chloride	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-01-4	W
Xylene (Total)	<114	ug/kg	273	114	1	01/16/18 08:45	01/16/18 15:21	1330-20-7	W
cis-1,2-Dichloroethene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	156-59-2	W
cis-1,3-Dichloropropene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	10061-01-5	W
m&p-Xylene	<75.8	ug/kg	182	75.8	1	01/16/18 08:45	01/16/18 15:21	179601-23-1	W
n-Butylbenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	104-51-8	W
n-Propylbenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	103-65-1	W
o-Xylene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	95-47-6	W
p-Isopropyltoluene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	99-87-6	W
sec-Butylbenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	135-98-8	W
tert-Butylbenzene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	98-06-6	W
trans-1,2-Dichloroethene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	156-60-5	W
trans-1,3-Dichloropropene	<37.9	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	123	%	68-130		1	01/16/18 08:45	01/16/18 15:21	1868-53-7	
Toluene-d8 (S)	102	%	68-149		1	01/16/18 08:45	01/16/18 15:21	2037-26-5	
4-Bromofluorobenzene (S)	84	%	58-141		1	01/16/18 08:45	01/16/18 15:21	460-00-4	
Percent Moisture		Analytical Method: ASTM D2974-87							
Percent Moisture	15.5	%	0.10	0.10	1		01/15/18 11:34		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-9-8 **Lab ID: 40163468010** Collected: 01/10/18 13:35 Received: 01/13/18 08:45 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									
Arsenic	4.6J	mg/kg	5.6	1.2	1	01/16/18 13:32	01/19/18 11:06	7440-38-2	
Barium	48.5	mg/kg	0.56	0.17	1	01/16/18 13:32	01/19/18 11:06	7440-39-3	
Cadmium	0.19J	mg/kg	0.56	0.15	1	01/16/18 13:32	01/19/18 11:06	7440-43-9	
Chromium	23.5	mg/kg	1.1	0.31	1	01/16/18 13:32	01/19/18 11:06	7440-47-3	
Lead	8.2	mg/kg	1.5	0.49	1	01/16/18 13:32	01/19/18 11:06	7439-92-1	
Selenium	<1.3	mg/kg	5.6	1.3	1	01/16/18 13:32	01/19/18 11:06	7782-49-2	
Silver	<0.39	mg/kg	1.1	0.39	1	01/16/18 13:32	01/19/18 11:06	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.013	mg/kg	0.044	0.013	1	01/24/18 06:29	01/24/18 11:45	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	630-20-6	W
1,1,1-Trichloroethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	71-55-6	W
1,1,2,2-Tetrachloroethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	79-34-5	W
1,1,2-Trichloroethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	79-00-5	W
1,1-Dichloroethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-34-3	W
1,1-Dichloroethene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-35-4	W
1,1-Dichloropropene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	563-58-6	W
1,2,3-Trichlorobenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	87-61-6	W
1,2,3-Trichloropropane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	96-18-4	W
1,2,4-Trichlorobenzene	<63.4	ug/kg	333	63.4	1	01/16/18 08:45	01/16/18 15:44	120-82-1	L2,W
1,2,4-Trimethylbenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	95-63-6	W
1,2-Dibromo-3-chloropropane	<122	ug/kg	333	122	1	01/16/18 08:45	01/16/18 15:44	96-12-8	W
1,2-Dibromoethane (EDB)	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	106-93-4	W
1,2-Dichlorobenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	95-50-1	W
1,2-Dichloroethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	107-06-2	W
1,2-Dichloropropane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	78-87-5	W
1,3,5-Trimethylbenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	108-67-8	W
1,3-Dichlorobenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	541-73-1	W
1,3-Dichloropropane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	142-28-9	W
1,4-Dichlorobenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	106-46-7	W
2,2-Dichloropropane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	594-20-7	W
2-Chlorotoluene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	95-49-8	W
4-Chlorotoluene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	106-43-4	W
Benzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	71-43-2	W
Bromobenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	108-86-1	W
Bromochloromethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	74-97-5	W
Bromodichloromethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-27-4	W
Bromoform	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-25-2	W
Bromomethane	<93.2	ug/kg	333	93.2	1	01/16/18 08:45	01/16/18 15:44	74-83-9	W
Carbon tetrachloride	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	56-23-5	W
Chlorobenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	108-90-7	W
Chloroethane	<89.4	ug/kg	333	89.4	1	01/16/18 08:45	01/16/18 15:44	75-00-3	W
Chloroform	<61.9	ug/kg	333	61.9	1	01/16/18 08:45	01/16/18 15:44	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Sample Project No.: 40163468

Sample: B-9-8 **Lab ID: 40163468010** Collected: 01/10/18 13:35 Received: 01/13/18 08:45 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									
Chloromethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	74-87-3	W
Dibromochloromethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	124-48-1	W
Dibromomethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	74-95-3	W
Dichlorodifluoromethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-71-8	W
Diisopropyl ether	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	108-20-3	W
Ethylbenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	100-41-4	W
Hexachloro-1,3-butadiene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	87-68-3	W
Isopropylbenzene (Cumene)	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	98-82-8	W
Methyl-tert-butyl ether	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	1634-04-4	W
Methylene Chloride	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-09-2	W
Naphthalene	<53.4	ug/kg	333	53.4	1	01/16/18 08:45	01/16/18 15:44	91-20-3	W
Styrene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	100-42-5	W
Tetrachloroethene	3650	ug/kg	95.2	39.7	1	01/16/18 08:45	01/16/18 15:44	127-18-4	
Toluene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	108-88-3	W
Trichloroethene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	79-01-6	W
Trichlorofluoromethane	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-69-4	W
Vinyl chloride	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-01-4	W
Xylene (Total)	<100	ug/kg	240	100	1	01/16/18 08:45	01/16/18 15:44	1330-20-7	W
cis-1,2-Dichloroethene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	156-59-2	W
cis-1,3-Dichloropropene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	10061-01-5	W
m&p-Xylene	<66.7	ug/kg	160	66.7	1	01/16/18 08:45	01/16/18 15:44	179601-23-1	W
n-Butylbenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	104-51-8	W
n-Propylbenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	103-65-1	W
o-Xylene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	95-47-6	W
p-Isopropyltoluene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	99-87-6	W
sec-Butylbenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	135-98-8	W
tert-Butylbenzene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	98-06-6	W
trans-1,2-Dichloroethene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	156-60-5	W
trans-1,3-Dichloropropene	<33.3	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	125	%	68-130		1	01/16/18 08:45	01/16/18 15:44	1868-53-7	
Toluene-d8 (S)	105	%	68-149		1	01/16/18 08:45	01/16/18 15:44	2037-26-5	
4-Bromofluorobenzene (S)	85	%	58-141		1	01/16/18 08:45	01/16/18 15:44	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	16.0	%	0.10	0.10	1		01/15/18 11:34		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-8-3 Lab ID: 40163468011 Collected: 01/10/18 13:50 Received: 01/13/18 08:45 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									
Arsenic	5.1J	mg/kg	5.4	1.1	1	01/16/18 13:32	01/17/18 16:29	7440-38-2	
Barium	80.4	mg/kg	0.54	0.16	1	01/16/18 13:32	01/17/18 16:29	7440-39-3	
Cadmium	0.18J	mg/kg	0.54	0.14	1	01/16/18 13:32	01/17/18 16:29	7440-43-9	
Chromium	29.0	mg/kg	1.1	0.30	1	01/16/18 13:32	01/17/18 16:29	7440-47-3	
Lead	12.5	mg/kg	1.4	0.46	1	01/16/18 13:32	01/17/18 16:29	7439-92-1	
Selenium	<1.2	mg/kg	5.4	1.2	1	01/16/18 13:32	01/17/18 16:29	7782-49-2	
Silver	<0.37	mg/kg	1.1	0.37	1	01/16/18 13:32	01/17/18 16:29	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.042	mg/kg	0.040	0.012	1	01/24/18 06:29	01/24/18 11:48	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	630-20-6	W
1,1,1-Trichloroethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	71-55-6	W
1,1,2,2-Tetrachloroethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	79-34-5	W
1,1,2-Trichloroethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	79-00-5	W
1,1-Dichloroethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-34-3	W
1,1-Dichloroethene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-35-4	W
1,1-Dichloropropene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	563-58-6	W
1,2,3-Trichlorobenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	87-61-6	W
1,2,3-Trichloropropane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	96-18-4	W
1,2,4-Trichlorobenzene	<52.3	ug/kg	275	52.3	1	01/16/18 08:45	01/16/18 16:06	120-82-1	L2,W
1,2,4-Trimethylbenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	95-63-6	W
1,2-Dibromo-3-chloropropane	<100	ug/kg	275	100	1	01/16/18 08:45	01/16/18 16:06	96-12-8	W
1,2-Dibromoethane (EDB)	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	106-93-4	W
1,2-Dichlorobenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	95-50-1	W
1,2-Dichloroethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	107-06-2	W
1,2-Dichloropropane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	78-87-5	W
1,3,5-Trimethylbenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	108-67-8	W
1,3-Dichlorobenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	541-73-1	W
1,3-Dichloropropane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	142-28-9	W
1,4-Dichlorobenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	106-46-7	W
2,2-Dichloropropane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	594-20-7	W
2-Chlorotoluene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	95-49-8	W
4-Chlorotoluene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	106-43-4	W
Benzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	71-43-2	W
Bromobenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	108-86-1	W
Bromochloromethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	74-97-5	W
Bromodichloromethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-27-4	W
Bromoform	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-25-2	W
Bromomethane	<76.8	ug/kg	275	76.8	1	01/16/18 08:45	01/16/18 16:06	74-83-9	W
Carbon tetrachloride	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	56-23-5	W
Chlorobenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	108-90-7	W
Chloroethane	<73.6	ug/kg	275	73.6	1	01/16/18 08:45	01/16/18 16:06	75-00-3	W
Chloroform	<51.0	ug/kg	275	51.0	1	01/16/18 08:45	01/16/18 16:06	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-8-3 **Lab ID: 40163468011** Collected: 01/10/18 13:50 Received: 01/13/18 08:45 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									
Chloromethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	74-87-3	W
Dibromochloromethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	124-48-1	W
Dibromomethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	74-95-3	W
Dichlorodifluoromethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-71-8	W
Diisopropyl ether	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	108-20-3	W
Ethylbenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	100-41-4	W
Hexachloro-1,3-butadiene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	87-68-3	W
Isopropylbenzene (Cumene)	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	98-82-8	W
Methyl-tert-butyl ether	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	1634-04-4	W
Methylene Chloride	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-09-2	W
Naphthalene	<44.0	ug/kg	275	44.0	1	01/16/18 08:45	01/16/18 16:06	91-20-3	W
Styrene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	100-42-5	W
Tetrachloroethene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	127-18-4	W
Toluene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	108-88-3	W
Trichloroethene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	79-01-6	W
Trichlorofluoromethane	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-69-4	W
Vinyl chloride	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-01-4	W
Xylene (Total)	<82.4	ug/kg	198	82.4	1	01/16/18 08:45	01/16/18 16:06	1330-20-7	W
cis-1,2-Dichloroethene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	156-59-2	W
cis-1,3-Dichloropropene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	10061-01-5	W
m&p-Xylene	<54.9	ug/kg	132	54.9	1	01/16/18 08:45	01/16/18 16:06	179601-23-1	W
n-Butylbenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	104-51-8	W
n-Propylbenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	103-65-1	W
o-Xylene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	95-47-6	W
p-Isopropyltoluene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	99-87-6	W
sec-Butylbenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	135-98-8	W
tert-Butylbenzene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	98-06-6	W
trans-1,2-Dichloroethene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	156-60-5	W
trans-1,3-Dichloropropene	<27.5	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	121	%	68-130		1	01/16/18 08:45	01/16/18 16:06	1868-53-7	
Toluene-d8 (S)	98	%	68-149		1	01/16/18 08:45	01/16/18 16:06	2037-26-5	
4-Bromofluorobenzene (S)	81	%	58-141		1	01/16/18 08:45	01/16/18 16:06	460-00-4	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	17.2	%	0.10	0.10	1		01/15/18 11:34		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-8-8 Lab ID: 40163468012 Collected: 01/10/18 13:55 Received: 01/13/18 08:45 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									
Arsenic	10.4	mg/kg	5.6	1.2	1	01/16/18 13:32	01/17/18 16:36	7440-38-2	
Barium	73.4	mg/kg	0.56	0.17	1	01/16/18 13:32	01/17/18 16:36	7440-39-3	
Cadmium	0.21J	mg/kg	0.56	0.15	1	01/16/18 13:32	01/17/18 16:36	7440-43-9	
Chromium	20.7	mg/kg	1.1	0.31	1	01/16/18 13:32	01/17/18 16:36	7440-47-3	
Lead	8.3	mg/kg	1.5	0.49	1	01/16/18 13:32	01/17/18 16:36	7439-92-1	
Selenium	<1.2	mg/kg	5.6	1.2	1	01/16/18 13:32	01/17/18 16:36	7782-49-2	
Silver	<0.39	mg/kg	1.1	0.39	1	01/16/18 13:32	01/17/18 16:36	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.016J	mg/kg	0.041	0.012	1	01/24/18 06:29	01/24/18 11:50	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 16:29	120-82-1	L2,W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 16:29	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 16:29	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 16:29	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 16:29	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-8-8 **Lab ID: 40163468012** Collected: 01/10/18 13:55 Received: 01/13/18 08:45 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									
Chloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 16:29	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 16:29	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 16:29	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	127	%	68-130		1	01/16/18 08:45	01/16/18 16:29	1868-53-7	
Toluene-d8 (S)	106	%	68-149		1	01/16/18 08:45	01/16/18 16:29	2037-26-5	
4-Bromofluorobenzene (S)	88	%	58-141		1	01/16/18 08:45	01/16/18 16:29	460-00-4	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	18.1	%	0.10	0.10	1		01/15/18 11:35		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-11-3 Lab ID: 40163468013 Collected: 01/10/18 14:20 Received: 01/13/18 08:45 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									
Arsenic	5.1J	mg/kg	5.4	1.1	1	01/16/18 13:32	01/17/18 16:39	7440-38-2	
Barium	91.9	mg/kg	0.54	0.16	1	01/16/18 13:32	01/17/18 16:39	7440-39-3	
Cadmium	0.17J	mg/kg	0.54	0.14	1	01/16/18 13:32	01/17/18 16:39	7440-43-9	
Chromium	19.1	mg/kg	1.1	0.30	1	01/16/18 13:32	01/17/18 16:39	7440-47-3	
Lead	96.3	mg/kg	1.4	0.47	1	01/16/18 13:32	01/17/18 16:39	7439-92-1	
Selenium	<1.2	mg/kg	5.4	1.2	1	01/16/18 13:32	01/17/18 16:39	7782-49-2	
Silver	<0.37	mg/kg	1.1	0.37	1	01/16/18 13:32	01/17/18 16:39	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.38	mg/kg	0.039	0.012	1	01/24/18 06:29	01/24/18 11:57	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	630-20-6	W
1,1,1-Trichloroethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	71-55-6	W
1,1,2,2-Tetrachloroethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	79-34-5	W
1,1,2-Trichloroethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	79-00-5	W
1,1-Dichloroethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-34-3	W
1,1-Dichloroethene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-35-4	W
1,1-Dichloropropene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	563-58-6	W
1,2,3-Trichlorobenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	87-61-6	W
1,2,3-Trichloropropane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	96-18-4	W
1,2,4-Trichlorobenzene	<76.7	ug/kg	403	76.7	1	01/16/18 08:45	01/16/18 16:52	120-82-1	L2,W
1,2,4-Trimethylbenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	95-63-6	W
1,2-Dibromo-3-chloropropane	<147	ug/kg	403	147	1	01/16/18 08:45	01/16/18 16:52	96-12-8	W
1,2-Dibromoethane (EDB)	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	106-93-4	W
1,2-Dichlorobenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	95-50-1	W
1,2-Dichloroethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	107-06-2	W
1,2-Dichloropropane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	78-87-5	W
1,3,5-Trimethylbenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	108-67-8	W
1,3-Dichlorobenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	541-73-1	W
1,3-Dichloropropane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	142-28-9	W
1,4-Dichlorobenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	106-46-7	W
2,2-Dichloropropane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	594-20-7	W
2-Chlorotoluene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	95-49-8	W
4-Chlorotoluene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	106-43-4	W
Benzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	71-43-2	W
Bromobenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	108-86-1	W
Bromochloromethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	74-97-5	W
Bromodichloromethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-27-4	W
Bromoform	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-25-2	W
Bromomethane	<113	ug/kg	403	113	1	01/16/18 08:45	01/16/18 16:52	74-83-9	W
Carbon tetrachloride	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	56-23-5	W
Chlorobenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	108-90-7	W
Chloroethane	<108	ug/kg	403	108	1	01/16/18 08:45	01/16/18 16:52	75-00-3	W
Chloroform	<74.9	ug/kg	403	74.9	1	01/16/18 08:45	01/16/18 16:52	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-11-3 **Lab ID: 40163468013** Collected: 01/10/18 14:20 Received: 01/13/18 08:45 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									
Chloromethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	74-87-3	W
Dibromochloromethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	124-48-1	W
Dibromomethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	74-95-3	W
Dichlorodifluoromethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-71-8	W
Diisopropyl ether	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	108-20-3	W
Ethylbenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	100-41-4	W
Hexachloro-1,3-butadiene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	87-68-3	W
Isopropylbenzene (Cumene)	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	98-82-8	W
Methyl-tert-butyl ether	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	1634-04-4	W
Methylene Chloride	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-09-2	W
Naphthalene	<64.6	ug/kg	403	64.6	1	01/16/18 08:45	01/16/18 16:52	91-20-3	W
Styrene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	100-42-5	W
Tetrachloroethene	50.6J	ug/kg	115	47.8	1	01/16/18 08:45	01/16/18 16:52	127-18-4	
Toluene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	108-88-3	W
Trichloroethene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	79-01-6	W
Trichlorofluoromethane	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-69-4	W
Vinyl chloride	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-01-4	W
Xylene (Total)	<121	ug/kg	290	121	1	01/16/18 08:45	01/16/18 16:52	1330-20-7	W
cis-1,2-Dichloroethene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	156-59-2	W
cis-1,3-Dichloropropene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	10061-01-5	W
m&p-Xylene	<80.6	ug/kg	194	80.6	1	01/16/18 08:45	01/16/18 16:52	179601-23-1	W
n-Butylbenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	104-51-8	W
n-Propylbenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	103-65-1	W
o-Xylene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	95-47-6	W
p-Isopropyltoluene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	99-87-6	W
sec-Butylbenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	135-98-8	W
tert-Butylbenzene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	98-06-6	W
trans-1,2-Dichloroethene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	156-60-5	W
trans-1,3-Dichloropropene	<40.3	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	130	%	68-130		1	01/16/18 08:45	01/16/18 16:52	1868-53-7	
Toluene-d8 (S)	106	%	68-149		1	01/16/18 08:45	01/16/18 16:52	2037-26-5	
4-Bromofluorobenzene (S)	89	%	58-141		1	01/16/18 08:45	01/16/18 16:52	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	15.7	%	0.10	0.10	1		01/15/18 11:35		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-11-8 **Lab ID: 40163468014** Collected: 01/10/18 14:25 Received: 01/13/18 08:45 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									
Arsenic	6.9	mg/kg	5.8	1.2	1	01/16/18 13:32	01/17/18 16:41	7440-38-2	
Barium	71.9	mg/kg	0.58	0.17	1	01/16/18 13:32	01/17/18 16:41	7440-39-3	
Cadmium	0.24J	mg/kg	0.58	0.15	1	01/16/18 13:32	01/17/18 16:41	7440-43-9	
Chromium	26.4	mg/kg	1.2	0.32	1	01/16/18 13:32	01/17/18 16:41	7440-47-3	
Lead	8.1	mg/kg	1.5	0.50	1	01/16/18 13:32	01/17/18 16:41	7439-92-1	
Selenium	<1.3	mg/kg	5.8	1.3	1	01/16/18 13:32	01/17/18 16:41	7782-49-2	
Silver	<0.40	mg/kg	1.2	0.40	1	01/16/18 13:32	01/17/18 16:41	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.019J	mg/kg	0.044	0.013	1	01/24/18 06:29	01/24/18 11:59	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	630-20-6	W
1,1,1-Trichloroethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	71-55-6	W
1,1,2,2-Tetrachloroethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	79-34-5	W
1,1,2-Trichloroethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	79-00-5	W
1,1-Dichloroethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-34-3	W
1,1-Dichloroethene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-35-4	W
1,1-Dichloropropene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	563-58-6	W
1,2,3-Trichlorobenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	87-61-6	W
1,2,3-Trichloropropane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	96-18-4	W
1,2,4-Trichlorobenzene	<54.0	ug/kg	284	54.0	1	01/16/18 08:45	01/16/18 17:14	120-82-1	L2,W
1,2,4-Trimethylbenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	95-63-6	W
1,2-Dibromo-3-chloropropane	<104	ug/kg	284	104	1	01/16/18 08:45	01/16/18 17:14	96-12-8	W
1,2-Dibromoethane (EDB)	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	106-93-4	W
1,2-Dichlorobenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	95-50-1	W
1,2-Dichloroethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	107-06-2	W
1,2-Dichloropropane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	78-87-5	W
1,3,5-Trimethylbenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	108-67-8	W
1,3-Dichlorobenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	541-73-1	W
1,3-Dichloropropane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	142-28-9	W
1,4-Dichlorobenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	106-46-7	W
2,2-Dichloropropane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	594-20-7	W
2-Chlorotoluene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	95-49-8	W
4-Chlorotoluene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	106-43-4	W
Benzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	71-43-2	W
Bromobenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	108-86-1	W
Bromochloromethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	74-97-5	W
Bromodichloromethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-27-4	W
Bromoform	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-25-2	W
Bromomethane	<79.4	ug/kg	284	79.4	1	01/16/18 08:45	01/16/18 17:14	74-83-9	W
Carbon tetrachloride	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	56-23-5	W
Chlorobenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	108-90-7	W
Chloroethane	<76.2	ug/kg	284	76.2	1	01/16/18 08:45	01/16/18 17:14	75-00-3	W
Chloroform	<52.8	ug/kg	284	52.8	1	01/16/18 08:45	01/16/18 17:14	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Sample Project No.: 40163468

Sample: B-11-8 **Lab ID: 40163468014** Collected: 01/10/18 14:25 Received: 01/13/18 08:45 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									
Chloromethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	74-87-3	W
Dibromochloromethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	124-48-1	W
Dibromomethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	74-95-3	W
Dichlorodifluoromethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-71-8	W
Diisopropyl ether	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	108-20-3	W
Ethylbenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	100-41-4	W
Hexachloro-1,3-butadiene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	87-68-3	W
Isopropylbenzene (Cumene)	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	98-82-8	W
Methyl-tert-butyl ether	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	1634-04-4	W
Methylene Chloride	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-09-2	W
Naphthalene	<45.5	ug/kg	284	45.5	1	01/16/18 08:45	01/16/18 17:14	91-20-3	W
Styrene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	100-42-5	W
Tetrachloroethene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	127-18-4	W
Toluene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	108-88-3	W
Trichloroethene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	79-01-6	W
Trichlorofluoromethane	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-69-4	W
Vinyl chloride	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-01-4	W
Xylene (Total)	<85.2	ug/kg	205	85.2	1	01/16/18 08:45	01/16/18 17:14	1330-20-7	W
cis-1,2-Dichloroethene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	156-59-2	W
cis-1,3-Dichloropropene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	10061-01-5	W
m&p-Xylene	<56.8	ug/kg	136	56.8	1	01/16/18 08:45	01/16/18 17:14	179601-23-1	W
n-Butylbenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	104-51-8	W
n-Propylbenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	103-65-1	W
o-Xylene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	95-47-6	W
p-Isopropyltoluene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	99-87-6	W
sec-Butylbenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	135-98-8	W
tert-Butylbenzene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	98-06-6	W
trans-1,2-Dichloroethene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	156-60-5	W
trans-1,3-Dichloropropene	<28.4	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	120	%	68-130		1	01/16/18 08:45	01/16/18 17:14	1868-53-7	
Toluene-d8 (S)	96	%	68-149		1	01/16/18 08:45	01/16/18 17:14	2037-26-5	
4-Bromofluorobenzene (S)	81	%	58-141		1	01/16/18 08:45	01/16/18 17:14	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	17.0	%	0.10	0.10	1		01/15/18 11:35		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-13-3 Lab ID: 40163468015 Collected: 01/10/18 14:40 Received: 01/13/18 08:45 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									
Arsenic	4.0J	mg/kg	5.6	1.2	1	01/16/18 13:32	01/17/18 16:44	7440-38-2	
Barium	21.8	mg/kg	0.56	0.17	1	01/16/18 13:32	01/17/18 16:44	7440-39-3	
Cadmium	0.28J	mg/kg	0.56	0.15	1	01/16/18 13:32	01/17/18 16:44	7440-43-9	
Chromium	10.1	mg/kg	1.1	0.31	1	01/16/18 13:32	01/17/18 16:44	7440-47-3	
Lead	7.6	mg/kg	1.5	0.49	1	01/16/18 13:32	01/17/18 16:44	7439-92-1	
Selenium	<1.3	mg/kg	5.6	1.3	1	01/16/18 13:32	01/17/18 16:44	7782-49-2	
Silver	<0.39	mg/kg	1.1	0.39	1	01/16/18 13:32	01/17/18 16:44	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.029J	mg/kg	0.041	0.012	1	01/24/18 06:29	01/24/18 12:02	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	630-20-6	W
1,1,1-Trichloroethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	71-55-6	W
1,1,2,2-Tetrachloroethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	79-34-5	W
1,1,2-Trichloroethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	79-00-5	W
1,1-Dichloroethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-34-3	W
1,1-Dichloroethene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-35-4	W
1,1-Dichloropropene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	563-58-6	W
1,2,3-Trichlorobenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	87-61-6	W
1,2,3-Trichloropropane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	96-18-4	W
1,2,4-Trichlorobenzene	<51.7	ug/kg	272	51.7	1	01/16/18 08:45	01/16/18 17:37	120-82-1	L2,W
1,2,4-Trimethylbenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	95-63-6	W
1,2-Dibromo-3-chloropropane	<99.2	ug/kg	272	99.2	1	01/16/18 08:45	01/16/18 17:37	96-12-8	W
1,2-Dibromoethane (EDB)	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	106-93-4	W
1,2-Dichlorobenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	95-50-1	W
1,2-Dichloroethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	107-06-2	W
1,2-Dichloropropane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	78-87-5	W
1,3,5-Trimethylbenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	108-67-8	W
1,3-Dichlorobenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	541-73-1	W
1,3-Dichloropropane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	142-28-9	W
1,4-Dichlorobenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	106-46-7	W
2,2-Dichloropropane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	594-20-7	W
2-Chlorotoluene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	95-49-8	W
4-Chlorotoluene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	106-43-4	W
Benzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	71-43-2	W
Bromobenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	108-86-1	W
Bromochloromethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	74-97-5	W
Bromodichloromethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-27-4	W
Bromoform	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-25-2	W
Bromomethane	<76.0	ug/kg	272	76.0	1	01/16/18 08:45	01/16/18 17:37	74-83-9	W
Carbon tetrachloride	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	56-23-5	W
Chlorobenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	108-90-7	W
Chloroethane	<72.8	ug/kg	272	72.8	1	01/16/18 08:45	01/16/18 17:37	75-00-3	W
Chloroform	<50.5	ug/kg	272	50.5	1	01/16/18 08:45	01/16/18 17:37	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-13-3 **Lab ID: 40163468015** Collected: 01/10/18 14:40 Received: 01/13/18 08:45 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									
Chloromethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	74-87-3	W
Dibromochloromethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	124-48-1	W
Dibromomethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	74-95-3	W
Dichlorodifluoromethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-71-8	W
Diisopropyl ether	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	108-20-3	W
Ethylbenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	100-41-4	W
Hexachloro-1,3-butadiene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	87-68-3	W
Isopropylbenzene (Cumene)	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	98-82-8	W
Methyl-tert-butyl ether	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	1634-04-4	W
Methylene Chloride	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-09-2	W
Naphthalene	<43.5	ug/kg	272	43.5	1	01/16/18 08:45	01/16/18 17:37	91-20-3	W
Styrene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	100-42-5	W
Tetrachloroethene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	127-18-4	W
Toluene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	108-88-3	W
Trichloroethene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	79-01-6	W
Trichlorofluoromethane	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-69-4	W
Vinyl chloride	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-01-4	W
Xylene (Total)	<81.5	ug/kg	196	81.5	1	01/16/18 08:45	01/16/18 17:37	1330-20-7	W
cis-1,2-Dichloroethene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	156-59-2	W
cis-1,3-Dichloropropene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	10061-01-5	W
m&p-Xylene	<54.3	ug/kg	130	54.3	1	01/16/18 08:45	01/16/18 17:37	179601-23-1	W
n-Butylbenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	104-51-8	W
n-Propylbenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	103-65-1	W
o-Xylene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	95-47-6	W
p-Isopropyltoluene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	99-87-6	W
sec-Butylbenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	135-98-8	W
tert-Butylbenzene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	98-06-6	W
trans-1,2-Dichloroethene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	156-60-5	W
trans-1,3-Dichloropropene	<27.2	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	128	%	68-130		1	01/16/18 08:45	01/16/18 17:37	1868-53-7	
Toluene-d8 (S)	105	%	68-149		1	01/16/18 08:45	01/16/18 17:37	2037-26-5	
4-Bromofluorobenzene (S)	90	%	58-141		1	01/16/18 08:45	01/16/18 17:37	460-00-4	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	12.7	%	0.10	0.10	1		01/15/18 11:35		
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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-13-8 **Lab ID: 40163468016** Collected: 01/10/18 14:45 Received: 01/13/18 08:45 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									
Arsenic	5.0J	mg/kg	5.6	1.2	1	01/16/18 13:32	01/17/18 16:46	7440-38-2	
Barium	49.5	mg/kg	0.56	0.17	1	01/16/18 13:32	01/17/18 16:46	7440-39-3	
Cadmium	0.23J	mg/kg	0.56	0.15	1	01/16/18 13:32	01/17/18 16:46	7440-43-9	
Chromium	20.6	mg/kg	1.1	0.31	1	01/16/18 13:32	01/17/18 16:46	7440-47-3	
Lead	7.6	mg/kg	1.5	0.49	1	01/16/18 13:32	01/17/18 16:46	7439-92-1	
Selenium	<1.2	mg/kg	5.6	1.2	1	01/16/18 13:32	01/17/18 16:46	7782-49-2	
Silver	<0.39	mg/kg	1.1	0.39	1	01/16/18 13:32	01/17/18 16:46	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.013J	mg/kg	0.042	0.012	1	01/24/18 06:29	01/24/18 12:04	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 17:59	120-82-1	L2,W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 17:59	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 17:59	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 17:59	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 17:59	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-13-8 **Lab ID: 40163468016** Collected: 01/10/18 14:45 Received: 01/13/18 08:45 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									
Chloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 17:59	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 17:59	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 17:59	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	128	%	68-130		1	01/16/18 08:45	01/16/18 17:59	1868-53-7	
Toluene-d8 (S)	102	%	68-149		1	01/16/18 08:45	01/16/18 17:59	2037-26-5	
4-Bromofluorobenzene (S)	85	%	58-141		1	01/16/18 08:45	01/16/18 17:59	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	13.9	%	0.10	0.10	1		01/15/18 11:35		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-16-3 **Lab ID: 40163468017** Collected: 01/10/18 15:00 Received: 01/13/18 08:45 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									
Arsenic	4.6J	mg/kg	6.0	1.3	1	01/16/18 13:32	01/17/18 16:49	7440-38-2	
Barium	59.8	mg/kg	0.60	0.18	1	01/16/18 13:32	01/17/18 16:49	7440-39-3	
Cadmium	0.18J	mg/kg	0.60	0.16	1	01/16/18 13:32	01/17/18 16:49	7440-43-9	
Chromium	26.1	mg/kg	1.2	0.34	1	01/16/18 13:32	01/17/18 16:49	7440-47-3	
Lead	10.3	mg/kg	1.6	0.52	1	01/16/18 13:32	01/17/18 16:49	7439-92-1	
Selenium	<1.3	mg/kg	6.0	1.3	1	01/16/18 13:32	01/17/18 16:49	7782-49-2	
Silver	<0.41	mg/kg	1.2	0.41	1	01/16/18 13:32	01/17/18 16:49	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.055	mg/kg	0.041	0.012	1	01/24/18 06:29	01/24/18 12:18	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 18:22	120-82-1	L2,W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 18:22	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 18:22	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 18:22	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 18:22	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-16-3 **Lab ID: 40163468017** Collected: 01/10/18 15:00 Received: 01/13/18 08:45 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									
Chloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 18:22	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 18:22	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 18:22	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	118	%	68-130		1	01/16/18 08:45	01/16/18 18:22	1868-53-7	
Toluene-d8 (S)	92	%	68-149		1	01/16/18 08:45	01/16/18 18:22	2037-26-5	
4-Bromofluorobenzene (S)	74	%	58-141		1	01/16/18 08:45	01/16/18 18:22	460-00-4	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	18.2	%	0.10	0.10	1		01/15/18 11:35		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-16-8 **Lab ID: 40163468018** Collected: 01/10/18 15:05 Received: 01/13/18 08:45 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									
Arsenic	5.6	mg/kg	5.2	1.1	1	01/16/18 13:32	01/17/18 16:51	7440-38-2	
Barium	61.2	mg/kg	0.52	0.16	1	01/16/18 13:32	01/17/18 16:51	7440-39-3	
Cadmium	0.15J	mg/kg	0.52	0.14	1	01/16/18 13:32	01/17/18 16:51	7440-43-9	
Chromium	18.0	mg/kg	1.0	0.29	1	01/16/18 13:32	01/17/18 16:51	7440-47-3	
Lead	7.1	mg/kg	1.4	0.45	1	01/16/18 13:32	01/17/18 16:51	7439-92-1	
Selenium	<1.2	mg/kg	5.2	1.2	1	01/16/18 13:32	01/17/18 16:51	7782-49-2	
Silver	<0.36	mg/kg	1.0	0.36	1	01/16/18 13:32	01/17/18 16:51	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.041	0.012	1	01/24/18 06:29	01/24/18 12:25	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 18:45	120-82-1	L2,W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 18:45	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 18:45	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 18:45	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 18:45	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-16-8 **Lab ID: 40163468018** Collected: 01/10/18 15:05 Received: 01/13/18 08:45 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									
Chloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 18:45	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 18:45	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 18:45	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	131	%	68-130		1	01/16/18 08:45	01/16/18 18:45	1868-53-7	S3
Toluene-d8 (S)	107	%	68-149		1	01/16/18 08:45	01/16/18 18:45	2037-26-5	
4-Bromofluorobenzene (S)	88	%	58-141		1	01/16/18 08:45	01/16/18 18:45	460-00-4	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	12.8	%	0.10	0.10	1		01/15/18 11:35		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-15-3 **Lab ID: 40163468019** Collected: 01/10/18 15:15 Received: 01/13/18 08:45 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									
Arsenic	4.8J	mg/kg	5.9	1.2	1	01/16/18 13:32	01/17/18 16:54	7440-38-2	
Barium	71.1	mg/kg	0.59	0.18	1	01/16/18 13:32	01/17/18 16:54	7440-39-3	
Cadmium	<0.16	mg/kg	0.59	0.16	1	01/16/18 13:32	01/17/18 16:54	7440-43-9	
Chromium	22.2	mg/kg	1.2	0.33	1	01/16/18 13:32	01/17/18 16:54	7440-47-3	
Lead	11.2	mg/kg	1.5	0.51	1	01/16/18 13:32	01/17/18 16:54	7439-92-1	
Selenium	<1.3	mg/kg	5.9	1.3	1	01/16/18 13:32	01/17/18 16:54	7782-49-2	
Silver	<0.40	mg/kg	1.2	0.40	1	01/16/18 13:32	01/17/18 16:54	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.016J	mg/kg	0.044	0.013	1	01/24/18 06:29	01/24/18 12:27	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	630-20-6	W
1,1,1-Trichloroethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	71-55-6	W
1,1,2,2-Tetrachloroethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	79-34-5	W
1,1,2-Trichloroethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	79-00-5	W
1,1-Dichloroethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-34-3	W
1,1-Dichloroethene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-35-4	W
1,1-Dichloropropene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	563-58-6	W
1,2,3-Trichlorobenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	87-61-6	W
1,2,3-Trichloropropane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	96-18-4	W
1,2,4-Trichlorobenzene	<52.8	ug/kg	278	52.8	1	01/16/18 08:45	01/16/18 19:07	120-82-1	L2,W
1,2,4-Trimethylbenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	95-63-6	W
1,2-Dibromo-3-chloropropane	<101	ug/kg	278	101	1	01/16/18 08:45	01/16/18 19:07	96-12-8	W
1,2-Dibromoethane (EDB)	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	106-93-4	W
1,2-Dichlorobenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	95-50-1	W
1,2-Dichloroethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	107-06-2	W
1,2-Dichloropropane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	78-87-5	W
1,3,5-Trimethylbenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	108-67-8	W
1,3-Dichlorobenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	541-73-1	W
1,3-Dichloropropane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	142-28-9	W
1,4-Dichlorobenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	106-46-7	W
2,2-Dichloropropane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	594-20-7	W
2-Chlorotoluene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	95-49-8	W
4-Chlorotoluene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	106-43-4	W
Benzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	71-43-2	W
Bromobenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	108-86-1	W
Bromochloromethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	74-97-5	W
Bromodichloromethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-27-4	W
Bromoform	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-25-2	W
Bromomethane	<77.7	ug/kg	278	77.7	1	01/16/18 08:45	01/16/18 19:07	74-83-9	W
Carbon tetrachloride	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	56-23-5	W
Chlorobenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	108-90-7	W
Chloroethane	<74.5	ug/kg	278	74.5	1	01/16/18 08:45	01/16/18 19:07	75-00-3	W
Chloroform	<51.6	ug/kg	278	51.6	1	01/16/18 08:45	01/16/18 19:07	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-15-3 **Lab ID: 40163468019** Collected: 01/10/18 15:15 Received: 01/13/18 08:45 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									
Chloromethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	74-87-3	W
Dibromochloromethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	124-48-1	W
Dibromomethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	74-95-3	W
Dichlorodifluoromethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-71-8	W
Diisopropyl ether	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	108-20-3	W
Ethylbenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	100-41-4	W
Hexachloro-1,3-butadiene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	87-68-3	W
Isopropylbenzene (Cumene)	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	98-82-8	W
Methyl-tert-butyl ether	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	1634-04-4	W
Methylene Chloride	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-09-2	W
Naphthalene	<44.5	ug/kg	278	44.5	1	01/16/18 08:45	01/16/18 19:07	91-20-3	W
Styrene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	100-42-5	W
Tetrachloroethene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	127-18-4	W
Toluene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	108-88-3	W
Trichloroethene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	79-01-6	W
Trichlorofluoromethane	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-69-4	W
Vinyl chloride	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-01-4	W
Xylene (Total)	<83.3	ug/kg	200	83.3	1	01/16/18 08:45	01/16/18 19:07	1330-20-7	W
cis-1,2-Dichloroethene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	156-59-2	W
cis-1,3-Dichloropropene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	10061-01-5	W
m&p-Xylene	<55.6	ug/kg	133	55.6	1	01/16/18 08:45	01/16/18 19:07	179601-23-1	W
n-Butylbenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	104-51-8	W
n-Propylbenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	103-65-1	W
o-Xylene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	95-47-6	W
p-Isopropyltoluene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	99-87-6	W
sec-Butylbenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	135-98-8	W
tert-Butylbenzene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	98-06-6	W
trans-1,2-Dichloroethene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	156-60-5	W
trans-1,3-Dichloropropene	<27.8	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	136	%	68-130		1	01/16/18 08:45	01/16/18 19:07	1868-53-7	S3
Toluene-d8 (S)	109	%	68-149		1	01/16/18 08:45	01/16/18 19:07	2037-26-5	
4-Bromofluorobenzene (S)	93	%	58-141		1	01/16/18 08:45	01/16/18 19:07	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	17.2	%	0.10	0.10	1		01/15/18 11:35		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-15-8 **Lab ID: 40163468020** Collected: 01/10/18 15:20 Received: 01/13/18 08:45 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									
Arsenic	6.5	mg/kg	6.0	1.3	1	01/16/18 13:32	01/19/18 11:08	7440-38-2	
Barium	67.3	mg/kg	0.60	0.18	1	01/16/18 13:32	01/19/18 11:08	7440-39-3	
Cadmium	0.29J	mg/kg	0.60	0.16	1	01/16/18 13:32	01/19/18 11:08	7440-43-9	
Chromium	27.3	mg/kg	1.2	0.33	1	01/16/18 13:32	01/19/18 11:08	7440-47-3	
Lead	9.8	mg/kg	1.6	0.52	1	01/16/18 13:32	01/19/18 11:08	7439-92-1	
Selenium	<1.3	mg/kg	6.0	1.3	1	01/16/18 13:32	01/19/18 11:08	7782-49-2	
Silver	<0.41	mg/kg	1.2	0.41	1	01/16/18 13:32	01/19/18 11:08	7440-22-4	
7471 Mercury									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.045	mg/kg	0.042	0.013	1	01/24/18 06:29	01/24/18 12:29	7439-97-6	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	630-20-6	W
1,1,1-Trichloroethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	71-55-6	W
1,1,2,2-Tetrachloroethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	79-34-5	W
1,1,2-Trichloroethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	79-00-5	W
1,1-Dichloroethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-34-3	W
1,1-Dichloroethene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-35-4	W
1,1-Dichloropropene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	563-58-6	W
1,2,3-Trichlorobenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	87-61-6	W
1,2,3-Trichloropropane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	96-18-4	W
1,2,4-Trichlorobenzene	<57.3	ug/kg	301	57.3	1	01/16/18 08:45	01/16/18 19:30	120-82-1	L2,W
1,2,4-Trimethylbenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	95-63-6	W
1,2-Dibromo-3-chloropropane	<110	ug/kg	301	110	1	01/16/18 08:45	01/16/18 19:30	96-12-8	W
1,2-Dibromoethane (EDB)	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	106-93-4	W
1,2-Dichlorobenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	95-50-1	W
1,2-Dichloroethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	107-06-2	W
1,2-Dichloropropane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	78-87-5	W
1,3,5-Trimethylbenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	108-67-8	W
1,3-Dichlorobenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	541-73-1	W
1,3-Dichloropropane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	142-28-9	W
1,4-Dichlorobenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	106-46-7	W
2,2-Dichloropropane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	594-20-7	W
2-Chlorotoluene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	95-49-8	W
4-Chlorotoluene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	106-43-4	W
Benzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	71-43-2	W
Bromobenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	108-86-1	W
Bromochloromethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	74-97-5	W
Bromodichloromethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-27-4	W
Bromoform	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-25-2	W
Bromomethane	<84.2	ug/kg	301	84.2	1	01/16/18 08:45	01/16/18 19:30	74-83-9	W
Carbon tetrachloride	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	56-23-5	W
Chlorobenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	108-90-7	W
Chloroethane	<80.7	ug/kg	301	80.7	1	01/16/18 08:45	01/16/18 19:30	75-00-3	W
Chloroform	<56.0	ug/kg	301	56.0	1	01/16/18 08:45	01/16/18 19:30	67-66-3	W

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: B-15-8 **Lab ID: 40163468020** Collected: 01/10/18 15:20 Received: 01/13/18 08:45 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									
Chloromethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	74-87-3	W
Dibromochloromethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	124-48-1	W
Dibromomethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	74-95-3	W
Dichlorodifluoromethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-71-8	W
Diisopropyl ether	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	108-20-3	W
Ethylbenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	100-41-4	W
Hexachloro-1,3-butadiene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	87-68-3	W
Isopropylbenzene (Cumene)	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	98-82-8	W
Methyl-tert-butyl ether	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	1634-04-4	W
Methylene Chloride	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-09-2	W
Naphthalene	<48.2	ug/kg	301	48.2	1	01/16/18 08:45	01/16/18 19:30	91-20-3	W
Styrene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	100-42-5	W
Tetrachloroethene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	127-18-4	W
Toluene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	108-88-3	W
Trichloroethene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	79-01-6	W
Trichlorofluoromethane	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-69-4	W
Vinyl chloride	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-01-4	W
Xylene (Total)	<90.4	ug/kg	217	90.4	1	01/16/18 08:45	01/16/18 19:30	1330-20-7	W
cis-1,2-Dichloroethene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	156-59-2	W
cis-1,3-Dichloropropene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	10061-01-5	W
m&p-Xylene	<60.2	ug/kg	145	60.2	1	01/16/18 08:45	01/16/18 19:30	179601-23-1	W
n-Butylbenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	104-51-8	W
n-Propylbenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	103-65-1	W
o-Xylene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	95-47-6	W
p-Isopropyltoluene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	99-87-6	W
sec-Butylbenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	135-98-8	W
tert-Butylbenzene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	98-06-6	W
trans-1,2-Dichloroethene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	156-60-5	W
trans-1,3-Dichloropropene	<30.1	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	119	%	68-130		1	01/16/18 08:45	01/16/18 19:30	1868-53-7	
Toluene-d8 (S)	93	%	68-149		1	01/16/18 08:45	01/16/18 19:30	2037-26-5	
4-Bromofluorobenzene (S)	78	%	58-141		1	01/16/18 08:45	01/16/18 19:30	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	18.6	%	0.10	0.10	1		01/15/18 11:35		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: TW-7 **Lab ID: 40163468021** Collected: 01/11/18 11:05 Received: 01/13/18 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved		Analytical Method: EPA 6010							
Arsenic, Dissolved	<5.4	ug/L	20.0	5.4	1		01/16/18 15:46	7440-38-2	2q
Barium, Dissolved	170	ug/L	5.0	1.5	1		01/16/18 15:46	7440-39-3	
Cadmium, Dissolved	<1.3	ug/L	5.0	1.3	1		01/16/18 15:46	7440-43-9	
Chromium, Dissolved	<2.5	ug/L	10.0	2.5	1		01/16/18 15:46	7440-47-3	
Lead, Dissolved	<4.3	ug/L	13.0	4.3	1		01/16/18 15:46	7439-92-1	
Selenium, Dissolved	<5.6	ug/L	20.0	5.6	1		01/16/18 15:46	7782-49-2	3q
Silver, Dissolved	3.4J	ug/L	10.0	3.2	1		01/16/18 15:46	7440-22-4	
7470 Mercury, Dissolved		Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury, Dissolved	<0.50	ug/L	1.7	0.50	1	01/23/18 11:10	01/24/18 09:40	7439-97-6	D3,P4
8260 MSV		Analytical Method: EPA 8260							
Benzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		01/15/18 19:02	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		01/15/18 19:02	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		01/15/18 19:02	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		01/15/18 19:02	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		01/15/18 19:02	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		01/15/18 19:02	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		01/15/18 19:02	67-66-3	
Chloromethane	1.7	ug/L	1.0	0.50	1		01/15/18 19:02	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		01/15/18 19:02	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		01/15/18 19:02	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		01/15/18 19:02	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		01/15/18 19:02	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		01/15/18 19:02	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		01/15/18 19:02	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		01/15/18 19:02	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		01/15/18 19:02	75-35-4	
cis-1,2-Dichloroethene	0.49J	ug/L	1.0	0.26	1		01/15/18 19:02	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/15/18 19:02	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		01/15/18 19:02	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		01/15/18 19:02	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		01/15/18 19:02	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	10061-01-5	

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: TW-7 **Lab ID: 40163468021** Collected: 01/11/18 11:05 Received: 01/13/18 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		01/15/18 19:02	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		01/15/18 19:02	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		01/15/18 19:02	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		01/15/18 19:02	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		01/15/18 19:02	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		01/15/18 19:02	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		01/15/18 19:02	630-20-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		01/15/18 19:02	79-34-5	
Tetrachloroethene	61.8	ug/L	1.0	0.50	1		01/15/18 19:02	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		01/15/18 19:02	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		01/15/18 19:02	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		01/15/18 19:02	79-00-5	
Trichloroethene	1.7	ug/L	1.0	0.33	1		01/15/18 19:02	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		01/15/18 19:02	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		01/15/18 19:02	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		01/15/18 19:02	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		01/15/18 19:02	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		01/15/18 19:02	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	83	%	61-130		1		01/15/18 19:02	460-00-4	
Dibromofluoromethane (S)	105	%	67-130		1		01/15/18 19:02	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		01/15/18 19:02	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: TRIP BLANK **Lab ID: 40163468022** Collected: 01/11/18 00:00 Received: 01/13/18 08:45 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		01/15/18 20:31	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		01/15/18 20:31	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		01/15/18 20:31	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		01/15/18 20:31	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		01/15/18 20:31	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		01/15/18 20:31	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		01/15/18 20:31	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		01/15/18 20:31	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		01/15/18 20:31	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		01/15/18 20:31	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		01/15/18 20:31	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		01/15/18 20:31	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		01/15/18 20:31	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		01/15/18 20:31	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		01/15/18 20:31	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		01/15/18 20:31	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/15/18 20:31	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/15/18 20:31	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		01/15/18 20:31	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		01/15/18 20:31	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		01/15/18 20:31	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		01/15/18 20:31	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		01/15/18 20:31	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		01/15/18 20:31	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		01/15/18 20:31	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		01/15/18 20:31	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		01/15/18 20:31	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		01/15/18 20:31	630-20-6	

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Sample: TRIP BLANK **Lab ID: 40163468022** Collected: 01/11/18 00:00 Received: 01/13/18 08:45 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		01/15/18 20:31	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		01/15/18 20:31	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		01/15/18 20:31	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		01/15/18 20:31	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		01/15/18 20:31	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		01/15/18 20:31	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		01/15/18 20:31	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		01/15/18 20:31	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		01/15/18 20:31	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		01/15/18 20:31	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	81	%	61-130		1		01/15/18 20:31	460-00-4	
Dibromofluoromethane (S)	106	%	67-130		1		01/15/18 20:31	1868-53-7	
Toluene-d8 (S)	91	%	70-130		1		01/15/18 20:31	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

QC Batch: 279176 Analysis Method: EPA 6010
QC Batch Method: EPA 6010 Analysis Description: ICP Metals, Trace, Dissolved
Associated Lab Samples: 40163468021

METHOD BLANK: 1639105 Matrix: Water
Associated Lab Samples: 40163468021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<5.4	20.0	01/16/18 14:57	
Barium, Dissolved	ug/L	<1.5	5.0	01/16/18 14:57	
Cadmium, Dissolved	ug/L	<1.3	5.0	01/16/18 14:57	
Chromium, Dissolved	ug/L	<2.5	10.0	01/16/18 14:57	
Lead, Dissolved	ug/L	<4.3	13.0	01/16/18 14:57	
Selenium, Dissolved	ug/L	<5.6	20.0	01/16/18 14:57	
Silver, Dissolved	ug/L	<3.2	10.0	01/16/18 14:57	

LABORATORY CONTROL SAMPLE: 1639106

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	500	490	98	80-120	
Barium, Dissolved	ug/L	500	519	104	80-120	
Cadmium, Dissolved	ug/L	500	497	99	80-120	
Chromium, Dissolved	ug/L	500	500	100	80-120	
Lead, Dissolved	ug/L	500	495	99	80-120	
Selenium, Dissolved	ug/L	500	515	103	80-120	
Silver, Dissolved	ug/L	250	254	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1639107 1639108

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40163434003 Result	Spike Conc.	Spike Conc.	MS Result						
Arsenic, Dissolved	ug/L	<5.4	500	500	514	529	103	106	75-125	3	20
Barium, Dissolved	ug/L	146	500	500	658	666	102	104	75-125	1	20
Cadmium, Dissolved	ug/L	<1.3	500	500	507	516	101	103	75-125	2	20
Chromium, Dissolved	ug/L	<2.5	500	500	505	511	101	102	75-125	1	20
Lead, Dissolved	ug/L	<4.3	500	500	496	505	99	101	75-125	2	20
Selenium, Dissolved	ug/L	7.4J	500	500	580	594	115	117	75-125	2	20
Silver, Dissolved	ug/L	<3.2	250	250	253	255	101	102	75-125	1	20

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

QC Batch: 279605	Analysis Method: EPA 7470
QC Batch Method: EPA 7470	Analysis Description: 7470 Mercury Dissolved
Associated Lab Samples: 40163468021	

METHOD BLANK: 1641124 Matrix: Water

Associated Lab Samples: 40163468021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.13	0.42	01/24/18 08:51	

LABORATORY CONTROL SAMPLE: 1641125

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.0	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1641126 1641127

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		40163543008	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Mercury, Dissolved	ug/L	<0.13	5	5	4.8	4.9	96	97	85-115	1	20		

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

QC Batch: 279631

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005, 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016

METHOD BLANK: 1641289

Matrix: Solid

Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005, 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.011	0.037	01/24/18 11:02	

LABORATORY CONTROL SAMPLE: 1641290

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.83	0.86	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1641291 1641292

Parameter	Units	40163452011		1641291		1641292		% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Mercury	mg/kg	<0.011	.86	.86	0.89	0.87	103	101	85-115	2	20	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

QC Batch: 279632 Analysis Method: EPA 7471
 QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
 Associated Lab Samples: 40163468017, 40163468018, 40163468019, 40163468020

METHOD BLANK: 1641294 Matrix: Solid
 Associated Lab Samples: 40163468017, 40163468018, 40163468019, 40163468020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.011	0.037	01/24/18 12:06	

LABORATORY CONTROL SAMPLE: 1641295

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.83	0.85	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1641296 1641297

Parameter	Units	1641296		1641297		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40163617001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/kg	<0.013	1	.99	1.0	1.0	101	101	85-115	2	20

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

QC Batch:	279186	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3050	Analysis Description:	6010 MET
Associated Lab Samples:	40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016, 40163468017, 40163468018, 40163468019, 40163468020		

METHOD BLANK:	1639170	Matrix:	Solid
Associated Lab Samples:	40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016, 40163468017, 40163468018, 40163468019, 40163468020		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<1.0	5.0	01/17/18 16:07	
Barium	mg/kg	<0.15	0.50	01/17/18 16:07	
Cadmium	mg/kg	<0.13	0.50	01/17/18 16:07	
Chromium	mg/kg	<0.28	1.0	01/17/18 16:07	
Lead	mg/kg	<0.43	1.3	01/17/18 16:07	
Selenium	mg/kg	<1.1	5.0	01/17/18 16:07	
Silver	mg/kg	<0.34	1.0	01/17/18 16:07	

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	50.8	102	80-120	
Barium	mg/kg	50	50.6	101	80-120	
Cadmium	mg/kg	50	51.0	102	80-120	
Chromium	mg/kg	50	51.4	103	80-120	
Lead	mg/kg	50	50.7	101	80-120	
Selenium	mg/kg	50	50.4	101	80-120	
Silver	mg/kg	25	24.5	98	80-120	

Parameter	Units	1639172		1639173		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		40163468008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result					
Arsenic	mg/kg	5.3J	56.3	56.5	56.5	91	91	75-125	1	20
Barium	mg/kg	17.7	56.3	56.5	79.2	109	105	75-125	3	20
Cadmium	mg/kg	0.20J	56.3	56.5	56.1	99	99	75-125	0	20
Chromium	mg/kg	10.2	56.3	56.5	64.8	97	96	75-125	0	20
Lead	mg/kg	6.4	56.3	56.5	59.3	94	91	75-125	3	20
Selenium	mg/kg	<1.3	56.3	56.5	53.1	94	92	75-125	2	20
Silver	mg/kg	<0.39	28.1	28.3	27.6	98	99	75-125	1	20

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

QC Batch: 279315 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005

METHOD BLANK: 1639610 Matrix: Solid
Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<1.0	5.0	01/19/18 11:21	
Barium	mg/kg	<0.15	0.50	01/19/18 11:21	
Cadmium	mg/kg	<0.13	0.50	01/19/18 11:21	
Chromium	mg/kg	<0.28	1.0	01/19/18 11:21	
Lead	mg/kg	<0.43	1.3	01/19/18 11:21	
Selenium	mg/kg	<1.1	5.0	01/19/18 11:21	
Silver	mg/kg	<0.34	1.0	01/19/18 11:21	

LABORATORY CONTROL SAMPLE: 1639611

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	49.6	99	80-120	
Barium	mg/kg	50	49.8	100	80-120	
Cadmium	mg/kg	50	50.5	101	80-120	
Chromium	mg/kg	50	51.3	103	80-120	
Lead	mg/kg	50	50.9	102	80-120	
Selenium	mg/kg	50	51.7	103	80-120	
Silver	mg/kg	25	25.4	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1639612 1639613

Parameter	Units	40163515001		1639612		1639613		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Arsenic	mg/kg	5.3J	62.6	62.8	62.8	62.8	62.6	92	91	75-125	0	20	
Barium	mg/kg	166	62.6	62.8	62.8	228	222	99	89	75-125	2	20	
Cadmium	mg/kg	0.24J	62.6	62.8	62.8	58.7	59.3	93	94	75-125	1	20	
Chromium	mg/kg	19.9	62.6	62.8	62.8	80.3	85.2	97	104	75-125	6	20	
Lead	mg/kg	17.1	62.6	62.8	62.8	72.9	72.3	89	88	75-125	1	20	
Selenium	mg/kg	<1.4	62.6	62.8	62.8	59.0	59.2	94	94	75-125	0	20	
Silver	mg/kg	<0.43	31.3	31.4	31.4	28.3	29.8	91	95	75-125	5	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

QC Batch: 279205 Analysis Method: EPA 8260
 QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
 Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005, 40163468006, 40163468007,
 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014,
 40163468015, 40163468016, 40163468017, 40163468018, 40163468019, 40163468020

METHOD BLANK: 1639215 Matrix: Solid
 Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005, 40163468006, 40163468007,
 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014,
 40163468015, 40163468016, 40163468017, 40163468018, 40163468019, 40163468020

Parameter	Units	Blank Reporting		Analyzed	Qualifiers
		Result	Limit		
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	01/16/18 09:34	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	01/16/18 09:34	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	01/16/18 09:34	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	01/16/18 09:34	
1,1-Dichloroethane	ug/kg	<17.6	50.0	01/16/18 09:34	
1,1-Dichloroethene	ug/kg	<17.6	50.0	01/16/18 09:34	
1,1-Dichloropropene	ug/kg	<14.0	50.0	01/16/18 09:34	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	01/16/18 09:34	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	01/16/18 09:34	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	01/16/18 09:34	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	01/16/18 09:34	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	01/16/18 09:34	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	01/16/18 09:34	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	01/16/18 09:34	
1,2-Dichloroethane	ug/kg	<15.0	50.0	01/16/18 09:34	
1,2-Dichloropropane	ug/kg	<16.8	50.0	01/16/18 09:34	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	01/16/18 09:34	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	01/16/18 09:34	
1,3-Dichloropropane	ug/kg	<12.0	50.0	01/16/18 09:34	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	01/16/18 09:34	
2,2-Dichloropropane	ug/kg	<12.6	50.0	01/16/18 09:34	
2-Chlorotoluene	ug/kg	<15.8	50.0	01/16/18 09:34	
4-Chlorotoluene	ug/kg	<13.0	50.0	01/16/18 09:34	
Benzene	ug/kg	<9.2	20.0	01/16/18 09:34	
Bromobenzene	ug/kg	<20.6	50.0	01/16/18 09:34	
Bromochloromethane	ug/kg	<21.4	50.0	01/16/18 09:34	
Bromodichloromethane	ug/kg	<9.8	50.0	01/16/18 09:34	
Bromoform	ug/kg	<19.8	50.0	01/16/18 09:34	
Bromomethane	ug/kg	<69.9	250	01/16/18 09:34	
Carbon tetrachloride	ug/kg	<12.1	50.0	01/16/18 09:34	
Chlorobenzene	ug/kg	<14.8	50.0	01/16/18 09:34	
Chloroethane	ug/kg	<67.0	250	01/16/18 09:34	
Chloroform	ug/kg	<46.4	250	01/16/18 09:34	
Chloromethane	ug/kg	<20.4	50.0	01/16/18 09:34	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	01/16/18 09:34	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	01/16/18 09:34	
Dibromochloromethane	ug/kg	<17.9	50.0	01/16/18 09:34	
Dibromomethane	ug/kg	<19.3	50.0	01/16/18 09:34	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

METHOD BLANK: 1639215

Matrix: Solid

Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005, 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016, 40163468017, 40163468018, 40163468019, 40163468020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/kg	<12.3	50.0	01/16/18 09:34	
Diisopropyl ether	ug/kg	<17.7	50.0	01/16/18 09:34	
Ethylbenzene	ug/kg	<12.4	50.0	01/16/18 09:34	
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	01/16/18 09:34	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	01/16/18 09:34	
m&p-Xylene	ug/kg	<34.4	100	01/16/18 09:34	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	01/16/18 09:34	
Methylene Chloride	ug/kg	<16.2	50.0	01/16/18 09:34	
n-Butylbenzene	ug/kg	<10.5	50.0	01/16/18 09:34	
n-Propylbenzene	ug/kg	<11.6	50.0	01/16/18 09:34	
Naphthalene	ug/kg	<40.0	250	01/16/18 09:34	
o-Xylene	ug/kg	<14.0	50.0	01/16/18 09:34	
p-Isopropyltoluene	ug/kg	<12.0	50.0	01/16/18 09:34	
sec-Butylbenzene	ug/kg	<11.9	50.0	01/16/18 09:34	
Styrene	ug/kg	<9.0	50.0	01/16/18 09:34	
tert-Butylbenzene	ug/kg	<9.5	50.0	01/16/18 09:34	
Tetrachloroethene	ug/kg	<12.9	50.0	01/16/18 09:34	
Toluene	ug/kg	<11.2	50.0	01/16/18 09:34	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	01/16/18 09:34	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	01/16/18 09:34	
Trichloroethene	ug/kg	<23.6	50.0	01/16/18 09:34	
Trichlorofluoromethane	ug/kg	<24.7	50.0	01/16/18 09:34	
Vinyl chloride	ug/kg	<21.1	50.0	01/16/18 09:34	
Xylene (Total)	ug/kg	<48.4	150	01/16/18 09:34	
4-Bromofluorobenzene (S)	%	85	58-141	01/16/18 09:34	
Dibromofluoromethane (S)	%	117	68-130	01/16/18 09:34	
Toluene-d8 (S)	%	101	68-149	01/16/18 09:34	

LABORATORY CONTROL SAMPLE: 1639216

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2480	99	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2120	85	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2360	94	70-130	
1,1-Dichloroethane	ug/kg	2500	2360	94	63-124	
1,1-Dichloroethene	ug/kg	2500	2500	100	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	1900	76	78-130	L2
1,2-Dibromo-3-chloropropane	ug/kg	2500	1910	76	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2350	94	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2310	93	70-130	
1,2-Dichloroethane	ug/kg	2500	2590	104	56-135	
1,2-Dichloropropane	ug/kg	2500	2490	100	77-122	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

LABORATORY CONTROL SAMPLE: 1639216

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3-Dichlorobenzene	ug/kg	2500	2230	89	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2380	95	70-130	
Benzene	ug/kg	2500	2420	97	66-130	
Bromodichloromethane	ug/kg	2500	2670	107	62-135	
Bromoform	ug/kg	2500	2180	87	68-130	
Bromomethane	ug/kg	2500	2230	89	29-137	
Carbon tetrachloride	ug/kg	2500	2750	110	57-130	
Chlorobenzene	ug/kg	2500	2460	98	70-130	
Chloroethane	ug/kg	2500	2360	94	36-144	
Chloroform	ug/kg	2500	2470	99	69-115	
Chloromethane	ug/kg	2500	1510	60	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2260	90	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	2250	90	70-130	
Dibromochloromethane	ug/kg	2500	2540	102	70-130	
Dichlorodifluoromethane	ug/kg	2500	1130	45	10-99	
Ethylbenzene	ug/kg	2500	2330	93	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2430	97	70-130	
m&p-Xylene	ug/kg	5000	5050	101	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2260	90	63-134	
Methylene Chloride	ug/kg	2500	2600	104	56-123	
o-Xylene	ug/kg	2500	2400	96	70-130	
Styrene	ug/kg	2500	2460	98	70-130	
Tetrachloroethene	ug/kg	2500	2480	99	70-131	
Toluene	ug/kg	2500	2350	94	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2530	101	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	2310	93	68-130	
Trichloroethene	ug/kg	2500	2510	101	70-130	
Trichlorofluoromethane	ug/kg	2500	2620	105	37-149	
Vinyl chloride	ug/kg	2500	1960	78	43-128	
Xylene (Total)	ug/kg	7500	7450	99	70-130	
4-Bromofluorobenzene (S)	%			91	58-141	
Dibromofluoromethane (S)	%			107	68-130	
Toluene-d8 (S)	%			96	68-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1639217 1639218

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40163468002	Result	Spike Conc.	Spike Conc.								
1,1,1-Trichloroethane	ug/kg	<25.0	1340	1340	1310	1340	98	101	57-123	3	20		
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1340	1340	1230	1160	92	87	73-135	6	20		
1,1,2-Trichloroethane	ug/kg	<25.0	1340	1340	1130	1210	84	91	70-130	7	20		
1,1-Dichloroethane	ug/kg	<25.0	1340	1340	1270	1270	95	95	63-124	0	20		
1,1-Dichloroethene	ug/kg	<25.0	1340	1340	1410	1290	106	96	48-117	9	23		
1,2,4-Trichlorobenzene	ug/kg	<47.6	1340	1340	1150	1100	84	80	78-145	5	20		

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1639217		1639218		1639218		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		40163468002	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	1340	1340	1010	1040	76	78	38-168	2	22		
1,2-Dibromoethane (EDB)	ug/kg	<25.0	1340	1340	1140	1200	85	90	70-130	5	20		
1,2-Dichlorobenzene	ug/kg	<25.0	1340	1340	1320	1310	99	98	70-130	0	20		
1,2-Dichloroethane	ug/kg	<25.0	1340	1340	1370	1450	102	109	56-145	6	20		
1,2-Dichloropropane	ug/kg	<25.0	1340	1340	1400	1380	105	103	77-123	2	20		
1,3-Dichlorobenzene	ug/kg	<25.0	1340	1340	1220	1240	91	93	70-130	2	20		
1,4-Dichlorobenzene	ug/kg	<25.0	1340	1340	1320	1250	99	94	70-130	5	20		
Benzene	ug/kg	<25.0	1340	1340	1180	1300	88	97	65-130	10	20		
Bromodichloromethane	ug/kg	<25.0	1340	1340	1490	1430	112	107	59-141	5	20		
Bromoform	ug/kg	<25.0	1340	1340	1240	1250	93	93	59-141	0	20		
Bromomethane	ug/kg	<69.9	1340	1340	1230	1250	92	94	28-139	2	20		
Carbon tetrachloride	ug/kg	<25.0	1340	1340	1470	1440	110	107	50-130	2	20		
Chlorobenzene	ug/kg	<25.0	1340	1340	1330	1340	100	100	70-130	0	20		
Chloroethane	ug/kg	<67.0	1340	1340	1320	1370	99	103	36-144	4	20		
Chloroform	ug/kg	<46.4	1340	1340	1350	1340	101	100	68-122	1	20		
Chloromethane	ug/kg	<25.0	1340	1340	894	844	67	63	30-126	6	20		
cis-1,2-Dichloroethene	ug/kg	<25.0	1340	1340	1240	1280	93	96	63-130	3	20		
cis-1,3-Dichloropropene	ug/kg	<25.0	1340	1340	1220	1190	91	89	70-130	2	20		
Dibromochloromethane	ug/kg	<25.0	1340	1340	1190	1280	89	96	66-136	7	20		
Dichlorodifluoromethane	ug/kg	<25.0	1340	1340	533	568	40	42	10-99	6	33		
Ethylbenzene	ug/kg	<25.0	1340	1340	1180	1160	89	87	80-122	2	20		
Isopropylbenzene (Cumene)	ug/kg	<25.0	1340	1340	1230	1190	92	89	70-130	4	20		
m&p-Xylene	ug/kg	<50.0	2670	2670	2560	2570	96	96	70-130	0	20		
Methyl-tert-butyl ether	ug/kg	<25.0	1340	1340	1170	1170	88	87	63-134	1	20		
Methylene Chloride	ug/kg	<25.0	1340	1340	1470	1440	110	107	56-127	2	20		
o-Xylene	ug/kg	<25.0	1340	1340	1220	1210	91	91	70-130	0	20		
Styrene	ug/kg	<25.0	1340	1340	1270	1210	95	91	70-130	4	20		
Tetrachloroethene	ug/kg	29.5J	1340	1340	1220	1310	89	96	70-131	7	20		
Toluene	ug/kg	<25.0	1340	1340	1160	1240	87	93	80-120	6	20		
trans-1,2-Dichloroethene	ug/kg	<25.0	1340	1340	1450	1450	108	108	60-130	0	20		
trans-1,3-Dichloropropene	ug/kg	<25.0	1340	1340	1020	1090	76	81	68-130	6	20		
Trichloroethene	ug/kg	<25.0	1340	1340	1390	1350	104	101	70-130	3	20		
Trichlorofluoromethane	ug/kg	<25.0	1340	1340	1690	1620	126	121	37-149	4	24		
Vinyl chloride	ug/kg	<25.0	1340	1340	1080	1040	80	78	39-128	4	20		
Xylene (Total)	ug/kg	<75.0	4010	4010	3770	3780	94	94	70-130	0	20		
4-Bromofluorobenzene (S)	%						103	100	58-141				
Dibromofluoromethane (S)	%						121	124	68-130				
Toluene-d8 (S)	%						100	105	68-149				

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

QC Batch: 279069 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40163468021, 40163468022

METHOD BLANK: 1638744 Matrix: Water

Associated Lab Samples: 40163468021, 40163468022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	01/15/18 12:41	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	01/15/18 12:41	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	01/15/18 12:41	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	01/15/18 12:41	
1,1-Dichloroethane	ug/L	<0.24	1.0	01/15/18 12:41	
1,1-Dichloroethene	ug/L	<0.41	1.0	01/15/18 12:41	
1,1-Dichloropropene	ug/L	<0.44	1.0	01/15/18 12:41	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	01/15/18 12:41	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	01/15/18 12:41	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	01/15/18 12:41	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	01/15/18 12:41	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	01/15/18 12:41	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,2-Dichloroethane	ug/L	<0.17	1.0	01/15/18 12:41	
1,2-Dichloropropane	ug/L	<0.23	1.0	01/15/18 12:41	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,3-Dichloropropane	ug/L	<0.50	1.0	01/15/18 12:41	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
2,2-Dichloropropane	ug/L	<0.48	1.0	01/15/18 12:41	
2-Chlorotoluene	ug/L	<0.50	1.0	01/15/18 12:41	
4-Chlorotoluene	ug/L	<0.21	1.0	01/15/18 12:41	
Benzene	ug/L	<0.50	1.0	01/15/18 12:41	
Bromobenzene	ug/L	<0.23	1.0	01/15/18 12:41	
Bromochloromethane	ug/L	<0.34	1.0	01/15/18 12:41	
Bromodichloromethane	ug/L	<0.50	1.0	01/15/18 12:41	
Bromoform	ug/L	<0.50	1.0	01/15/18 12:41	
Bromomethane	ug/L	<2.4	5.0	01/15/18 12:41	
Carbon tetrachloride	ug/L	<0.50	1.0	01/15/18 12:41	
Chlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
Chloroethane	ug/L	<0.37	1.0	01/15/18 12:41	
Chloroform	ug/L	<2.5	5.0	01/15/18 12:41	
Chloromethane	ug/L	<0.50	1.0	01/15/18 12:41	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	01/15/18 12:41	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	01/15/18 12:41	
Dibromochloromethane	ug/L	<0.50	1.0	01/15/18 12:41	
Dibromomethane	ug/L	<0.43	1.0	01/15/18 12:41	
Dichlorodifluoromethane	ug/L	<0.22	1.0	01/15/18 12:41	
Diisopropyl ether	ug/L	<0.50	1.0	01/15/18 12:41	
Ethylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

METHOD BLANK: 1638744

Matrix: Water

Associated Lab Samples: 40163468021, 40163468022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	01/15/18 12:41	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	01/15/18 12:41	
m&p-Xylene	ug/L	<1.0	2.0	01/15/18 12:41	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	01/15/18 12:41	
Methylene Chloride	ug/L	<0.23	1.0	01/15/18 12:41	
n-Butylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
n-Propylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
Naphthalene	ug/L	<2.5	5.0	01/15/18 12:41	
o-Xylene	ug/L	<0.50	1.0	01/15/18 12:41	
p-Isopropyltoluene	ug/L	<0.50	1.0	01/15/18 12:41	
sec-Butylbenzene	ug/L	<2.2	5.0	01/15/18 12:41	
Styrene	ug/L	<0.50	1.0	01/15/18 12:41	
tert-Butylbenzene	ug/L	<0.18	1.0	01/15/18 12:41	
Tetrachloroethene	ug/L	<0.50	1.0	01/15/18 12:41	
Toluene	ug/L	<0.50	1.0	01/15/18 12:41	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	01/15/18 12:41	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	01/15/18 12:41	
Trichloroethene	ug/L	<0.33	1.0	01/15/18 12:41	
Trichlorofluoromethane	ug/L	<0.18	1.0	01/15/18 12:41	
Vinyl chloride	ug/L	<0.18	1.0	01/15/18 12:41	
Xylene (Total)	ug/L	<1.5	3.0	01/15/18 12:41	
4-Bromofluorobenzene (S)	%	86	61-130	01/15/18 12:41	
Dibromofluoromethane (S)	%	105	67-130	01/15/18 12:41	
Toluene-d8 (S)	%	93	70-130	01/15/18 12:41	

LABORATORY CONTROL SAMPLE: 1638745

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	48.0	96	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	42.1	84	70-130	
1,1,2-Trichloroethane	ug/L	50	47.2	94	70-130	
1,1-Dichloroethane	ug/L	50	42.6	85	71-132	
1,1-Dichloroethene	ug/L	50	41.1	82	75-130	
1,2,4-Trichlorobenzene	ug/L	50	44.2	88	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	34.6	69	63-123	
1,2-Dibromoethane (EDB)	ug/L	50	46.0	92	70-130	
1,2-Dichlorobenzene	ug/L	50	48.9	98	70-130	
1,2-Dichloroethane	ug/L	50	41.4	83	70-131	
1,2-Dichloropropane	ug/L	50	43.9	88	80-120	
1,3-Dichlorobenzene	ug/L	50	48.2	96	70-130	
1,4-Dichlorobenzene	ug/L	50	49.4	99	70-130	
Benzene	ug/L	50	44.8	90	73-145	
Bromodichloromethane	ug/L	50	47.7	95	70-130	
Bromoform	ug/L	50	56.4	113	67-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

LABORATORY CONTROL SAMPLE: 1638745

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	50	31.6	63	26-128	
Carbon tetrachloride	ug/L	50	51.8	104	70-133	
Chlorobenzene	ug/L	50	54.0	108	70-130	
Chloroethane	ug/L	50	36.2	72	58-120	
Chloroform	ug/L	50	50.0	100	80-121	
Chloromethane	ug/L	50	23.3	47	40-127	
cis-1,2-Dichloroethene	ug/L	50	42.0	84	70-130	
cis-1,3-Dichloropropene	ug/L	50	42.6	85	70-130	
Dibromochloromethane	ug/L	50	55.8	112	70-130	
Dichlorodifluoromethane	ug/L	50	15.5	31	20-135	
Ethylbenzene	ug/L	50	50.5	101	87-129	
Isopropylbenzene (Cumene)	ug/L	50	54.7	109	70-130	
m&p-Xylene	ug/L	100	107	107	70-130	
Methyl-tert-butyl ether	ug/L	50	38.1	76	66-143	
Methylene Chloride	ug/L	50	37.8	76	70-130	
o-Xylene	ug/L	50	52.7	105	70-130	
Styrene	ug/L	50	54.0	108	70-130	
Tetrachloroethene	ug/L	50	51.3	103	70-130	
Toluene	ug/L	50	48.9	98	82-130	
trans-1,2-Dichloroethene	ug/L	50	41.1	82	75-132	
trans-1,3-Dichloropropene	ug/L	50	44.0	88	70-130	
Trichloroethene	ug/L	50	50.6	101	70-130	
Trichlorofluoromethane	ug/L	50	45.2	90	76-133	
Vinyl chloride	ug/L	50	28.5	57	57-136	
Xylene (Total)	ug/L	150	160	107	70-130	
4-Bromofluorobenzene (S)	%			96	61-130	
Dibromofluoromethane (S)	%			103	67-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638896 1638897

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40163465004	Spike Conc.	Spike Conc.	Result							Result
1,1,1-Trichloroethane	ug/L	<0.50	50	50	52.0	53.2	104	106	70-134	2	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	44.1	42.4	88	85	70-130	4	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	49.2	50.4	98	101	70-130	2	20	
1,1-Dichloroethane	ug/L	<0.24	50	50	44.9	45.1	90	90	71-133	1	20	
1,1-Dichloroethene	ug/L	<0.41	50	50	48.5	50.3	97	101	75-136	4	20	
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	47.6	46.1	94	91	70-130	3	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	34.5	35.0	69	70	63-123	1	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	46.7	49.8	93	100	70-130	6	20	
1,2-Dichlorobenzene	ug/L	<0.50	50	50	49.4	50.0	99	100	70-130	1	20	
1,2-Dichloroethane	ug/L	<0.17	50	50	43.8	44.7	88	89	70-131	2	20	
1,2-Dichloropropane	ug/L	<0.23	50	50	43.9	45.7	88	91	80-120	4	20	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638896		1638897		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		40163465004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
1,3-Dichlorobenzene	ug/L	<0.50	50	50	49.9	50.9	100	102	70-130	2	20		
1,4-Dichlorobenzene	ug/L	<0.50	50	50	53.3	52.4	107	105	70-130	2	20		
Benzene	ug/L	<0.50	50	50	45.7	48.0	91	96	73-145	5	20		
Bromodichloromethane	ug/L	<0.50	50	50	47.0	47.7	94	95	70-130	1	20		
Bromoform	ug/L	<0.50	50	50	56.5	57.9	113	116	67-130	2	20		
Bromomethane	ug/L	<2.4	50	50	42.6	51.2	85	102	26-129	18	20		
Carbon tetrachloride	ug/L	<0.50	50	50	55.3	56.4	111	113	70-134	2	20		
Chlorobenzene	ug/L	<0.50	50	50	53.7	57.5	107	115	70-130	7	20		
Chloroethane	ug/L	<0.37	50	50	42.2	46.4	84	93	58-120	9	20		
Chloroform	ug/L	<2.5	50	50	51.8	52.4	104	105	80-121	1	20		
Chloromethane	ug/L	<0.50	50	50	34.7	36.6	69	73	40-128	5	20		
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	44.6	45.9	89	91	70-130	3	20		
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	44.9	44.4	90	89	70-130	1	20		
Dibromochloromethane	ug/L	<0.50	50	50	56.7	60.4	113	121	70-130	6	20		
Dichlorodifluoromethane	ug/L	<0.22	50	50	42.1	42.9	84	86	20-146	2	20		
Ethylbenzene	ug/L	<0.50	50	50	50.1	53.8	100	108	87-129	7	20		
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	55.3	58.2	111	116	70-130	5	20		
m&p-Xylene	ug/L	<1.0	100	100	106	113	106	113	70-130	6	20		
Methyl-tert-butyl ether	ug/L	<0.17	50	50	40.0	40.2	80	80	66-143	0	20		
Methylene Chloride	ug/L	<0.23	50	50	40.1	40.4	80	81	70-130	1	20		
o-Xylene	ug/L	<0.50	50	50	53.8	56.4	108	113	70-130	5	20		
Styrene	ug/L	<0.50	50	50	53.9	56.2	108	112	70-130	4	20		
Tetrachloroethene	ug/L	<0.50	50	50	54.3	57.4	109	115	70-130	6	20		
Toluene	ug/L	<0.50	50	50	51.9	55.2	104	110	82-131	6	20		
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	46.7	46.1	93	92	75-135	1	20		
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	45.5	46.8	91	94	70-130	3	20		
Trichloroethene	ug/L	1.4	50	50	53.4	54.8	104	107	70-130	3	20		
Trichlorofluoromethane	ug/L	<0.18	50	50	57.2	57.1	114	114	76-150	0	20		
Vinyl chloride	ug/L	<0.18	50	50	43.6	45.8	87	92	56-143	5	20		
Xylene (Total)	ug/L	<1.5	150	150	160	169	106	113	70-130	6	20		
4-Bromofluorobenzene (S)	%						96	95	61-130				
Dibromofluoromethane (S)	%						100	100	67-130				
Toluene-d8 (S)	%						91	94	70-130				

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

QC Batch:	279082	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	40163468001, 40163468002, 40163468003		

SAMPLE DUPLICATE: 1638820

Parameter	Units	40163466001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.1	17.5	8	10	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

QC Batch:	279095	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	40163468004, 40163468005, 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016, 40163468017, 40163468018, 40163468019, 40163468020		

SAMPLE DUPLICATE: 1638858

Parameter	Units	40163468004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	17.0	16.9	1	10	

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QUALIFIERS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

- 1q Analyte was detected in the associated method blank at a concentration of -0.66 mg/kg.
- 2q Analyte was detected in the associated method blank at a concentration of -7.65 ug/L.
- 3q Analyte was detected in the associated method blank at a concentration of -9.13 ug/L.
- D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
- L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.
- P4 Sample field preservation does not meet EPA or method recommendations for this analysis.
- S3 Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.
- W Non-detect results are reported on a wet weight basis.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163468

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40163468001	B-7-3	EPA 3050	279315	EPA 6010	279400
40163468002	B-7-7.5	EPA 3050	279315	EPA 6010	279400
40163468003	B-14-3	EPA 3050	279315	EPA 6010	279400
40163468004	B-14-8	EPA 3050	279315	EPA 6010	279400
40163468005	B-12-3	EPA 3050	279315	EPA 6010	279400
40163468006	B-12-8	EPA 3050	279186	EPA 6010	279321
40163468007	B-10-3	EPA 3050	279186	EPA 6010	279321
40163468008	B-10-8	EPA 3050	279186	EPA 6010	279321
40163468009	B-9-3	EPA 3050	279186	EPA 6010	279321
40163468010	B-9-8	EPA 3050	279186	EPA 6010	279321
40163468011	B-8-3	EPA 3050	279186	EPA 6010	279321
40163468012	B-8-8	EPA 3050	279186	EPA 6010	279321
40163468013	B-11-3	EPA 3050	279186	EPA 6010	279321
40163468014	B-11-8	EPA 3050	279186	EPA 6010	279321
40163468015	B-13-3	EPA 3050	279186	EPA 6010	279321
40163468016	B-13-8	EPA 3050	279186	EPA 6010	279321
40163468017	B-16-3	EPA 3050	279186	EPA 6010	279321
40163468018	B-16-8	EPA 3050	279186	EPA 6010	279321
40163468019	B-15-3	EPA 3050	279186	EPA 6010	279321
40163468020	B-15-8	EPA 3050	279186	EPA 6010	279321
40163468021	TW-7	EPA 6010	279176		
40163468021	TW-7	EPA 7470	279605	EPA 7470	279673
40163468001	B-7-3	EPA 7471	279631	EPA 7471	279690
40163468002	B-7-7.5	EPA 7471	279631	EPA 7471	279690
40163468003	B-14-3	EPA 7471	279631	EPA 7471	279690
40163468004	B-14-8	EPA 7471	279631	EPA 7471	279690
40163468005	B-12-3	EPA 7471	279631	EPA 7471	279690
40163468006	B-12-8	EPA 7471	279631	EPA 7471	279690
40163468007	B-10-3	EPA 7471	279631	EPA 7471	279690
40163468008	B-10-8	EPA 7471	279631	EPA 7471	279690
40163468009	B-9-3	EPA 7471	279631	EPA 7471	279690
40163468010	B-9-8	EPA 7471	279631	EPA 7471	279690
40163468011	B-8-3	EPA 7471	279631	EPA 7471	279690
40163468012	B-8-8	EPA 7471	279631	EPA 7471	279690
40163468013	B-11-3	EPA 7471	279631	EPA 7471	279690
40163468014	B-11-8	EPA 7471	279631	EPA 7471	279690
40163468015	B-13-3	EPA 7471	279631	EPA 7471	279690
40163468016	B-13-8	EPA 7471	279631	EPA 7471	279690
40163468017	B-16-3	EPA 7471	279632	EPA 7471	279691
40163468018	B-16-8	EPA 7471	279632	EPA 7471	279691
40163468019	B-15-3	EPA 7471	279632	EPA 7471	279691
40163468020	B-15-8	EPA 7471	279632	EPA 7471	279691
40163468001	B-7-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468002	B-7-7.5	EPA 5035/5030B	279205	EPA 8260	279206
40163468003	B-14-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468004	B-14-8	EPA 5035/5030B	279205	EPA 8260	279206

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40163468005	B-12-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468006	B-12-8	EPA 5035/5030B	279205	EPA 8260	279206
40163468007	B-10-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468008	B-10-8	EPA 5035/5030B	279205	EPA 8260	279206
40163468009	B-9-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468010	B-9-8	EPA 5035/5030B	279205	EPA 8260	279206
40163468011	B-8-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468012	B-8-8	EPA 5035/5030B	279205	EPA 8260	279206
40163468013	B-11-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468014	B-11-8	EPA 5035/5030B	279205	EPA 8260	279206
40163468015	B-13-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468016	B-13-8	EPA 5035/5030B	279205	EPA 8260	279206
40163468017	B-16-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468018	B-16-8	EPA 5035/5030B	279205	EPA 8260	279206
40163468019	B-15-3	EPA 5035/5030B	279205	EPA 8260	279206
40163468020	B-15-8	EPA 5035/5030B	279205	EPA 8260	279206
40163468021	TW-7	EPA 8260	279069		
40163468022	TRIP BLANK	EPA 8260	279069		
40163468001	B-7-3	ASTM D2974-87	279082		
40163468002	B-7-7.5	ASTM D2974-87	279082		
40163468003	B-14-3	ASTM D2974-87	279082		
40163468004	B-14-8	ASTM D2974-87	279095		
40163468005	B-12-3	ASTM D2974-87	279095		
40163468006	B-12-8	ASTM D2974-87	279095		
40163468007	B-10-3	ASTM D2974-87	279095		
40163468008	B-10-8	ASTM D2974-87	279095		
40163468009	B-9-3	ASTM D2974-87	279095		
40163468010	B-9-8	ASTM D2974-87	279095		
40163468011	B-8-3	ASTM D2974-87	279095		
40163468012	B-8-8	ASTM D2974-87	279095		
40163468013	B-11-3	ASTM D2974-87	279095		
40163468014	B-11-8	ASTM D2974-87	279095		
40163468015	B-13-3	ASTM D2974-87	279095		
40163468016	B-13-8	ASTM D2974-87	279095		
40163468017	B-16-3	ASTM D2974-87	279095		
40163468018	B-16-8	ASTM D2974-87	279095		
40163468019	B-15-3	ASTM D2974-87	279095		
40163468020	B-15-8	ASTM D2974-87	279095		

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Company Name: **Ramboll**

Branch/Location:

Project Contact: **Susan Percefske**

Phone: **262-391-5990**

Project Number: **1690005255-001**

Project Name: **MU APRC SITE**

Project State: **WI**

Sampled By (Print): **Brian Marschke**

Sampled By (Sign): *[Signature]*

PO #:

Regulatory Program:



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

Page 1 of 2
 40163468
 Page 74 of 76

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

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

Y/N	Pick Letter	Analysis Requested	
N	A	RURA & METALS VOLs	
N	F		

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		MATRIX
		DATE	TIME	
001	B-7-3	1-10-18	0945	S
002	B-7-7.5		0955	
003	B-14-3		1138	
004	B-14-8		1142	
005	B-12-3		1213	
006	B-12-8		1245	
007	B-10-3		1306	
008	B-10-8		1305	
009	B-9-3		1330	
010	B-9-8		1335	
011	B-8-3		1350	
012	B-8-8		1355	
013	B-11-3		1426	

CLIENT COMMENTS

LAB COMMENTS (Lab Use Only)
 1-4ozp A 1-40ulV^F

Profile #

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

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

Email #1:

Email #2:

Telephone:

Fax:

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

Relinquished By: *[Signature]* Date/Time: 1-12-18 9:10

Relinquished By: *[Signature]* Date/Time: 1/12/18 1300

Relinquished By: *[Signature]* Date/Time: 1-13-18 0845

Relinquished By: _____ Date/Time: _____

Received By: *[Signature]* Date/Time: 1/12/18 9:10

Received By: *[Signature]* Date/Time: _____

Received By: *[Signature]* Date/Time: 1-13-18 0845

Received By: _____ Date/Time: _____

PACE Project No.
 40163468

Receipt Temp = ROT °C

Sample Receipt pH
 OK / Adjusted

Cooler Custody Seal
 Present / Not Present
 Intact / Not Intact

(Please Print Clearly)

Company Name: Rambell
 Branch/Location:
 Project Contact: Susan Petroske
 Phone: 262-391-5996
 Project Number: 1690005265-001
 Project Name: MU APAC Site
 Project State: WI
 Sampled By (Print): Brad Marschke
 Sampled By (Sign): [Signature]
 PO #:
 Regulatory Program:



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

Page 2 of 2
40163468
 Page 75 of 76

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

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

Y/N	Pick Letter	Analysis Requested
<u>N</u>	<u>A</u>	<u>RURALS MATRIS</u> <u>VOCS</u>
<u>N</u>	<u>F</u>	

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX
		DATE	TIME	
<u>014</u>	<u>B-11-8</u>	<u>1-10-18</u>	<u>1425</u>	<u>S</u>
<u>015</u>	<u>B-13-3</u>		<u>1440</u>	
<u>016</u>	<u>B-13-8</u>		<u>1445</u>	
<u>017</u>	<u>B-16-3</u>		<u>1500</u>	
<u>018</u>	<u>B-16-8</u>		<u>1505</u>	
<u>019</u>	<u>B-15-3</u>		<u>1515</u>	
<u>020</u>	<u>B-15-8</u>	<u>↓</u>	<u>1526</u>	<u>↓</u>
<u>021</u>	<u>TW-7</u>	<u>1-11-18</u>	<u>1105</u>	<u>GW</u>
<u>022</u>	<u>TOIP BANK</u>			

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

CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
	<u>1-40zpa</u>	<u>1-40mlv</u>
<u>Please filter metals sample per se to analysis</u>	<u>3-40mlvB</u>	<u>1-250mlvA</u>
	<u>1-40mlvB</u>	

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) Date Needed:	Relinquished By: <u>[Signature]</u> Date/Time: <u>1-12-18 9:10</u>	Received By: <u>Mary Fanning</u> Date/Time: <u>1/12/18 9:10</u>	PACE Project No. <u>40163468</u>
	Transmit Prelim Rush Results by (complete what you want):	Relinquished By: <u>Mary Fanning</u> Date/Time: <u>1/12/18 1300</u>	
Email #1:	Relinquished By: <u>[Signature]</u> Date/Time: <u>1-13-18 0815</u>	Received By: <u>[Signature]</u> Date/Time: <u>1-13-18 0815</u>	Receipt Temp <u>ROT</u> °C
Email #2:	Relinquished By:	Received By:	Sample Receipt pH OK / Adjusted
Telephone:	Relinquished By:	Received By:	Cooler Custody Seal Present / Not Present
Fax:	Relinquished By:	Received By:	Intact / Not Intact
Samples on HOLD are subject to special pricing and release of liability	Relinquished By:	Received By:	

Sample Condition Upon Receipt

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



Client Name: Ramboll
 Courier: Fed Ex UPS Client Pace Other: CSLogistics
 Tracking #: _____

Project #: _____

WO#: 40163468

40163468

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: ROT / Corr: _____ Biological Tissue is Frozen: Yes No
 Temp Blank Present: Yes No

Person examining contents:
 Date: 1/13/18
 Initials: SW

		Comments:
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8. <u>No MS/MSD Volume</u>
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10. <u>OOI - Client covered tared</u>
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11. <u>weight on 40ml vial</u>
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>Lab added 1-250ml p for filtering</u>
-Includes date/time/ID/Analysis Matrix: <u>S+W</u>		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 <2; NaOH+ZnAct ≥9, NaOH ≥12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: <u>VOA</u> coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
		Lab Std #ID of preservative
		Date/Time:
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>388</u>		

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 1/10/18

APPENDIX B

WASTE CHARACTERIZATION LABORATORY ANALYTICAL RESULTS

January 29, 2018

Jeanne Tarvin
Ramboll Environ
175 North Corporate Drive
Suite 160
Brookfield, WI 53045

RE: Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

Dear Jeanne Tarvin:

Enclosed are the analytical results for sample(s) received by the laboratory on January 13, 2018. 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,



Steven Mleczo
steve.mleczo@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Jim Hutchens, Ramboll Environ
Jim Kane, Ramboll Environ
Snejana Karakis, Environ
David L. Markelz, Ramboll Environ
Michelle Murphy, Environ
Susan Petrofske, Ramboll Environ
Scott Tarmann, Ramboll Environ
Abigail M. Wedig, Environ International Corp



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235

Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40163466001	COMP-1	Solid	01/10/18 15:40	01/13/18 08:45
40163466002	TRIP BLANK	Water	01/10/18 00:00	01/13/18 08:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40163466001	COMP-1	EPA 8082	BLM	10	PASI-G
		EPA 6010	JLD	10	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	17	PASI-G
		EPA 8260	HNW	13	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 1010	DEY	1	PASI-G
		EPA 9045	ALY	1	PASI-G
		EPA 9095	DEY	1	PASI-G
		SM 2710F	DEY	1	PASI-G
		EPA 9014	PAS	1	PASI-PA
		SM4500S2F-00	PAS	1	PASI-PA
		40163466002	TRIP BLANK	EPA 8260	HNW

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40163466001	COMP-1					
EPA 6010	Barium	0.52	mg/L	0.075	01/23/18 13:13	
EPA 7470	Mercury	0.37J	ug/L	0.42	01/25/18 10:11	
ASTM D2974-87	Percent Moisture	16.1	%	0.10	01/15/18 11:00	
EPA 1010	Flashpoint	>210	deg F		01/16/18 12:05	
EPA 9045	pH at 25 Degrees C	8.69	Std. Units	0.100	01/23/18 09:12	H6
EPA 9095	Free Liquids	Pass	no units		01/18/18 11:21	
SM 2710F	Specific Gravity	2.2	no units		01/17/18 11:59	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

Sample: COMP-1 **Lab ID: 40163466001** Collected: 01/10/18 15:40 Received: 01/13/18 08:45 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
8082 GCS PCB									
Analytical Method: EPA 8082 Preparation Method: EPA 3541									
PCB-1016 (Aroclor 1016)	<29.8	ug/kg	59.6	29.8	1	01/23/18 12:11	01/24/18 11:52	12674-11-2	
PCB-1221 (Aroclor 1221)	<29.8	ug/kg	59.6	29.8	1	01/23/18 12:11	01/24/18 11:52	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.8	ug/kg	59.6	29.8	1	01/23/18 12:11	01/24/18 11:52	11141-16-5	
PCB-1242 (Aroclor 1242)	<29.8	ug/kg	59.6	29.8	1	01/23/18 12:11	01/24/18 11:52	53469-21-9	
PCB-1248 (Aroclor 1248)	<29.8	ug/kg	59.6	29.8	1	01/23/18 12:11	01/24/18 11:52	12672-29-6	
PCB-1254 (Aroclor 1254)	<29.8	ug/kg	59.6	29.8	1	01/23/18 12:11	01/24/18 11:52	11097-69-1	
PCB-1260 (Aroclor 1260)	<29.8	ug/kg	59.6	29.8	1	01/23/18 12:11	01/24/18 11:52	11096-82-5	
PCB, Total	<29.8	ug/kg	59.6	29.8	1	01/23/18 12:11	01/24/18 11:52	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	87	%	50-102		1	01/23/18 12:11	01/24/18 11:52	877-09-8	
Decachlorobiphenyl (S)	83	%	53-105		1	01/23/18 12:11	01/24/18 11:52	2051-24-3	
6010 MET ICP, TCLP									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Leachate Method/Date: EPA 1311; 01/17/18 12:05									
Arsenic	<0.042	mg/L	0.12	0.042	1	01/18/18 09:55	01/23/18 13:13	7440-38-2	
Barium	0.52	mg/L	0.075	0.025	1	01/18/18 09:55	01/23/18 13:13	7440-39-3	
Cadmium	<0.0066	mg/L	0.025	0.0066	1	01/18/18 09:55	01/23/18 13:13	7440-43-9	
Chromium	<0.013	mg/L	0.050	0.013	1	01/18/18 09:55	01/23/18 13:13	7440-47-3	
Copper	<0.031	mg/L	0.10	0.031	1	01/18/18 09:55	01/23/18 13:13	7440-50-8	
Lead	<0.022	mg/L	0.065	0.022	1	01/18/18 09:55	01/23/18 13:13	7439-92-1	
Nickel	<0.013	mg/L	0.050	0.013	1	01/18/18 09:55	01/23/18 13:13	7440-02-0	
Selenium	<0.083	mg/L	0.25	0.083	1	01/18/18 09:55	01/23/18 13:13	7782-49-2	
Silver	<0.017	mg/L	0.050	0.017	1	01/18/18 09:55	01/23/18 13:13	7440-22-4	
Zinc	<0.047	mg/L	0.20	0.047	1	01/18/18 09:55	01/23/18 13:13	7440-66-6	
7470 Mercury, TCLP									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Leachate Method/Date: EPA 1311; 01/17/18 12:05									
Mercury	0.37J	ug/L	0.42	0.13	1	01/24/18 12:40	01/25/18 10:11	7439-97-6	
8270 MSSV TCLP Sep Funnel									
Analytical Method: EPA 8270 Preparation Method: EPA 3510									
Leachate Method/Date: EPA 1311; 01/17/18 12:05									
1,4-Dichlorobenzene	<18.8	ug/L	62.5	18.8	1	01/22/18 08:00	01/23/18 11:21	106-46-7	
2,4-Dinitrotoluene	<7.9	ug/L	26.4	7.9	1	01/22/18 08:00	01/23/18 11:21	121-14-2	
Hexachloro-1,3-butadiene	<24.6	ug/L	82.0	24.6	1	01/22/18 08:00	01/23/18 11:21	87-68-3	
Hexachlorobenzene	<16.9	ug/L	56.4	16.9	1	01/22/18 08:00	01/23/18 11:21	118-74-1	
Hexachloroethane	<26.6	ug/L	88.6	26.6	1	01/22/18 08:00	01/23/18 11:21	67-72-1	
2-Methylphenol(o-Cresol)	<8.7	ug/L	28.9	8.7	1	01/22/18 08:00	01/23/18 11:21	95-48-7	
3&4-Methylphenol(m&p Cresol)	<15.6	ug/L	52.0	15.6	1	01/22/18 08:00	01/23/18 11:21		
Nitrobenzene	<14.5	ug/L	48.3	14.5	1	01/22/18 08:00	01/23/18 11:21	98-95-3	
Pentachlorophenol	<14.3	ug/L	47.8	14.3	1	01/22/18 08:00	01/23/18 11:21	87-86-5	
Phenol	<6.0	ug/L	20.0	6.0	1	01/22/18 08:00	01/23/18 11:21	108-95-2	
Pyridine	<17.9	ug/L	59.6	17.9	1	01/22/18 08:00	01/23/18 11:21	110-86-1	
2,4,5-Trichlorophenol	<8.4	ug/L	28.0	8.4	1	01/22/18 08:00	01/23/18 11:21	95-95-4	
2,4,6-Trichlorophenol	<21.1	ug/L	70.4	21.1	1	01/22/18 08:00	01/23/18 11:21	88-06-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

Sample: COMP-1 **Lab ID: 40163466001** Collected: 01/10/18 15:40 Received: 01/13/18 08:45 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
8270 MSSV TCLP Sep Funnel									
Analytical Method: EPA 8270 Preparation Method: EPA 3510									
Leachate Method/Date: EPA 1311; 01/17/18 12:05									
Surrogates									
Nitrobenzene-d5 (S)	73	%	56-120		1	01/22/18 08:00	01/23/18 11:21	4165-60-0	
2-Fluorobiphenyl (S)	62	%	54-122		1	01/22/18 08:00	01/23/18 11:21	321-60-8	
2,4,6-Tribromophenol (S)	90	%	58-134		1	01/22/18 08:00	01/23/18 11:21	118-79-6	
Phenol-d6 (S)	31	%	16-120		1	01/22/18 08:00	01/23/18 11:21	13127-88-3	
8260 MSV TCLP									
Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 01/18/18 11:50									
Benzene	<5.0	ug/L	10.0	5.0	10		01/19/18 11:43	71-43-2	
2-Butanone (MEK)	<29.8	ug/L	200	29.8	10		01/19/18 11:43	78-93-3	
Carbon tetrachloride	<5.0	ug/L	10.0	5.0	10		01/19/18 11:43	56-23-5	
Chlorobenzene	<5.0	ug/L	10.0	5.0	10		01/19/18 11:43	108-90-7	
Chloroform	<25.0	ug/L	50.0	25.0	10		01/19/18 11:43	67-66-3	
1,2-Dichloroethane	<1.7	ug/L	10.0	1.7	10		01/19/18 11:43	107-06-2	
1,1-Dichloroethene	<4.1	ug/L	10.0	4.1	10		01/19/18 11:43	75-35-4	
Tetrachloroethene	<5.0	ug/L	10.0	5.0	10		01/19/18 11:43	127-18-4	
Trichloroethene	<3.3	ug/L	10.0	3.3	10		01/19/18 11:43	79-01-6	
Vinyl chloride	<1.8	ug/L	10.0	1.8	10		01/19/18 11:43	75-01-4	
Surrogates									
Toluene-d8 (S)	96	%	70-130		10		01/19/18 11:43	2037-26-5	
4-Bromofluorobenzene (S)	86	%	61-130		10		01/19/18 11:43	460-00-4	
Dibromofluoromethane (S)	106	%	67-130		10		01/19/18 11:43	1868-53-7	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	16.1	%	0.10	0.10	1		01/15/18 11:00		
1010 Flashpoint,Closed Cup									
Analytical Method: EPA 1010									
Flashpoint	>210	deg F			1		01/16/18 12:05		
9045 pH Soil									
Analytical Method: EPA 9045									
pH at 25 Degrees C	8.69	Std. Units	0.100	0.0100	1		01/23/18 09:12		H6
9095 Paint Filter Liquid Test									
Analytical Method: EPA 9095									
Free Liquids	Pass	no units			1		01/18/18 11:21		
Specific Gravity									
Analytical Method: SM 2710F									
Specific Gravity	2.2	no units			1		01/17/18 11:59		
733C S Reactive Cyanide									
Analytical Method: EPA 9014 Preparation Method: SW-846 7.3.3.2									
Cyanide, Reactive	<0.48	mg/kg	1.2	0.48	1	01/18/18 16:09	01/18/18 23:36		
734S Reactive Sulfide									
Analytical Method: SM4500S2F-00 Preparation Method: SW-846 7.3.4.2									
Sulfide, Reactive	<11.9	mg/kg	11.9	11.9	1	01/18/18 16:09	01/18/18 21:37		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

Sample: TRIP BLANK **Lab ID: 40163466002** Collected: 01/10/18 00:00 Received: 01/13/18 08:45 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		01/15/18 21:39	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		01/15/18 21:39	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		01/15/18 21:39	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		01/15/18 21:39	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		01/15/18 21:39	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		01/15/18 21:39	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		01/15/18 21:39	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		01/15/18 21:39	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		01/15/18 21:39	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		01/15/18 21:39	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		01/15/18 21:39	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		01/15/18 21:39	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		01/15/18 21:39	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		01/15/18 21:39	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		01/15/18 21:39	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		01/15/18 21:39	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/15/18 21:39	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/15/18 21:39	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		01/15/18 21:39	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		01/15/18 21:39	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		01/15/18 21:39	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		01/15/18 21:39	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		01/15/18 21:39	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		01/15/18 21:39	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		01/15/18 21:39	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		01/15/18 21:39	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		01/15/18 21:39	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		01/15/18 21:39	630-20-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

Sample: TRIP BLANK **Lab ID: 40163466002** Collected: 01/10/18 00:00 Received: 01/13/18 08:45 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		01/15/18 21:39	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		01/15/18 21:39	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		01/15/18 21:39	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		01/15/18 21:39	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		01/15/18 21:39	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		01/15/18 21:39	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		01/15/18 21:39	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		01/15/18 21:39	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		01/15/18 21:39	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		01/15/18 21:39	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	80	%	61-130		1		01/15/18 21:39	460-00-4	
Dibromofluoromethane (S)	110	%	67-130		1		01/15/18 21:39	1868-53-7	
Toluene-d8 (S)	90	%	70-130		1		01/15/18 21:39	2037-26-5	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 279724 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury TCLP
Associated Lab Samples: 40163466001

METHOD BLANK: 1641660 Matrix: Water
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	01/25/18 10:06	

METHOD BLANK: 1638859 Matrix: Solid
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	01/25/18 10:55	

METHOD BLANK: 1639054 Matrix: Water
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	01/25/18 10:27	

METHOD BLANK: 1641148 Matrix: Water
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	01/25/18 11:00	

LABORATORY CONTROL SAMPLE: 1641661

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.2	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1641662 1641663

Parameter	Units	MS Result	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	0.37J	5	5	5.1	5.1	95	95	85-115	0	20

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

MATRIX SPIKE SAMPLE:		1641664					
Parameter	Units	40163551001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	<0.13	5	4.9	96	85-115	

MATRIX SPIKE SAMPLE:		1641665					
Parameter	Units	40163606001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	0.34J	5	4.8	90	85-115	

MATRIX SPIKE SAMPLE:		1641666					
Parameter	Units	40163614001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	0.20J	5	4.8	92	85-115	

MATRIX SPIKE SAMPLE:		1641667					
Parameter	Units	40163634001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	<0.13	5	4.8	95	85-115	

MATRIX SPIKE SAMPLE:		1641668					
Parameter	Units	40163638001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	0.00020J mg/L	5	5.4	103	85-115	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 279371 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET TCLP
Associated Lab Samples: 40163466001

METHOD BLANK: 1639883 Matrix: Water
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.0083	0.025	01/23/18 13:01	
Barium	mg/L	<0.0050	0.015	01/23/18 13:01	
Cadmium	mg/L	<0.0013	0.0050	01/23/18 13:01	
Chromium	mg/L	<0.0025	0.010	01/23/18 13:01	
Copper	mg/L	<0.0063	0.020	01/23/18 13:01	
Lead	mg/L	<0.0043	0.013	01/23/18 13:01	
Nickel	mg/L	<0.0026	0.010	01/23/18 13:01	
Selenium	mg/L	<0.017	0.050	01/23/18 13:01	
Silver	mg/L	<0.0033	0.010	01/23/18 13:01	
Zinc	mg/L	<0.0093	0.040	01/23/18 13:01	

METHOD BLANK: 1639052 Matrix: Solid
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.042	0.12	01/23/18 13:21	
Barium	mg/L	<0.025	0.075	01/23/18 13:21	
Cadmium	mg/L	<0.0066	0.025	01/23/18 13:21	
Chromium	mg/L	<0.013	0.050	01/23/18 13:21	
Copper	mg/L	<0.031	0.10	01/23/18 13:21	
Lead	mg/L	<0.022	0.065	01/23/18 13:21	
Nickel	mg/L	<0.013	0.050	01/23/18 13:21	
Selenium	mg/L	<0.083	0.25	01/23/18 13:21	
Silver	mg/L	<0.017	0.050	01/23/18 13:21	
Zinc	mg/L	<0.047	0.20	01/23/18 13:21	

METHOD BLANK: 1639449 Matrix: Solid
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.0083	0.025	01/23/18 13:37	
Barium	mg/L	<0.0050	0.015	01/23/18 13:37	
Cadmium	mg/L	<0.0013	0.0050	01/23/18 13:37	
Chromium	mg/L	<0.0025	0.010	01/23/18 13:37	
Copper	mg/L	<0.0063	0.020	01/23/18 13:37	
Lead	mg/L	<0.0043	0.013	01/23/18 13:37	
Nickel	mg/L	0.0032J	0.010	01/23/18 13:37	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

METHOD BLANK: 1639449 Matrix: Solid
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Selenium	mg/L	<0.017	0.050	01/23/18 13:37	
Silver	mg/L	<0.0033	0.010	01/23/18 13:37	
Zinc	mg/L	<0.0093	0.040	01/23/18 13:37	

LABORATORY CONTROL SAMPLE: 1639884

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.5	0.50	99	80-120	
Barium	mg/L	.5	0.51	103	80-120	
Cadmium	mg/L	.5	0.50	101	80-120	
Chromium	mg/L	.5	0.51	102	80-120	
Copper	mg/L	.5	0.51	103	80-120	
Lead	mg/L	.5	0.51	102	80-120	
Nickel	mg/L	.5	0.51	102	80-120	
Selenium	mg/L	.5	0.52	103	80-120	
Silver	mg/L	.25	0.25	101	80-120	
Zinc	mg/L	.5	0.53	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1639885 1639886

Parameter	Units	40163519001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	Spike Conc.	Result	MSD Result	MS % Rec	MSD % Rec					
Arsenic	mg/L	<0.042	2.5	2.5	2.4	2.4	96	95	75-125	1	20		
Barium	mg/L	0.33	2.5	2.5	2.8	2.8	99	98	75-125	2	20		
Cadmium	mg/L	<0.0066	2.5	2.5	2.5	2.4	99	98	75-125	1	20		
Chromium	mg/L	<0.013	2.5	2.5	2.4	2.4	97	96	75-125	1	20		
Copper	mg/L	<0.031	2.5	2.5	2.5	2.5	99	98	75-125	2	20		
Lead	mg/L	<0.022	2.5	2.5	2.4	2.4	97	95	75-125	2	20		
Nickel	mg/L	0.016J	2.5	2.5	2.4	2.4	95	95	75-125	1	20		
Selenium	mg/L	<0.083	2.5	2.5	2.5	2.5	100	98	75-125	2	20		
Silver	mg/L	<0.017	1.2	1.2	1.2	1.2	100	98	75-125	2	20		
Zinc	mg/L	<0.047	2.5	2.5	2.5	2.5	99	98	75-125	1	20		

MATRIX SPIKE SAMPLE: 1639887

Parameter	Units	40163551001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	<0.042	2.5	2.4	96	75-125	
Barium	mg/L	0.38	2.5	2.9	100	75-125	
Cadmium	mg/L	<0.0066	2.5	2.5	98	75-125	
Chromium	mg/L	<0.013	2.5	2.4	97	75-125	
Copper	mg/L	<0.031	2.5	2.5	100	75-125	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

MATRIX SPIKE SAMPLE:		1639887					
Parameter	Units	40163551001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	<0.022	2.5	2.5	98	75-125	
Nickel	mg/L	<0.013	2.5	2.4	96	75-125	
Selenium	mg/L	<0.083	2.5	2.6	102	75-125	
Silver	mg/L	<0.017	1.2	1.2	100	75-125	
Zinc	mg/L	0.20J	2.5	2.7	100	75-125	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 279431 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV TCLP
Associated Lab Samples: 40163466001

METHOD BLANK: 1640299 Matrix: Water
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	<0.41	1.0	01/19/18 08:59	
1,2-Dichloroethane	ug/L	<0.17	1.0	01/19/18 08:59	
2-Butanone (MEK)	ug/L	<3.0	20.0	01/19/18 08:59	
Benzene	ug/L	<0.50	1.0	01/19/18 08:59	
Carbon tetrachloride	ug/L	<0.50	1.0	01/19/18 08:59	
Chlorobenzene	ug/L	<0.50	1.0	01/19/18 08:59	
Chloroform	ug/L	<2.5	5.0	01/19/18 08:59	
Tetrachloroethene	ug/L	<0.50	1.0	01/19/18 08:59	
Trichloroethene	ug/L	<0.33	1.0	01/19/18 08:59	
Vinyl chloride	ug/L	<0.18	1.0	01/19/18 08:59	
4-Bromofluorobenzene (S)	%	84	61-130	01/19/18 08:59	
Dibromofluoromethane (S)	%	111	67-130	01/19/18 08:59	
Toluene-d8 (S)	%	93	70-130	01/19/18 08:59	

METHOD BLANK: 1639849 Matrix: Solid
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	<4.1	10.0	01/19/18 09:22	
1,2-Dichloroethane	ug/L	<1.7	10.0	01/19/18 09:22	
2-Butanone (MEK)	ug/L	<29.8	200	01/19/18 09:22	
Benzene	ug/L	<5.0	10.0	01/19/18 09:22	
Carbon tetrachloride	ug/L	<5.0	10.0	01/19/18 09:22	
Chlorobenzene	ug/L	<5.0	10.0	01/19/18 09:22	
Chloroform	ug/L	<25.0	50.0	01/19/18 09:22	
Tetrachloroethene	ug/L	<5.0	10.0	01/19/18 09:22	
Trichloroethene	ug/L	<3.3	10.0	01/19/18 09:22	
Vinyl chloride	ug/L	<1.8	10.0	01/19/18 09:22	
4-Bromofluorobenzene (S)	%	85	61-130	01/19/18 09:22	
Dibromofluoromethane (S)	%	104	67-130	01/19/18 09:22	
Toluene-d8 (S)	%	93	70-130	01/19/18 09:22	

LABORATORY CONTROL SAMPLE: 1640300

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	50	47.9	96	75-130	
1,2-Dichloroethane	ug/L	50	43.3	87	70-131	
Benzene	ug/L	50	44.3	89	73-145	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

LABORATORY CONTROL SAMPLE: 1640300

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	56.6	113	70-133	
Chlorobenzene	ug/L	50	56.2	112	70-130	
Chloroform	ug/L	50	52.0	104	80-121	
Tetrachloroethene	ug/L	50	55.3	111	70-130	
Trichloroethene	ug/L	50	52.9	106	70-130	
Vinyl chloride	ug/L	50	36.2	72	57-136	
4-Bromofluorobenzene (S)	%			98	61-130	
Dibromofluoromethane (S)	%			99	67-130	
Toluene-d8 (S)	%			92	70-130	

MATRIX SPIKE SAMPLE: 1640329

Parameter	Units	40163551001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	<4.1	500	461	92	75-136	
1,2-Dichloroethane	ug/L	<1.7	500	453	91	70-131	
2-Butanone (MEK)	ug/L	<29.8		<29.8			
Benzene	ug/L	<5.0	500	454	91	73-145	
Carbon tetrachloride	ug/L	<5.0	500	574	115	70-134	
Chlorobenzene	ug/L	<5.0	500	547	109	70-130	
Chloroform	ug/L	<25.0	500	534	107	80-121	
Tetrachloroethene	ug/L	<5.0	500	551	110	70-130	
Trichloroethene	ug/L	<3.3	500	522	104	70-130	
Vinyl chloride	ug/L	<1.8	500	371	74	56-143	
4-Bromofluorobenzene (S)	%				100	61-130	
Dibromofluoromethane (S)	%				100	67-130	
Toluene-d8 (S)	%				94	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1640335 1640336

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40163466001 Result	Spike Conc.	Spike Conc.	MS Result								
1,1-Dichloroethene	ug/L	<4.1	500	500	469	486	94	97	75-136	4	20		
1,2-Dichloroethane	ug/L	<1.7	500	500	435	454	87	91	70-131	4	20		
2-Butanone (MEK)	ug/L	<29.8			<29.8	<29.8						20	
Benzene	ug/L	<5.0	500	500	444	469	89	94	73-145	5	20		
Carbon tetrachloride	ug/L	<5.0	500	500	572	603	114	121	70-134	5	20		
Chlorobenzene	ug/L	<5.0	500	500	556	570	111	114	70-130	3	20		
Chloroform	ug/L	<25.0	500	500	516	539	103	108	80-121	4	20		
Tetrachloroethene	ug/L	<5.0	500	500	549	551	110	110	70-130	0	20		
Trichloroethene	ug/L	<3.3	500	500	559	565	112	113	70-130	1	20		
Vinyl chloride	ug/L	<1.8	500	500	388	396	78	79	56-143	2	20		
4-Bromofluorobenzene (S)	%							98	98	61-130			
Dibromofluoromethane (S)	%							98	105	67-130			
Toluene-d8 (S)	%							95	94	70-130			

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 279069 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40163466002

METHOD BLANK: 1638744 Matrix: Water
Associated Lab Samples: 40163466002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	01/15/18 12:41	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	01/15/18 12:41	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	01/15/18 12:41	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	01/15/18 12:41	
1,1-Dichloroethane	ug/L	<0.24	1.0	01/15/18 12:41	
1,1-Dichloroethene	ug/L	<0.41	1.0	01/15/18 12:41	
1,1-Dichloropropene	ug/L	<0.44	1.0	01/15/18 12:41	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	01/15/18 12:41	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	01/15/18 12:41	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	01/15/18 12:41	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	01/15/18 12:41	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	01/15/18 12:41	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,2-Dichloroethane	ug/L	<0.17	1.0	01/15/18 12:41	
1,2-Dichloropropane	ug/L	<0.23	1.0	01/15/18 12:41	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,3-Dichloropropane	ug/L	<0.50	1.0	01/15/18 12:41	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
2,2-Dichloropropane	ug/L	<0.48	1.0	01/15/18 12:41	
2-Chlorotoluene	ug/L	<0.50	1.0	01/15/18 12:41	
4-Chlorotoluene	ug/L	<0.21	1.0	01/15/18 12:41	
Benzene	ug/L	<0.50	1.0	01/15/18 12:41	
Bromobenzene	ug/L	<0.23	1.0	01/15/18 12:41	
Bromochloromethane	ug/L	<0.34	1.0	01/15/18 12:41	
Bromodichloromethane	ug/L	<0.50	1.0	01/15/18 12:41	
Bromoform	ug/L	<0.50	1.0	01/15/18 12:41	
Bromomethane	ug/L	<2.4	5.0	01/15/18 12:41	
Carbon tetrachloride	ug/L	<0.50	1.0	01/15/18 12:41	
Chlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
Chloroethane	ug/L	<0.37	1.0	01/15/18 12:41	
Chloroform	ug/L	<2.5	5.0	01/15/18 12:41	
Chloromethane	ug/L	<0.50	1.0	01/15/18 12:41	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	01/15/18 12:41	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	01/15/18 12:41	
Dibromochloromethane	ug/L	<0.50	1.0	01/15/18 12:41	
Dibromomethane	ug/L	<0.43	1.0	01/15/18 12:41	
Dichlorodifluoromethane	ug/L	<0.22	1.0	01/15/18 12:41	
Diisopropyl ether	ug/L	<0.50	1.0	01/15/18 12:41	
Ethylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

METHOD BLANK: 1638744 Matrix: Water
Associated Lab Samples: 40163466002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	01/15/18 12:41	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	01/15/18 12:41	
m&p-Xylene	ug/L	<1.0	2.0	01/15/18 12:41	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	01/15/18 12:41	
Methylene Chloride	ug/L	<0.23	1.0	01/15/18 12:41	
n-Butylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
n-Propylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
Naphthalene	ug/L	<2.5	5.0	01/15/18 12:41	
o-Xylene	ug/L	<0.50	1.0	01/15/18 12:41	
p-Isopropyltoluene	ug/L	<0.50	1.0	01/15/18 12:41	
sec-Butylbenzene	ug/L	<2.2	5.0	01/15/18 12:41	
Styrene	ug/L	<0.50	1.0	01/15/18 12:41	
tert-Butylbenzene	ug/L	<0.18	1.0	01/15/18 12:41	
Tetrachloroethene	ug/L	<0.50	1.0	01/15/18 12:41	
Toluene	ug/L	<0.50	1.0	01/15/18 12:41	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	01/15/18 12:41	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	01/15/18 12:41	
Trichloroethene	ug/L	<0.33	1.0	01/15/18 12:41	
Trichlorofluoromethane	ug/L	<0.18	1.0	01/15/18 12:41	
Vinyl chloride	ug/L	<0.18	1.0	01/15/18 12:41	
Xylene (Total)	ug/L	<1.5	3.0	01/15/18 12:41	
4-Bromofluorobenzene (S)	%	86	61-130	01/15/18 12:41	
Dibromofluoromethane (S)	%	105	67-130	01/15/18 12:41	
Toluene-d8 (S)	%	93	70-130	01/15/18 12:41	

LABORATORY CONTROL SAMPLE: 1638745

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	48.0	96	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	42.1	84	70-130	
1,1,2-Trichloroethane	ug/L	50	47.2	94	70-130	
1,1-Dichloroethane	ug/L	50	42.6	85	71-132	
1,1-Dichloroethene	ug/L	50	41.1	82	75-130	
1,2,4-Trichlorobenzene	ug/L	50	44.2	88	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	34.6	69	63-123	
1,2-Dibromoethane (EDB)	ug/L	50	46.0	92	70-130	
1,2-Dichlorobenzene	ug/L	50	48.9	98	70-130	
1,2-Dichloroethane	ug/L	50	41.4	83	70-131	
1,2-Dichloropropane	ug/L	50	43.9	88	80-120	
1,3-Dichlorobenzene	ug/L	50	48.2	96	70-130	
1,4-Dichlorobenzene	ug/L	50	49.4	99	70-130	
Benzene	ug/L	50	44.8	90	73-145	
Bromodichloromethane	ug/L	50	47.7	95	70-130	
Bromoform	ug/L	50	56.4	113	67-130	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

LABORATORY CONTROL SAMPLE: 1638745

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	50	31.6	63	26-128	
Carbon tetrachloride	ug/L	50	51.8	104	70-133	
Chlorobenzene	ug/L	50	54.0	108	70-130	
Chloroethane	ug/L	50	36.2	72	58-120	
Chloroform	ug/L	50	50.0	100	80-121	
Chloromethane	ug/L	50	23.3	47	40-127	
cis-1,2-Dichloroethene	ug/L	50	42.0	84	70-130	
cis-1,3-Dichloropropene	ug/L	50	42.6	85	70-130	
Dibromochloromethane	ug/L	50	55.8	112	70-130	
Dichlorodifluoromethane	ug/L	50	15.5	31	20-135	
Ethylbenzene	ug/L	50	50.5	101	87-129	
Isopropylbenzene (Cumene)	ug/L	50	54.7	109	70-130	
m&p-Xylene	ug/L	100	107	107	70-130	
Methyl-tert-butyl ether	ug/L	50	38.1	76	66-143	
Methylene Chloride	ug/L	50	37.8	76	70-130	
o-Xylene	ug/L	50	52.7	105	70-130	
Styrene	ug/L	50	54.0	108	70-130	
Tetrachloroethene	ug/L	50	51.3	103	70-130	
Toluene	ug/L	50	48.9	98	82-130	
trans-1,2-Dichloroethene	ug/L	50	41.1	82	75-132	
trans-1,3-Dichloropropene	ug/L	50	44.0	88	70-130	
Trichloroethene	ug/L	50	50.6	101	70-130	
Trichlorofluoromethane	ug/L	50	45.2	90	76-133	
Vinyl chloride	ug/L	50	28.5	57	57-136	
Xylene (Total)	ug/L	150	160	107	70-130	
4-Bromofluorobenzene (S)	%			96	61-130	
Dibromofluoromethane (S)	%			103	67-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638896 1638897

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40163465004	Spike Conc.	Spike Conc.	Result							Result
1,1,1-Trichloroethane	ug/L	<0.50	50	50	52.0	53.2	104	106	70-134	2	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	44.1	42.4	88	85	70-130	4	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	49.2	50.4	98	101	70-130	2	20	
1,1-Dichloroethane	ug/L	<0.24	50	50	44.9	45.1	90	90	71-133	1	20	
1,1-Dichloroethene	ug/L	<0.41	50	50	48.5	50.3	97	101	75-136	4	20	
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	47.6	46.1	94	91	70-130	3	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	34.5	35.0	69	70	63-123	1	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	46.7	49.8	93	100	70-130	6	20	
1,2-Dichlorobenzene	ug/L	<0.50	50	50	49.4	50.0	99	100	70-130	1	20	
1,2-Dichloroethane	ug/L	<0.17	50	50	43.8	44.7	88	89	70-131	2	20	
1,2-Dichloropropane	ug/L	<0.23	50	50	43.9	45.7	88	91	80-120	4	20	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638896		1638897		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		40163465004 Result	MS Spike Conc.	MSD Spike Conc.									
1,3-Dichlorobenzene	ug/L	<0.50	50	50	49.9	50.9	100	102	70-130	2	20		
1,4-Dichlorobenzene	ug/L	<0.50	50	50	53.3	52.4	107	105	70-130	2	20		
Benzene	ug/L	<0.50	50	50	45.7	48.0	91	96	73-145	5	20		
Bromodichloromethane	ug/L	<0.50	50	50	47.0	47.7	94	95	70-130	1	20		
Bromoform	ug/L	<0.50	50	50	56.5	57.9	113	116	67-130	2	20		
Bromomethane	ug/L	<2.4	50	50	42.6	51.2	85	102	26-129	18	20		
Carbon tetrachloride	ug/L	<0.50	50	50	55.3	56.4	111	113	70-134	2	20		
Chlorobenzene	ug/L	<0.50	50	50	53.7	57.5	107	115	70-130	7	20		
Chloroethane	ug/L	<0.37	50	50	42.2	46.4	84	93	58-120	9	20		
Chloroform	ug/L	<2.5	50	50	51.8	52.4	104	105	80-121	1	20		
Chloromethane	ug/L	<0.50	50	50	34.7	36.6	69	73	40-128	5	20		
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	44.6	45.9	89	91	70-130	3	20		
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	44.9	44.4	90	89	70-130	1	20		
Dibromochloromethane	ug/L	<0.50	50	50	56.7	60.4	113	121	70-130	6	20		
Dichlorodifluoromethane	ug/L	<0.22	50	50	42.1	42.9	84	86	20-146	2	20		
Ethylbenzene	ug/L	<0.50	50	50	50.1	53.8	100	108	87-129	7	20		
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	55.3	58.2	111	116	70-130	5	20		
m&p-Xylene	ug/L	<1.0	100	100	106	113	106	113	70-130	6	20		
Methyl-tert-butyl ether	ug/L	<0.17	50	50	40.0	40.2	80	80	66-143	0	20		
Methylene Chloride	ug/L	<0.23	50	50	40.1	40.4	80	81	70-130	1	20		
o-Xylene	ug/L	<0.50	50	50	53.8	56.4	108	113	70-130	5	20		
Styrene	ug/L	<0.50	50	50	53.9	56.2	108	112	70-130	4	20		
Tetrachloroethene	ug/L	<0.50	50	50	54.3	57.4	109	115	70-130	6	20		
Toluene	ug/L	<0.50	50	50	51.9	55.2	104	110	82-131	6	20		
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	46.7	46.1	93	92	75-135	1	20		
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	45.5	46.8	91	94	70-130	3	20		
Trichloroethene	ug/L	1.4	50	50	53.4	54.8	104	107	70-130	3	20		
Trichlorofluoromethane	ug/L	<0.18	50	50	57.2	57.1	114	114	76-150	0	20		
Vinyl chloride	ug/L	<0.18	50	50	43.6	45.8	87	92	56-143	5	20		
Xylene (Total)	ug/L	<1.5	150	150	160	169	106	113	70-130	6	20		
4-Bromofluorobenzene (S)	%						96	95	61-130				
Dibromofluoromethane (S)	%						100	100	67-130				
Toluene-d8 (S)	%						91	94	70-130				

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 279622 Analysis Method: EPA 8082
QC Batch Method: EPA 3541 Analysis Description: 8082 GCS PCB
Associated Lab Samples: 40163466001

METHOD BLANK: 1641251 Matrix: Solid
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<25.0	50.0	01/24/18 08:28	
PCB-1221 (Aroclor 1221)	ug/kg	<25.0	50.0	01/24/18 08:28	
PCB-1232 (Aroclor 1232)	ug/kg	<25.0	50.0	01/24/18 08:28	
PCB-1242 (Aroclor 1242)	ug/kg	<25.0	50.0	01/24/18 08:28	
PCB-1248 (Aroclor 1248)	ug/kg	<25.0	50.0	01/24/18 08:28	
PCB-1254 (Aroclor 1254)	ug/kg	<25.0	50.0	01/24/18 08:28	
PCB-1260 (Aroclor 1260)	ug/kg	<25.0	50.0	01/24/18 08:28	
Decachlorobiphenyl (S)	%	82	53-105	01/24/18 08:28	
Tetrachloro-m-xylene (S)	%	80	50-102	01/24/18 08:28	

LABORATORY CONTROL SAMPLE: 1641252

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg		<25.0			
PCB-1221 (Aroclor 1221)	ug/kg		<25.0			
PCB-1232 (Aroclor 1232)	ug/kg		<25.0			
PCB-1242 (Aroclor 1242)	ug/kg		<25.0			
PCB-1248 (Aroclor 1248)	ug/kg		<25.0			
PCB-1254 (Aroclor 1254)	ug/kg		<25.0			
PCB-1260 (Aroclor 1260)	ug/kg	500	453	91	59-106	
Decachlorobiphenyl (S)	%			87	53-105	
Tetrachloro-m-xylene (S)	%			84	50-102	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1641253 1641254

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40163717011 Result	Spike Conc.	Spike Conc.	Result						
PCB-1016 (Aroclor 1016)	ug/kg	<27.1			<27.1	<27.1					20
PCB-1221 (Aroclor 1221)	ug/kg	<27.1			<27.1	<27.1					20
PCB-1232 (Aroclor 1232)	ug/kg	<27.1			<27.1	<27.1					20
PCB-1242 (Aroclor 1242)	ug/kg	<27.1			<27.1	<27.1					20
PCB-1248 (Aroclor 1248)	ug/kg	<27.1			<27.1	<27.1					20
PCB-1254 (Aroclor 1254)	ug/kg	<27.1			<27.1	<27.1					20
PCB-1260 (Aroclor 1260)	ug/kg	<27.1	542	542	471	476	87	88	51-109	1	20
Decachlorobiphenyl (S)	%						83	83	53-105		
Tetrachloro-m-xylene (S)	%						86	89	50-102		

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 279487 Analysis Method: EPA 8270
QC Batch Method: EPA 3510 Analysis Description: 8270 TCLP MSSV
Associated Lab Samples: 40163466001

METHOD BLANK: 1640804 Matrix: Water
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/L	<3.8	12.5	01/23/18 08:28	
2,4,5-Trichlorophenol	ug/L	<1.7	5.6	01/23/18 08:28	
2,4,6-Trichlorophenol	ug/L	<4.2	14.1	01/23/18 08:28	
2,4-Dinitrotoluene	ug/L	<1.6	5.3	01/23/18 08:28	
2-Methylphenol(o-Cresol)	ug/L	<1.7	5.8	01/23/18 08:28	
3&4-Methylphenol(m&p Cresol)	ug/L	<3.1	10.4	01/23/18 08:28	
Hexachloro-1,3-butadiene	ug/L	<4.9	16.4	01/23/18 08:28	
Hexachlorobenzene	ug/L	<3.4	11.3	01/23/18 08:28	
Hexachloroethane	ug/L	<5.3	17.7	01/23/18 08:28	
Nitrobenzene	ug/L	<2.9	9.7	01/23/18 08:28	
Pentachlorophenol	ug/L	<2.9	9.6	01/23/18 08:28	
Phenol	ug/L	<1.2	4.0	01/23/18 08:28	
Pyridine	ug/L	<3.6	11.9	01/23/18 08:28	
2,4,6-Tribromophenol (S)	%	105	58-134	01/23/18 08:28	
2-Fluorobiphenyl (S)	%	93	54-122	01/23/18 08:28	
Nitrobenzene-d5 (S)	%	93	56-120	01/23/18 08:28	
Phenol-d6 (S)	%	35	16-120	01/23/18 08:28	

METHOD BLANK: 1638643 Matrix: Water
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/L	<18.8	62.5	01/23/18 11:43	
2,4,5-Trichlorophenol	ug/L	<8.4	28.0	01/23/18 11:43	
2,4,6-Trichlorophenol	ug/L	<21.1	70.4	01/23/18 11:43	
2,4-Dinitrotoluene	ug/L	<7.9	26.4	01/23/18 11:43	
2-Methylphenol(o-Cresol)	ug/L	<8.7	28.9	01/23/18 11:43	
3&4-Methylphenol(m&p Cresol)	ug/L	<15.6	52.0	01/23/18 11:43	
Hexachloro-1,3-butadiene	ug/L	<24.6	82.0	01/23/18 11:43	
Hexachlorobenzene	ug/L	<16.9	56.4	01/23/18 11:43	
Hexachloroethane	ug/L	<26.6	88.6	01/23/18 11:43	
Nitrobenzene	ug/L	<14.5	48.3	01/23/18 11:43	
Pentachlorophenol	ug/L	<14.3	47.8	01/23/18 11:43	
Phenol	ug/L	<6.0	20.0	01/23/18 11:43	
Pyridine	ug/L	<17.9	59.6	01/23/18 11:43	
2,4,6-Tribromophenol (S)	%	99	58-134	01/23/18 11:43	
2-Fluorobiphenyl (S)	%	80	54-122	01/23/18 11:43	
Nitrobenzene-d5 (S)	%	84	56-120	01/23/18 11:43	
Phenol-d6 (S)	%	35	16-120	01/23/18 11:43	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

METHOD BLANK: 1639448 Matrix: Water
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/L	<18.8	62.5	01/23/18 12:04	
2,4,5-Trichlorophenol	ug/L	<8.4	28.0	01/23/18 12:04	
2,4,6-Trichlorophenol	ug/L	<21.1	70.4	01/23/18 12:04	
2,4-Dinitrotoluene	ug/L	<7.9	26.4	01/23/18 12:04	
2-Methylphenol(o-Cresol)	ug/L	<8.7	28.9	01/23/18 12:04	
3&4-Methylphenol(m&p Cresol)	ug/L	<15.6	52.0	01/23/18 12:04	
Hexachloro-1,3-butadiene	ug/L	<24.6	82.0	01/23/18 12:04	
Hexachlorobenzene	ug/L	<16.9	56.4	01/23/18 12:04	
Hexachloroethane	ug/L	<26.6	88.6	01/23/18 12:04	
Nitrobenzene	ug/L	<14.5	48.3	01/23/18 12:04	
Pentachlorophenol	ug/L	<14.3	47.8	01/23/18 12:04	
Phenol	ug/L	<6.0	20.0	01/23/18 12:04	
Pyridine	ug/L	<17.9	59.6	01/23/18 12:04	
2,4,6-Tribromophenol (S)	%	100	58-134	01/23/18 12:04	
2-Fluorobiphenyl (S)	%	89	54-122	01/23/18 12:04	
Nitrobenzene-d5 (S)	%	87	56-120	01/23/18 12:04	
Phenol-d6 (S)	%	35	16-120	01/23/18 12:04	

LABORATORY CONTROL SAMPLE: 1640805

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	50	38.3	77	44-84	
2,4,5-Trichlorophenol	ug/L	50	45.3	91	63-127	
2,4,6-Trichlorophenol	ug/L	50	48.5	97	65-125	
2,4-Dinitrotoluene	ug/L	50	49.6	99	68-137	
2-Methylphenol(o-Cresol)	ug/L	50	45.3	91	54-103	
3&4-Methylphenol(m&p Cresol)	ug/L	50	39.3	79	50-95	
Hexachloro-1,3-butadiene	ug/L	50	43.0	86	57-100	
Hexachlorobenzene	ug/L	50	54.1	108	70-130	
Hexachloroethane	ug/L	50	35.5	71	41-130	
Nitrobenzene	ug/L	50	46.3	93	70-130	
Pentachlorophenol	ug/L	50	41.9	84	57-121	
Phenol	ug/L	50	20.0	40	25-120	
Pyridine	ug/L	50	20.6	41	10-79	
2,4,6-Tribromophenol (S)	%			104	58-134	
2-Fluorobiphenyl (S)	%			88	54-122	
Nitrobenzene-d5 (S)	%			94	56-120	
Phenol-d6 (S)	%			40	16-120	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

MATRIX SPIKE SAMPLE: 1640806		40163429001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	<1.5 mg/L	250	<1500	115	42-96	M6
2,4,5-Trichlorophenol	ug/L	<0.67 mg/L	250	<674	95	49-127	
2,4,6-Trichlorophenol	ug/L	<1.7 mg/L	250	<1690	96	52-125	
2,4-Dinitrotoluene	ug/L	<0.63 mg/L	250	<633	85	56-137	
2-Methylphenol(o-Cresol)	ug/L	<0.69 mg/L	250	<694	87	29-103	
3&4-Methylphenol(m&p Cresol)	ug/L	1.3J mg/L	250	1940J	250	21-95	M6
Hexachloro-1,3-butadiene	ug/L	<2.0 mg/L	250	<1970	107	52-100	M6
Hexachlorobenzene	ug/L	<1.4 mg/L	250	<1350	111	67-130	
Hexachloroethane	ug/L	<2.1 mg/L	250	<2130	159	41-130	M6
Nitrobenzene	ug/L	<1.2 mg/L	250	<1160	130	61-130	
Pentachlorophenol	ug/L	<1.1 mg/L	250	<1150	87	44-134	
Phenol	ug/L	1.2J mg/L	250	1390J	68	16-120	
Pyridine	ug/L	<1.4 mg/L	250	<1430	0	10-79	M6
2,4,6-Tribromophenol (S)	%				106	58-134	
2-Fluorobiphenyl (S)	%				123	54-122	S4
Nitrobenzene-d5 (S)	%				122	56-120	S4
Phenol-d6 (S)	%				40	16-120	

MATRIX SPIKE SAMPLE: 1640807		40163466001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	<18.8	250	197	79	42-96	
2,4,5-Trichlorophenol	ug/L	<8.4	250	237	95	49-127	
2,4,6-Trichlorophenol	ug/L	<21.1	250	239	96	52-125	
2,4-Dinitrotoluene	ug/L	<7.9	250	253	101	56-137	
2-Methylphenol(o-Cresol)	ug/L	<8.7	250	210	84	29-103	
3&4-Methylphenol(m&p Cresol)	ug/L	<15.6	250	193	77	21-95	
Hexachloro-1,3-butadiene	ug/L	<24.6	250	208	83	52-100	
Hexachlorobenzene	ug/L	<16.9	250	268	107	67-130	
Hexachloroethane	ug/L	<26.6	250	182	73	41-130	
Nitrobenzene	ug/L	<14.5	250	228	91	61-130	
Pentachlorophenol	ug/L	<14.3	250	229	91	44-134	
Phenol	ug/L	<6.0	250	97.3	39	16-120	
Pyridine	ug/L	<17.9	250	131	52	10-79	
2,4,6-Tribromophenol (S)	%				104	58-134	
2-Fluorobiphenyl (S)	%				90	54-122	
Nitrobenzene-d5 (S)	%				92	56-120	
Phenol-d6 (S)	%				38	16-120	

MATRIX SPIKE SAMPLE: 1640808		40163551001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	<18.8	250	163	65	42-96	
2,4,5-Trichlorophenol	ug/L	<8.4	250	232	93	49-127	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

MATRIX SPIKE SAMPLE:		1640808						
Parameter	Units	40163551001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
2,4,6-Trichlorophenol	ug/L	<21.1	250	239	96	52-125		
2,4-Dinitrotoluene	ug/L	<7.9	250	241	96	56-137		
2-Methylphenol(o-Cresol)	ug/L	<8.7	250	212	85	29-103		
3&4-Methylphenol(m&p Cresol)	ug/L	<15.6	250	187	75	21-95		
Hexachloro-1,3-butadiene	ug/L	<24.6	250	192	77	52-100		
Hexachlorobenzene	ug/L	<16.9	250	260	104	67-130		
Hexachloroethane	ug/L	<26.6	250	153	61	41-130		
Nitrobenzene	ug/L	<14.5	250	220	88	61-130		
Pentachlorophenol	ug/L	<14.3	250	226	91	44-134		
Phenol	ug/L	6.3J	250	98.5	37	16-120		
Pyridine	ug/L	<17.9	250	141	56	10-79		
2,4,6-Tribromophenol (S)	%				102	58-134		
2-Fluorobiphenyl (S)	%				83	54-122		
Nitrobenzene-d5 (S)	%				88	56-120		
Phenol-d6 (S)	%				37	16-120		

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

QC Batch: 279082

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 40163466001

SAMPLE DUPLICATE: 1638820

Parameter	Units	40163466001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.1	17.5	8	10	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 279181 Analysis Method: EPA 1010
QC Batch Method: EPA 1010 Analysis Description: 1010 Flash Point, Closed Cup
Associated Lab Samples: 40163466001

LABORATORY CONTROL SAMPLE: 1639113

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

LABORATORY CONTROL SAMPLE: 1639114

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Flashpoint	deg F		81.0			

SAMPLE DUPLICATE: 1639264

Parameter	Units	10416843001 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	>210	>210			

SAMPLE DUPLICATE: 1639269

Parameter	Units	40163535001 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	>210	>210			

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

QC Batch: 279569 Analysis Method: EPA 9045

QC Batch Method: EPA 9045 Analysis Description: 9045 pH

Associated Lab Samples: 40163466001

SAMPLE DUPLICATE: 1641046

Parameter	Units	40163466001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.69	8.75	1	5	H6

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

QC Batch: 279381	Analysis Method: EPA 9095
QC Batch Method: EPA 9095	Analysis Description: 9095 PAINT FILTER LIQUID TEST
Associated Lab Samples: 40163466001	

METHOD BLANK: 1639962 Matrix: Solid

Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Free Liquids	no units	Fail		01/18/18 11:18	

LABORATORY CONTROL SAMPLE: 1639963

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

SAMPLE DUPLICATE: 1639990

Parameter	Units	40163588002 Result	Dup Result	RPD	Max RPD	Qualifiers
Free Liquids	no units	Pass	Pass			

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

QC Batch: 279305

Analysis Method: SM 2710F

QC Batch Method: SM 2710F

Analysis Description: Spec.Gravity

Associated Lab Samples: 40163466001

SAMPLE DUPLICATE: 1639557

Parameter	Units	40163466001 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Gravity	no units	2.2	2.3	5	20	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

QC Batch:	285348	Analysis Method:	EPA 9014
QC Batch Method:	SW-846 7.3.3.2	Analysis Description:	733C Reactive Cyanide
Associated Lab Samples:	40163466001		

METHOD BLANK: 1399466 Matrix: Solid

Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide, Reactive	mg/kg	<0.40	1.0	01/18/18 23:14	

LABORATORY CONTROL SAMPLE: 1399467

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide, Reactive	mg/kg	99.2	<0.40	0	0-8	

SAMPLE DUPLICATE: 1399468

Parameter	Units	30240704001 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide, Reactive	mg/kg	ND	<0.97		20	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

QC Batch:	285346	Analysis Method:	SM4500S2F-00
QC Batch Method:	SW-846 7.3.4.2	Analysis Description:	734S Reactive Sulfide
Associated Lab Samples:	40163466001		

METHOD BLANK: 1399456 Matrix: Solid
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide, Reactive	mg/kg	<10	10	01/18/18 21:37	

LABORATORY CONTROL SAMPLE: 1399457

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Reactive	mg/kg	200	35.9	18	0-52	

SAMPLE DUPLICATE: 1399458

Parameter	Units	30240704001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Reactive	mg/kg	ND	<24.3		20	

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QUALIFIERS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

PASI-PA Pace Analytical Services - Greensburg

SAMPLE QUALIFIERS

Sample: 40163466001

[1] Sample container used for ZHE had head space.

ANALYTE QUALIFIERS

H6 Analysis initiated outside of the 15 minute EPA required holding time.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163466

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40163466001	COMP-1	EPA 3541	279622	EPA 8082	279623
40163466001	COMP-1	EPA 3010	279371	EPA 6010	279592
40163466001	COMP-1	EPA 7470	279724	EPA 7470	279808
40163466001	COMP-1	EPA 3510	279487	EPA 8270	279542
40163466001	COMP-1	EPA 8260	279431		
40163466002	TRIP BLANK	EPA 8260	279069		
40163466001	COMP-1	ASTM D2974-87	279082		
40163466001	COMP-1	EPA 1010	279181		
40163466001	COMP-1	EPA 9045	279569		
40163466001	COMP-1	EPA 9095	279381		
40163466001	COMP-1	SM 2710F	279305		
40163466001	COMP-1	SW-846 7.3.3.2	285348	EPA 9014	285377
40163466001	COMP-1	SW-846 7.3.4.2	285346	SM4500S2F-00	285376

REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name: **Ramboll**
 Branch/Location:
 Project Contact: **Susan Petrofske**
 Phone: **262-391-5990**
 Project Number: **1690005255-001**
 Project Name: **MU APRC site**
 Project State: **WI**
 Sampled By (Print): **Rosal Marschke**
 Sampled By (Sign): *[Signature]*
 PO #:
 Regulatory Program:



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

40163466

Page 35 of 36

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

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

Y/N	Pick Letter	Analyses Requested
N	A	Protecol B TULP VOC, TULP RURA 8, Free liquids, Fluorapat, PUB's reagent, Sulfide, Sourative cyanide

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		MATRIX
		DATE	TIME	
001	Comp-1	1-10-18	1540	S
002	TAP DRINK			

CLIENT COMMENTS
LAB COMMENTS (Lab Use Only)
 Profile #

3-4ozag A
 2-40ml v B
 H318 SW

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

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

Relinquished By: <i>[Signature]</i>	Date/Time: 1-12-18 9:10	Received By: <i>[Signature]</i>	Date/Time: 1/12/18 9:10
Relinquished By: <i>[Signature]</i>	Date/Time: 1/12/18 1300	Received By: <i>[Signature]</i>	Date/Time:
Relinquished By: <i>[Signature]</i>	Date/Time: 1-13-18 0845	Received By: <i>[Signature]</i>	Date/Time: 1-13-18 0845
Relinquished By:	Date/Time:	Received By:	Date/Time:

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

PACE Project No. 40163466
 Receipt Temp = ROT °C
 Sample Receipt pH OK / Adjusted
 Cooler Custody Seal Present / Not Present Intact / Not Intact

Sample Condition Upon Receipt

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



Client Name: Ramboll

Project #: **WO# : 40163466**

Courier: Fed Ex UPS Client Pace Other: CS Logistics
Tracking #: _____



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: ROT / Corr: _____ Biological Tissue is Frozen: yes no

Temp Blank Present: yes no

Person examining contents:
Date: 1/15/10
Initials: [Signature]

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>5</u>		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lab Std #ID of preservative
		Date/Time:
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [Signature]

Date: 1/15/10

February 09, 2018

Jeanne Tarvin
Ramboll Environ
175 North Corporate Drive
Suite 160
Brookfield, WI 53045

RE: Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

Dear Jeanne Tarvin:

Enclosed are the analytical results for sample(s) received by the laboratory on January 13, 2018. 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,



Steven Mleczo
steve.mleczo@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Jim Hutchens, Ramboll Environ
Jim Kane, Ramboll Environ
Snejana Karakis, Environ
David L. Markelz, Ramboll Environ
Michelle Murphy, Environ
Susan Petrofske, Ramboll Environ
Scott Tarmann, Ramboll Environ
Abigail M. Wedig, Environ International Corp



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163467

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163467

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40163467001	B-7-COMP	Solid	01/10/18 09:55	01/13/18 10:01
40163467002	B-14-COMP	Solid	01/10/18 11:45	01/13/18 10:01
40163467003	B-12-COMP	Solid	01/10/18 12:45	01/13/18 10:01
40163467004	B-10-COMP	Solid	01/10/18 13:05	01/13/18 10:01
40163467005	B-9-COMP	Solid	01/10/18 13:35	01/13/18 10:01
40163467006	B-8-COMP	Solid	01/10/18 13:55	01/13/18 10:01
40163467007	B-11-COMP	Solid	01/10/18 14:25	01/13/18 10:01
40163467008	B-13-COMP	Solid	01/10/18 14:45	01/13/18 10:01
40163467009	COMP-2	Solid	01/10/18 00:00	01/13/18 08:45

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SAMPLE ANALYTE COUNT

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163467

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40163467001	B-7-COMP	ASTM D2974-87	KTS	1	PASI-G
40163467002	B-14-COMP	ASTM D2974-87	KTS	1	PASI-G
40163467003	B-12-COMP	ASTM D2974-87	KTS	1	PASI-G
40163467004	B-10-COMP	EPA 6010	JLD	1	PASI-G
		EPA 8260	LAP	13	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
40163467005	B-9-COMP	ASTM D2974-87	KTS	1	PASI-G
40163467006	B-8-COMP	ASTM D2974-87	KTS	1	PASI-G
40163467007	B-11-COMP	ASTM D2974-87	KTS	1	PASI-G
40163467008	B-13-COMP	ASTM D2974-87	KTS	1	PASI-G
40163467009	COMP-2	EPA 6010	JLD	1	PASI-G

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40163467001	B-7-COMP					
ASTM D2974-87	Percent Moisture	15.7	%	0.10	01/17/18 15:52	
40163467002	B-14-COMP					
ASTM D2974-87	Percent Moisture	17.8	%	0.10	01/17/18 15:52	
40163467003	B-12-COMP					
ASTM D2974-87	Percent Moisture	15.5	%	0.10	01/17/18 15:52	
40163467004	B-10-COMP					
ASTM D2974-87	Percent Moisture	14.3	%	0.10	01/17/18 15:52	
40163467005	B-9-COMP					
ASTM D2974-87	Percent Moisture	12.9	%	0.10	01/17/18 18:14	
40163467006	B-8-COMP					
ASTM D2974-87	Percent Moisture	17.6	%	0.10	01/17/18 18:14	
40163467007	B-11-COMP					
ASTM D2974-87	Percent Moisture	15.8	%	0.10	01/17/18 18:14	
40163467008	B-13-COMP					
ASTM D2974-87	Percent Moisture	15.4	%	0.10	01/17/18 18:14	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163467

Sample: B-7-COMP **Lab ID: 40163467001** Collected: 01/10/18 09:55 Received: 01/13/18 10:01 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
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	15.7	%	0.10	0.10	1		01/17/18 15:52		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163467

Sample: B-14-COMP **Lab ID: 40163467002** Collected: 01/10/18 11:45 Received: 01/13/18 10:01 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
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	17.8	%	0.10	0.10	1		01/17/18 15:52		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163467

Sample: B-12-COMP **Lab ID: 40163467003** Collected: 01/10/18 12:45 Received: 01/13/18 10:01 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
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	15.5	%	0.10	0.10	1		01/17/18 15:52		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163467

Sample: B-10-COMP **Lab ID: 40163467004** Collected: 01/10/18 13:05 Received: 01/13/18 10:01 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, TCLP									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Leachate Method/Date: EPA 1311; 01/31/18 12:08									
Lead	<0.022	mg/L	0.065	0.022	1	02/01/18 09:55	02/01/18 17:05	7439-92-1	
8260 MSV TCLP									
Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 01/31/18 12:08									
Benzene	<5.0	ug/L	10.0	5.0	10		02/01/18 19:07	71-43-2	H1,H2
2-Butanone (MEK)	<29.8	ug/L	200	29.8	10		02/01/18 19:07	78-93-3	H2
Carbon tetrachloride	<5.0	ug/L	10.0	5.0	10		02/01/18 19:07	56-23-5	H1,H2
Chlorobenzene	<5.0	ug/L	10.0	5.0	10		02/01/18 19:07	108-90-7	H1,H2
Chloroform	<25.0	ug/L	50.0	25.0	10		02/01/18 19:07	67-66-3	H1,H2
1,2-Dichloroethane	<1.7	ug/L	10.0	1.7	10		02/01/18 19:07	107-06-2	H1,H2
1,1-Dichloroethene	<4.1	ug/L	10.0	4.1	10		02/01/18 19:07	75-35-4	H1,H2
Tetrachloroethene	<5.0	ug/L	10.0	5.0	10		02/01/18 19:07	127-18-4	H1,H2
Trichloroethene	<3.3	ug/L	10.0	3.3	10		02/01/18 19:07	79-01-6	H1,H2
Vinyl chloride	<1.8	ug/L	10.0	1.8	10		02/01/18 19:07	75-01-4	H1,H2
Surrogates									
Toluene-d8 (S)	96	%	70-130		10		02/01/18 19:07	2037-26-5	
4-Bromofluorobenzene (S)	91	%	61-130		10		02/01/18 19:07	460-00-4	
Dibromofluoromethane (S)	101	%	67-130		10		02/01/18 19:07	1868-53-7	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	14.3	%	0.10	0.10	1		01/17/18 15:52		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163467

Sample: B-9-COMP **Lab ID: 40163467005** Collected: 01/10/18 13:35 Received: 01/13/18 10:01 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
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	12.9	%	0.10	0.10	1		01/17/18 18:14		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163467

Sample: B-8-COMP **Lab ID: 40163467006** Collected: 01/10/18 13:55 Received: 01/13/18 10:01 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
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	17.6	%	0.10	0.10	1		01/17/18 18:14		

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163467

Sample: B-11-COMP **Lab ID: 40163467007** Collected: 01/10/18 14:25 Received: 01/13/18 10:01 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
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	15.8	%	0.10	0.10	1		01/17/18 18:14		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163467

Sample: B-13-COMP **Lab ID: 40163467008** Collected: 01/10/18 14:45 Received: 01/13/18 10:01 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
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	15.4	%	0.10	0.10	1		01/17/18 18:14		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163467

Sample: COMP-2 **Lab ID: 40163467009** Collected: 01/10/18 00:00 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Leachate Method/Date: EPA 1311; 02/05/18 11:55									
Lead	<0.022	mg/L	0.065	0.022	1	02/06/18 14:51	02/08/18 13:05	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

QC Batch: 280341 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET TCLP
Associated Lab Samples: 40163467004

METHOD BLANK: 1644632 Matrix: Water
Associated Lab Samples: 40163467004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.0043	0.013	02/01/18 16:55	

METHOD BLANK: 1643396 Matrix: Solid
Associated Lab Samples: 40163467004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.022	0.065	02/01/18 17:17	

METHOD BLANK: 1644169 Matrix: Solid
Associated Lab Samples: 40163467004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.022	0.065	02/01/18 17:22	

METHOD BLANK: 1644282 Matrix: Solid
Associated Lab Samples: 40163467004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.022	0.065	02/01/18 17:12	

LABORATORY CONTROL SAMPLE: 1644633

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	.5	0.52	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1644634 1644635

Parameter	Units	40163467004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/L	<0.022	2.5	2.5	2.4	2.6	98	103	75-125	6	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

QC Batch: 280631 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET TCLP
Associated Lab Samples: 40163467009

METHOD BLANK: 1645650 Matrix: Solid
Associated Lab Samples: 40163467009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.022	0.065	02/07/18 18:33	

METHOD BLANK: 1645686 Matrix: Solid
Associated Lab Samples: 40163467009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.022	0.065	02/07/18 18:41	

METHOD BLANK: 1646087 Matrix: Water
Associated Lab Samples: 40163467009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.0043	0.013	02/08/18 13:01	

METHOD BLANK: 1645607 Matrix: Solid
Associated Lab Samples: 40163467009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.022	0.065	02/08/18 13:18	

METHOD BLANK: 1645676 Matrix: Solid
Associated Lab Samples: 40163467009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.022	0.065	02/08/18 13:30	

METHOD BLANK: 1644549 Matrix: Solid
Associated Lab Samples: 40163467009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.022	0.065	02/08/18 13:37	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163467

LABORATORY CONTROL SAMPLE: 1646088

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	.5	0.49	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1646089 1646090

Parameter	Units	40163467009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/L	<0.022	2.5	2.5	2.5	2.4	98	97	75-125	1	20	

MATRIX SPIKE SAMPLE: 1646091

Parameter	Units	40163822001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	0.023J	2.5	2.5	99	75-125	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

QC Batch: 280332 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV TCLP
Associated Lab Samples: 40163467004

METHOD BLANK: 1644605 Matrix: Water
Associated Lab Samples: 40163467004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	<0.41	1.0	02/01/18 09:46	
1,2-Dichloroethane	ug/L	<0.17	1.0	02/01/18 09:46	
2-Butanone (MEK)	ug/L	<3.0	20.0	02/01/18 09:46	
Benzene	ug/L	<0.50	1.0	02/01/18 09:46	
Carbon tetrachloride	ug/L	<0.50	1.0	02/01/18 09:46	
Chlorobenzene	ug/L	<0.50	1.0	02/01/18 09:46	
Chloroform	ug/L	<2.5	5.0	02/01/18 09:46	
Tetrachloroethene	ug/L	<0.50	1.0	02/01/18 09:46	
Trichloroethene	ug/L	<0.33	1.0	02/01/18 09:46	
Vinyl chloride	ug/L	<0.18	1.0	02/01/18 09:46	
4-Bromofluorobenzene (S)	%	90	61-130	02/01/18 09:46	
Dibromofluoromethane (S)	%	107	67-130	02/01/18 09:46	
Toluene-d8 (S)	%	96	70-130	02/01/18 09:46	

METHOD BLANK: 1644170 Matrix: Solid
Associated Lab Samples: 40163467004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	<4.1	10.0	02/01/18 18:45	
1,2-Dichloroethane	ug/L	<1.7	10.0	02/01/18 18:45	
2-Butanone (MEK)	ug/L	<29.8	200	02/01/18 18:45	
Benzene	ug/L	<5.0	10.0	02/01/18 18:45	
Carbon tetrachloride	ug/L	<5.0	10.0	02/01/18 18:45	
Chlorobenzene	ug/L	<5.0	10.0	02/01/18 18:45	
Chloroform	ug/L	<25.0	50.0	02/01/18 18:45	
Tetrachloroethene	ug/L	<5.0	10.0	02/01/18 18:45	
Trichloroethene	ug/L	<3.3	10.0	02/01/18 18:45	
Vinyl chloride	ug/L	<1.8	10.0	02/01/18 18:45	
4-Bromofluorobenzene (S)	%	88	61-130	02/01/18 18:45	
Dibromofluoromethane (S)	%	99	67-130	02/01/18 18:45	
Toluene-d8 (S)	%	93	70-130	02/01/18 18:45	

LABORATORY CONTROL SAMPLE: 1644606

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	50	52.1	104	75-130	
1,2-Dichloroethane	ug/L	50	53.4	107	70-131	
Benzene	ug/L	50	54.0	108	73-145	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163467

LABORATORY CONTROL SAMPLE: 1644606

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	59.2	118	70-133	
Chlorobenzene	ug/L	50	53.8	108	70-130	
Chloroform	ug/L	50	53.4	107	80-121	
Tetrachloroethene	ug/L	50	51.5	103	70-130	
Trichloroethene	ug/L	50	53.4	107	70-130	
Vinyl chloride	ug/L	50	45.1	90	57-136	
4-Bromofluorobenzene (S)	%			98	61-130	
Dibromofluoromethane (S)	%			104	67-130	
Toluene-d8 (S)	%			93	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1644607 1644608

Parameter	Units	40163467004		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	MSD Result	% Rec	% Rec				
1,1-Dichloroethene	ug/L	<4.1	500	500	464	507	93	101	75-136	9	20	H1
1,2-Dichloroethane	ug/L	<1.7	500	500	483	509	97	102	70-131	5	20	H1
Benzene	ug/L	<5.0	500	500	491	534	98	107	73-145	8	20	H1
Carbon tetrachloride	ug/L	<5.0	500	500	550	579	110	116	70-134	5	20	H1
Chlorobenzene	ug/L	<5.0	500	500	538	526	108	105	70-130	2	20	H1
Chloroform	ug/L	<25.0	500	500	489	529	98	106	80-121	8	20	H1
Tetrachloroethene	ug/L	<5.0	500	500	504	519	101	104	70-130	3	20	H1
Trichloroethene	ug/L	<3.3	500	500	562	574	112	115	70-130	2	20	H1
Vinyl chloride	ug/L	<1.8	500	500	428	448	86	90	56-143	5	20	H1
4-Bromofluorobenzene (S)	%						99	100	61-130			
Dibromofluoromethane (S)	%						94	100	67-130			
Toluene-d8 (S)	%						94	94	70-130			

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163467

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

SAMPLE QUALIFIERS

Sample: 40163467004

[1] The sample was leached with a TCLP 1 solution that exceeded the acceptable pH range of 4.88 to 4.89 pH units with a pH of 4.86. There is insufficient sample volume available to re-leach the samples.

ANALYTE QUALIFIERS

H1 Analysis conducted outside the recognized method holding time.

H2 Extraction or preparation was conducted outside of the recognized method holding time.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1690005255-001 MU APRC SITE

Pace Project No.: 40163467

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40163467004	B-10-COMP	EPA 3010	280341	EPA 6010	280381
40163467009	COMP-2	EPA 3010	280631	EPA 6010	280744
40163467004	B-10-COMP	EPA 8260	280332		
40163467001	B-7-COMP	ASTM D2974-87	279331		
40163467002	B-14-COMP	ASTM D2974-87	279331		
40163467003	B-12-COMP	ASTM D2974-87	279331		
40163467004	B-10-COMP	ASTM D2974-87	279331		
40163467005	B-9-COMP	ASTM D2974-87	279333		
40163467006	B-8-COMP	ASTM D2974-87	279333		
40163467007	B-11-COMP	ASTM D2974-87	279333		
40163467008	B-13-COMP	ASTM D2974-87	279333		

REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name: **Ramboll**
 Branch/Location:
 Project Contact: **Susan Petrofske**
 Phone: **262-391-5990**
 Project Number: **1690005255-001**
 Project Name: **MU APQC Site**
 Project State: **WI**
 Sampled By (Print): **BCad Macschke**
 Sampled By (Sign): *[Signature]*
 PO #:
 Regulatory Program:



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

40163467

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

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

Analyses Requested	Y/N	Pick Letter	Matrix Codes
Protocol B	N	A	
TCUP Volu			
TCUP RURAB			
Free Iquids			
Fluashpoint			
PUB's reflect suite			
reactive cyanide			
TCUP Lead			

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		MATRIX
		DATE	TIME	
001	B-7-Camp	1-10-18	0955	S
002	B-14-Camp		1145	S
003	B-12-Camp		1245	S
004	B-10-Camp		1305	S
005	B-9-Camp		1335	S
006	B-8-Camp		1355	S
007	B-11-Camp		1425	S
008	B-13-Camp		1445	S
009	Camp-2	1-10-18	sum 4/18	S

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

CLIENT COMMENTS
 Avoid All samples on this LOC until further notice
 composite of -001 + -002 sum 4/18

LAB COMMENTS (Lab Use Only)
 1-4ozag^A

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)
 Date Needed:
 Transmit Prelim Rush Results by (complete what you want):
 Email #1:
 Email #2:
 Telephone:
 Fax:
 Samples on HOLD are subject to special pricing and release of liability

Relinquished By: *[Signature]* Date/Time: 1-12-18 9:10
 Relinquished By: *[Signature]* Date/Time: 1/12/18 1300
 Relinquished By: *[Signature]* Date/Time: 1-13-18 0845
 Relinquished By: _____ Date/Time: _____

Received By: *[Signature]* Date/Time: 1/12/18 9:10
 Received By: *[Signature]* Date/Time: _____
 Received By: *[Signature]* Date/Time: 1-13-18 0845
 Received By: _____ Date/Time: _____

PACE Project No. 40163467
 Receipt Temp = ROT °C
 Sample Receipt pH OK / Adjusted
 Cooler Custody Seal Present / Not Present Intact / Not Intact

Sample Condition Upon Receipt

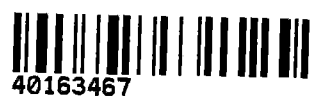
Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302



Client Name: Ramboll

Project #: **WO# : 40163467**

Courier: Fed Ex UPS Client Pace Other: CSLogistics
Tracking #: _____



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: ROT / Corr: _____ Biological Tissue is Frozen: yes no
Temp Blank Present: yes no

Person examining contents:
Date: 1/15/12
Initials: [Signature]

		Comments:
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>5</u>		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER: _____	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lab Std #ID of preservative
		Date/Time:
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: _____ If checked, see attached form for additional comments
Person Contacted: _____ Date/Time: _____
Comments/ Resolution: _____

Project Manager Review: [Signature] Date: 1/15/12

APPENDIX C

WASTE PROFILES

(to be provided with future update)