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Project Memorandum

To	Jason Knutson (via email) Environmental Engineer Supervisor Wisconsin Department of Natural Resources 101 S. Webster Street Madison, WI 53707-7921	
CC	Erika Biemann, American Transmission Company (via email) Leo Linnemanstons, AECOM (via email)	
Subject	Proposed Industrial Wastewater Treatment System Plan ATC Blount Substation Water Discharge	
From	Tim Wood, AECOM Dave Henderson, AECOM	
Date	September 04, 2019	

AECOM Technical Services, Inc. (AECOM), on behalf of the American Transmission Company (ATC), is providing the enclosed *Wastewater System Approval Request* (Form 3400-205) and treatment system design for the proposed Industrial Wastewater System associated with a ATC Blount Substation water discharge. The following information summarizes the project background, characterization of the water to be treated, treatment system sizing and proposed loading, and associated modeling for the system.

ATC has requested coverage under the General Permit to Discharge Under the Wisconsin Pollutant Discharge Elimination System (WPDES) for Petroleum Contaminated Water (WPDES Permit No. WI-0046531-06-1) to discharge the effluent water from the treatment system to surface water via the City of Madison storm sewer system. Lake Monona is the ultimate receiving water for the discharge.

Background

On Friday July 19, 2019, local fire departments in the City of Madison responded to a fire at the Blount Substation at 722 East Main Street (see Figure 1). The firefighting activities generated fire suppression water contaminated with petroleum products (transformer oil) from the electrical transformer. In addition, the Madison Fire Department first responders reportedly used an aqueous film forming foam (AFFF) fire suppressant agent, Fire Service Plus, Inc., FireAde brand, 3% AFFF Liquid Foam Concentrate for firefighting. Material Safety Data Sheets representative of the transformer oil and AFFF are included in Attachment A.

The MFD directed runoff from the fire into storm catch basins along Main Street and fire suppression water and mineral oil were observed in storm sewers along Livingston and Blount Streets. Storm sewers and basins in this area are surcharged with water. Based on discussions with WDNR and in an effort to collect the mineral oil and fire suppression water, ATC removed approximately 180,000 gallons from the catch basins around the site and along Blount and Livingston Streets. A portion of the water removed from the storm sewers

is considered to be surcharged storm and surface water that is always present in these portions of the City of Madison storm sewer system.

The approximately 180,000 gallons of fire suppression water that was collected following the response and is being stored in frac tanks at 201 South Blount Street property (aka, former MG&E Coal Yard), located approximately one City block south of the substation. Mineral oil that was collected and then separated into a free phase while stored in the frac tanks has been removed to a great extent by skimming using a vacuum truck. ATC is proposing to provide an industrial wastewater treatment system at the property to treat the water prior to discharge to the storm water inlets located on the MG&E Coal Yard property. A sketch of the frac tank and treatment system locations along with the locations of the storm sewer inlets on the property is included with this document for your reference (see Figure 2).

Wastewater Characterization

Representative samples of the collected water were analyzed for waste characterization purposes. A water sample, identified as WC-3 in the attached Eurofins TestAmerica laboratory report dated 8/14/2019, representing the approximately 180,000 gallons of combined water collected was analyzed for VOCs, SVOCs, RCRA 8 metals, DRO, Oil & Grease, ignitability and pH. In addition, seven water samples, presented in the attached Eurofins TestAmerica laboratory report dated 8/13/2019, were collected from representative storm sewer catch basins and were analyzed for the WDNR list of 32 PFAS compounds. A summary table of the PFAS results is provided on Table 1, and the laboratory reports are included in Attachment B.

Treatment System Design

An engineered industrial wastewater flow-through treatment system is proposed to treat the collected fire suppression water prior to discharge to the City of Madison storm sewer system. Contaminants of concern in the wastewater include mineral oil and per- and polyfluoroalkyl substances (PFAS). Treatment modeling results, a treatment system schematic, and equipment cut-sheets are included in the treatment system documentation in Attachment C.

The system consists of four treatment stages as described below:

Stage 1: Oil/Water Separation – Collected water will be pumped from the frac tanks to an oil water separator to remove free product. The oil water separator as proposed consists of a baffled tank to remove free oil product. A filter media is present within the baffle section to assist in removing emulsified oils within the water.

Stage 2: Filtration – consists of two bag filter units; 10-micron filter followed by a 5-micron unit. The filter units will remove suspended particles that may interfere with treatment in the stages to follow.

Stage 3: HS 200 Organoclay Vessel – Following the filtration stage, the water will flow through a media vessel with 1,500 pounds of HS 200 Organoclay to remove additional free phase and emulsified oil and grease.

Stage 4: Granulated Activated Carbon (GAC) – The final treatment stage consists of three vessels in series with 1,000 pounds of GAC each (a total of 3,000 lbs of GAC) to remove organic compounds from the wastewater stream.

Sampling ports and pressure valves will be installed between each of the units/vessels to monitor performance of the system. Prior to discharge to the storm sewer, the water will pass through a flow meter to monitor and record the discharge flow rate.

The system was modeled using a design flow rate of 20 gallons per minute and PFOA as the design compound for removal with a modeled initial concentration of 5.3 ug/L (expected initial concentration of 0.024 ug/L). Modeling results with three GAC vessels in series indicate no breakthrough of PFOA after 100 days of treatment with a total of 2,880,000 gallons of treated water.

Operation & Maintenance

The following operational criteria will be applied to the treatment system:

Volume to be treated:	180,000 gallons
Flow rate:	20 gpm
Operation:	12 hours/day (expanded up to 24 hours per day if needed)

Pressure gauges will be located between each of the units and vessels to monitor operation. Sampling ports will be present between each unit and vessel to allow for performance monitoring.

Initial operation will treat a single frac tank of water (approximately 20,000 gallons) to be discharged into a holding tank. Samples of the treated water will be collected and submitted to a licensed laboratory for the effluent parameters in the WPDES General Permit (WPDES Permit No. WI-0046531-06-1) and listed in the treatment system documentation in Attachment C. Upon receipt of the laboratory results confirming the effluent meets the discharge parameters, the treatment system will be operated and discharged to the storm sewer. Effluent samples will be collected daily and submitted to the licensed laboratory to monitor the treatment system performance.

When empty, the frac tanks will sprayed with potable water. The sprayed water will be pumped through the treatment system and discharged to the storm sewer.

The frac tanks and treatment system will be maintained on spill berms (PacTec or similar) throughout the treatment process and while water is present in the tanks or system.

The treatment system will be operated and maintained by personnel from North Shore Environmental Services, Inc – a contractor for ATC. Samples of the water for laboratory analysis will be collected by AECOM – environmental consultant for ATC.

Sludge/Waste Handling

Because of the characteristics of the wastewater being treated, it is anticipated that a minimal amount of sludge/solid waste product will be generated in the treatment system. Free oil product removed in the oil water separator along with any sludge that settles in the separator chambers will be removed and transported to a licensed waste handling contractor for recycling/disposal.

Solids generated during the filtration stage and settled in the frac tanks will be characterized and disposed in a licensed waste facility per local and state regulations.

Media in the treatment vessels will be regenerated or disposed by the vendor.

Attachments:

Attachment A: MSDS Sheets for Mineral Oil and AFFF
Attachment B: Laboratory Report and Summary Table
Attachment C: Wastewater Treatment System Documentation

Professional Engineer Certification

"I, Timothy P. Wood, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch.A-E8, Wis. Adm. Code, and that, to the best of my knowledge, the information contained in this document is correct."

09-05-19

Reviewed By: Timothy P. Wood, P.E.
AECOM, Project Engineer

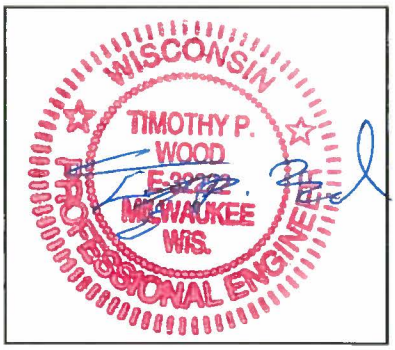

Figure 1

AECOM	**ATC Blount SS Water Discharge** **201 South Blount Street** **Madison, WI**	Site Location

Figure 2


FRAC Tanks
(Collected Fire
Supression Water)
Treatment System
Treatment System
Discharge Location
(Storm Inlets)
S Blount St
S Livingston St
Google Earth
200 ft

Attachment A
MSDS Sheets for Mineral Oil and AFFF

TULSTAR PRODUCTS, INC.
5510 SOUTH LEWIS AVENUE • TULSA, OK 74105 • (918) 749-9060 • FAX (918) 747-1444
TULSTAR@TULSTAR.COM • WWW.TULSTAR.COM

MATERIAL SAFETY DATA SHEET

May 2005

SECTON 1: Company Information/Product Identification

Company Information:	**TULSTAR PRODUCTS, INC.** 5510 S. Lewis Ave. Tulsa, OK 74105
Phone Number:	(918) 749-9060
Fax Number:	(918) 747-1444
Email Address:	tulstar@tulstar.com
Emergency Phone Number:	CHEMTREC 800-424-9300 (24 hours)

Product Name:	Transformer Oil, Type II, TS-3487
Chemical Name:	Severely Hydrotreated Heavy Naphthenic Distillate
CAS Number:	64742-53-6
Chemical Family:	Petroleum Hydrocarbon Oil

ECTION 2: Composition/Information on Ingredients

Ingredient Name:	Severely Hydrotreated Light Naphthenic Petroleum Oil
Exposure Limits:	Oil Mist. OSHA PEL MIST 5MG/M3 8 HRS ACGIH TLV MIST 5 MG/M3 8 HRS
Concentration:	99.7 % BY VOL.
Ingredient Name:	Hindered phenol type inhibitor, CAS # 128-39-2
Concentration:	0.3 % BY VOL.

SECTION 3: Hazard Identification

Emergency Overview: Not expected to cause a severe emergency hazard.

Potential Health Effects:

Primary Routes of Entry:

- Eyes- Tests on similar materials suggest that no eye effect be expected.
- Skin- Tests on similar materials indicate that no significant adverse health effects are expected to occur upon short term exposure.
- Ingestion- Tests on similar materials indicate no significant adverse effects expected. Practically non-toxic.
- Inhalation- Tests on similar material indicate no accuse effects are expected.
- Chronic- Prolonged and/or repeated contact with this material may produce skin irritation and inflammation.

Carcinogen listed by: National Toxicology Program (NO)
I.A.R.C. (NO)
OSHA (NO)
ACGIH (NO)

This product does not require a cancer hazard warning in accordance with the OSHA Hazard Communication Standard.

Medical Conditions Aggravated by Exposure: Personnel with pre-existing skin disorders should avoid contact with this product.

SECTION 4: First Aid Measures

Eyes: Flush eyes immediately with water for at least 15 minutes or until irritation subsides. If irritation persists, consult a physician.

Skin: Wash thoroughly with soap and water. Remove contaminated clothing and wash before reuse. If irritation or rash develops, obtain medical assistance. Immediately remove soaked clothing.

Ingestion: Product is practically non-toxic. Do not induce vomiting. Obtain emergency medical attention.

Inhalation: Not likely to occur except a mist. Remove patient to fresh air and consult a physician. If breathing is difficult, give oxygen. If not breathing give artificial respiration.

SECTION 5: Fire Fighting Measures

Flammable Properties:
- Flash Point- 293°F; >145°C COC ASTM D92
- Autoignition: >650°F; >343°C
- Flammability Class: IIIB
- Lower Explosive Limit (%): Not determined.
- Upper Explosive Limit (%): Not determined.

Fire & Explosion Hazards: Slightly combustible. OSHA/NFPA Class IIIB Combustible Liquid. If heated above its flash point will release flammable vapors which can burn in the open or be explosive in confined spaces if exposed to ignition source. Mists or sprays may be flammable below oil's normal flash point. Keep away from extreme heat or open flame.

Extinguishing Media: Dry Chemical, carbon dioxide, water fog and foam. NOTE: Water, fog and foam may cause frothing and spattering.

Fire Fighting Instruction: Use water to cool containers exposed to flames. Do not enter enclosed or a confined workspace without proper protective equipment. Fire fighting personnel should wear respiratory protection (positive pressure if available).

Products of combustion include fumes, smoke and carbon monoxide.

SECTION 6: Accidental Release Measures

Shut off ignition source. Contain spill and keep from entering waterways or sewers. Use personal protective equipment. Advise EPA; state agency if required. Absorb on inert material. Shovel, sweep, or vacuum spill.

SECTION 7: Handling & Storage

Precautions: Keep away from flames, sparks or hot surfaces. Never use a torch to cut or weld on or near container. Empty oil containers can contain explosive vapors. NFPA Class IIIB storage. Wash thoroughly after handling.

Work/Hygienic Practices: Wash hands with soap and water before eating, drinking, smoking or use of toilet facilities. Do not use gasoline, solvents, kerosene, or harsh abrasive skin cleaners for washing exposed skin areas. Take a shower after work if general contact occurs. Remove oil-soaked clothing and launder before reuse. Launder or discard contaminated shoes and leather gloves.

SECTION 8: Exposure Controls/Personal Protection

Engineer Controls: Use adequate ventilation to keep oil mists of this material below applicable standards(s). See Section on occupational exposure limits.

Eye/Face Protection: Safety glasses or splash goggles. Have suitable eye wash water available.

Skin Protection: Avoid prolonged and/or repeated skin contact. If prolonged contact cannot be avoided, wear protective impervious gloves and clothing. Acceptable materials for gloves are polyvinyl chloride; neoprene; nitrile; polyvinyl alcohol; viton.

Respiratory Protection: Normally not required if adequate ventilation. If occupational exposure limits are exceeded wear NIOSH/MSHA approved apparatus.

Other Protection:	If there is a likelihood of splashing, an oil resistant clothing should be worn. Never wear oil soaked clothing. Launder or dry clean before wearing. Discard oil soaked shoes. Affix warning labels on containers in accordance with 29 CFR 1910.1200 (Hazard Communication Standard).

SECTION 9: Physical & Chemical Properties

Appearance:	Clear, pale straw to water white, colored, viscous liquid.
Odor:	Light bland petroleum.
Odor Threshold:	N.D.
Physical State:	Liquid
Boiling Point:	IBP >350°F; IBP>176°C
Melting Point:	N/A
Vapor Pressure:	<0.04 MM hG@20°C
Vapor Density (AIR=1):	>5
Specific Gravity:	0.91 Water = 1
Molecular Weight:	265.00
Packing Density:	N/A
Solubility (H_2O):	Negligible in water
Percent Volatile:	nil
Evaporation Rate:	1000X slower than ethyl ether
pH:	Essentially Neutral
Viscosity:	63 SUS @ 100°F

SECTION 10: Stability & Reactivity

Stability:	Stable
Conditions to Avoid (stability):	Sources of ignition
Incompatible Materials:	Strong oxidizers
Hazardous Decomposition Products:	Combustion may produce carbon monoxide and other asphyxiant.
Hazardous Polymerization:	Will not occur

SECTION 11: Toxicological Information

Acute Studies:	Tests on similar materials show a low order of acute oral and dermal toxicity.
Eye Effects:	Minimal irritation on contact.
Skin Effects:	Practically non-toxic if absorbed. May cause mild irritation with prolonged and repeated contact.
Acute Oral Effects:	Tests on similar materials indicate low order of acute oral toxicity.
Acute Inhalation Effects:	Low acute toxicity expected on inhalation.

This product is severely hydrotreated. Severely hydrotreated naphthenic petroleum oil has not been found to be carcinogenic or a potential carcinogen. This product is not listed as carcinogenic or a potential carcinogen by the National Toxicology Program, by the I.A.R.C. monographs or by OSHA.

SECTION 12: Ecological Information

NO DATA GIVEN

SECTION 13: Disposal Considerations

Follow federal, state and local regulations. Not a RCRA hazardous waste if uncontaminated. If "used", RCRA criteria must be determined. Do not flush to drain/storm sewer. Contract to authorized disposal service, if permitted incineration may be practical. Recommend recycling.

RCRA Information:	Not a RCRA hazardous waste if uncontaminated.

SECTION 14: Transportation Information

Proper Shipping Name: Not regulated by DOT
Hazard Class: Not applicable
DOT Identification Number: N/A
DOT Shipping Label: Not regulated by DOT.

SECTION 15: Regulatory Information

U.S. Federal Regulatory Information:
SARA 302 Threshold Planning Quantity: Not applicable.
SARA 304 Reportable Quantity: Not applicable.
SARA 311 Categories: Immediate (acute) Health Effects- N
Delayed (chronic) Health Effects- N
Fire Hazard- N
Sudden Release of Pressure Hazard- N
Reactivity Hazard- N
EPA/TSCA Inventory: The components of this product are listed on the EPA/TSCA inventory of chemicals.
EPA Hazard Classification Code: Not applicable
Comprehensive Environmental Response, Compensation and liability Act (CERCLA): No chemicals in this product are subject to the reporting requirements of CERCLA.
SARA Title III - Section 313 Supplier Notification: No chemical in this product exceed the De Minimus reporting level established by SARA Title III, Section 313 and 40 CFR 372
WHMIS Classification: Not controlled

SECTION 16: Other Information

NFPA HAZARD RATING:	HEALTH-	1 ⇒	Negligible
	FIRE-	1 ⇒	Slight
	REACTIVITY-	0 ⇒	Negligible

Revised: 05/05

FIRE SERVICE PLUS, INC

SAFETY DATA SHEET

FIREADE FIRE FIGHTING AGENT

Preparation Date: 4/15/18

1. PRODUCT AND COMPANY IDENTIFICATION

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	1
Flammability	0
Physical Hazard	0

Product Name: **FireAde Fire Fighting Agent**

Recommended use: **Fire Fighting**

Manufacturer, supplier:

Fire Service Plus, Inc.
180 Etowah Trace
Fayette, GA 30214

Emergency Contact Telephone number: **770-460-7793**

2. HAZARDS IDENTIFICATION

GHS Classification

Serious Eye Irritant	Category 2A
Skin irritation	Category 2

GHS Label Element

Hazard Pictograms:

Signal Word: Warning

Hazard Statements

Harmful if swallowed
Harmful in contact with skin.
Causes severe eye damage.

Precautionary Statements:

Prevention: Wash skin thoroughly after handling. Do not eat, drink, or smoke when using this product. Wear protective gloves and eye protection.

Response:
Principal routes of exposure: Eye contact, Skin contact, Inhalation, Ingestion.
Skin: Wash contaminated area with soap or mild detergent. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation persists.
Eyes: Check for and remove contact lens. Immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately.
Inhalation: If symptoms occur move affected person to fresh air. If not breathing, give artificial respiration. If symptoms persist, get medical attention promptly.
Ingestion: If product is swallowed, do not induce vomiting. If vomiting occurs keep head lower than hips to help prevent aspiration. Never give anything by mouth to an unconscious person. If affected person is conscious, give plenty of water to drink. Get medical attention at once.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No	%[weight]	Name
107-41-5	<8	2-methyl-2,4-pentanediol
142-31-4	<8	sodium octyl sulfate
Not Available	<1.2	proprietary foamer blend (water, amphoteric copolymer, amphoteric polymer, C6 fluorosurfactant, acrylic copolymer, propylene glycol, ethanol)
151-21-3	<0.8	sodium decyl sulfate

Skin contact: Wash contaminated area with soap or mild detergent. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation persists.
Eye contact: Check for and remove contact lens. Immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately.
Inhalation: If symptoms occur, move affected person to fresh air. If not breathing, give artificial respiration. If symptoms persist, get medical attention promptly.
Ingestion: If product is swallowed, do not induce vomiting. If vomiting occurs keep head lower than hips to help prevent aspiration. Never give anything by mouth to an unconscious person. If affected person is conscious, give plenty of water to drink. Get medical attention at once.

5. FIRE-FIGHTING MEASURES

Fire Fighting Procedure: Use water vapor, foam or fog. Firefighters should wear proper protective equipment.
Fire Hazard: N/A
Flash Point (F°, TCC): None
Flammable Limits: LEL: N/A

6. ACCIDENTAL RELEASE MEASURES

Spill Clean Up: Wear appropriate protective equipment (see Section 8). Absorb with an inert material and put spilled material in appropriate waste disposal.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Keep container closed. Wash thoroughly after handling.
Storage: Keep container in cool well ventilated area. Keep container tightly closed. Store away from incompatible materials. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:
No special ventilation requirements. General room ventilation is adequate.

Personal Protective Equipment

Eyes: Safety eyewear should be used when there is a likelihood of exposure.
Hand: For prolonged or repeated handling wear impervious chemical resistant gloves.
Skin: Wear normal work place attire.
Respiratory: Avoid breathing vapors, spray or mists.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	clear light red liquid
Odor	characteristic
Upper and lower flammability or explosive limits	not available
Vapor pressure	not available
Odor threshold	not available
Vapor density	not available
pH	7-9
Relative density	1.0-1.02
Melting point/freezing point	not available
Boiling Point deg. F	not available
Solubility water	soluble
Initial boiling point and boiling range	not available
Flash point	not available
Evaporation rate	not available
Auto-ignition temperature	not available
Decomposition temperature	not available
VOC content (%)	<5
Viscosity	not available

10. STABILITY AND REACTIVITY

Stability: Stable
Incompatibility: Strong oxidizing agents.
Polymerization: Will not occur.
Hazardous Decomposition: Carbon monoxide, carbon dioxide, and other organic materials.

11. TOXICOLOGICAL INFORMATION

Toxicity to animals: Oral (Rat) LD50: >2000 mg/kg

12. ECOLOGICAL INFORMATION

12.1 Product upon delivery (concentrate):

Ecotoxic effects:
The product may be used for fighting forest fires up to a concentration of 0.5% without affecting soil biota (Tests of the Hygiene Institute des Ruhrgebietes). No further information.
Ecotoxic data:
Fish toxicity: EC0: 20 mg/l / 48 h (Bericht -Nr. [report No.] 424- 222750/110675/2.000 vom 04.03.2002 of T V Produkt und Umwelt GmbH, K.ln, Germany)
EC50: 40 mg/l / 48 h (as aforementioned) Further information: None
12.3 For the application concentration of 3% the following data are available:
Ecotoxic effects: Ready biodegradable. No adverse effects to sewage plants are to be expected (TTC-test by the HygieneInstitute des Ruhrgebietes).
Ecotoxic data for the 3% aqueous solution:
Fish toxicity:
LC50: 1,330 mg/l (Estimation by the Hygiene-Institute des Ruhrgebietes based on the data of the concentrate)

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Liquid wastes are not permitted in landfill. Consult local, state, and federal agencies for proper disposal in your area.
Classification: Non-hazardous waste

14. TRANSPORT INFORMATION

Not regulated as hazardous by DOT 14.1 Product:
Shipping Class: 55; NMFC # 048580; Schedule B: 3813.00
14.2 Extinguishers: Shipping Class: 60; NMFC # 069185; Schedule B: 8424.10

Note: DOT classification does not necessarily apply to all sizes. For specific container size exceptions, refer to the Bill of Lading with your shipment.

15. REGULATORY INFORMATION

SARA 313 toxic chemical notification and release reporting: No product found
Clean Water Act (CWA) regulated substance: No product found
Clean Air Act (CAA) 112 regulated toxic substances: No product found
State Regulations: The following ingredients appear on various State's Right to Know lists and/or California's Proposition 65 list:

Ingredient(s)	CAS #	State List
None		

SARA 311/312 Hazard Categories

Immediate: -
Delayed: -
Fire: -
Reactivity: -
Sudden Release of Pressure: -

Canada
WHMIS Hazard Class:

16. OTHER INFORMATION

Reason for revision: Format revision
Additional advice:

Notice to Reader:
As of the date of issuance, we are providing available information relevant to the handling of this material in the workplace. All information contained herein is offered in good faith in the belief that it is accurate. This material safety data sheet shall not be deemed to constitute or imply any warranty of any kind. In the event of an adverse incident associated with this material, this safety data sheet is not intended as a substitute for consultation with appropriately trained personnel (refer to section 1). Some information presented and conclusions herein are from sources other than test data on the substance itself. We do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with handling, storage, use or disposal of the product.

Attachment B
Laboratory Report and Summary Table

AECOM

DRAFT

TABLE #
LABORATORY ANALYTICAL WATER SAMPLING RESULTS
ATC BLOUNT SS - MADISON, WISCONSIN
PROJECT NO. 60611431

Parameters	NR 140 Standards ES	NR 140 Standards PAL	Catch Basin NSEC 7/19/2019	Surface Water NSEC 7/19/2019	Blount Street / Blount NSEC 7/19/2019	Blount Street / Blount SCS Split 7/19/2019	LW (Basin) / LW2 NSEC 7/19/2019	LW (Basin) / LW2 SCS Split 7/19/2019	LW1 SCS 7/19/2019	North Power Pole AECOM 7/24/2019	Storm Ceptor AECOM 7/25/2019	River Outlet AECOM 7/25/2019	Blount St Outlet AECOM 7/25/2019	Blount St Outlet FD AECOM 7/25/2019	Path Outlet AECOM 7/25/2019	LVN-6 AECOM 7/25/2019	BNT-3 AECOM 7/25/2019	BNT-4 AECOM 7/25/2019	BNT-8 AECOM 7/25/2019
DRO (ug/L)	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PFAS (ng/L) **PROPOSED PFAS NR 140 STANDARDS**																			
1 Perfluorobutanoic acid (PFBA)	--	--	4.3	14	9.5	12	1.8	1.8	<3.0	170	11	6.4	9.0	10	8.6	5.0	15	<4.4	8.5
2 **Perfluoropentanoic acid (PFPeA)**	--	--	3.2	12	2.8	3.6	1.5 J	1.5 J	6.6 J	150	27	<0.46	5.6	5.6	3.6	1.7 J	17	<6.1	6.7
3 **Perfluorohexanoic acid (PFHxA)**	--	--	7.0	26	3.9	3.9	6.3	5.0	10 J	230	24	1.5 J	5.7	5.5	3.3	2.2	11	<7.3	5.8
4 Perfluoroheptanoic acid (PFHpA)	--	--	0.67 J	3.0	1.5 J	1.2 J	0.41 J	0.33 J	<2.2	21	12	0.88 J	2.7	2.8	1.6 J	1.2 J	5.0	<3.1	2.3
5 **Perfluorooctanoic acid (PFOA)**	**20**	*2*	1.8	*2.7*	*3.2*	*3.0*	1.6 J	0.96 J	<7.3	**24**	*5.4*	1.8 J	*4.9*	*5.4*	*3.9*	*1.6 J*	*6.0*	*12 J*	*5.0*
6 Perfluorononaoic acid (PFNA)	--	--	0.43 J	0.60 J	0.55 J	0.55 J	<0.25	<0.23	<2.3	6.0 J	0.77 J	0.54 J	0.60 J	0.66 J	0.67 J	0.36 J	1.0 J	<3.4	0.74 J
7 Perfluorodecanoic acid (PFDA)	--	--	0.35 J	0.68 J	0.73 J	0.90 J	<0.28	<0.27	<2.7	5.1 JI	0.82 J	<0.29	0.75 J	0.94 J	0.62 J	<0.31	0.71 JI	<3.9	0.84 J
8 Perfluoroundecanoic acid (PFUnA)	--	--	<1.0	<1.0	<0.95	<0.90	<1.0	<0.95	<9.5	<5.5	<1.1	<1.0	<1.1	<1.1	<1.1	<1.1	<1.1	<14	<1.1
9 Perfluorododecanoic acid (PFDoA)	--	--	<0.50	<0.51	<0.48	<0.45	<0.50	<0.47	<4.8	<2.8	<0.54	<0.52	<0.53	<0.56	<0.53	<0.56	<0.54	<6.9	<0.56
10 Perfluorotridecanoic acid (PFTriA)	--	--	<1.2	<1.2	<1.1	<1.1	<1.2	<1.1	<11	<6.5	<1.3	<1.2	<1.3	<1.3	<1.3	<1.3	<1.3	<16	<1.3
11 Perfluorotetradecanoic acid (PFTeA)	--	--	<0.26	0.60 J	0.44 J	<0.24	<0.26	<0.25	<2.5	<1.5	<0.29	<0.27	<0.28	<0.30	<0.28	<0.29	<0.29	<3.6	<0.30
12 Perfluoro-n-hexadecanoic acid (PFHxDA)	--	--	<0.81	<0.83	<0.77	<0.73	<0.81	<0.77	<7.7	<4.5	<0.88	<0.84	<0.86	<0.91	<0.86	<0.90	<0.88	<11	<0.91
13 Perfluorobutanesulfonic acid (PFBS)	--	--	0.33 J	0.71 J	1.8	<0.16	0.21 J	<0.17	<1.7	5.1 J	2.5	<0.19	3.6	4.0	1.9	<0.20	2.9	<2.5	4.5
14 Perfluoro-n-octadecanoic acid (PFODA)	--	--	<0.42	<0.43	<0.40	<0.38	<0.42	<0.40	<4.0	<2.3	<0.45	<0.44	<0.44	<0.47	<0.44	<0.47	<0.45	<5.8	<0.47
15 Perfluoropentanesulfonic acid (PFPeS)	--	--	<0.27	<0.28	<0.26	<0.25	<0.27	<0.26	<2.6	1.8 JI	<0.30	<0.28	1.3 J	1.1 J	1.3 J	<0.30	0.78 J	<3.8	<0.31
16 Perfluorohexanesulfonoic acid (PFHxS)	--	--	0.81 J B	1.9 B	4.4 B	3.9 B	0.40 J B	0.29 J B	<1.5	18 B	2.0 B	0.76 J B	8.2 B	8.7 B	8.2 B	0.49 J B	5.7 B	11 J B	6.7 B
17 Perfluoroheptanesulfonic Acid (PFHpS)	--	--	<0.17	<0.18	<0.16	<0.16	<0.17	<0.16	<1.6	<0.95	<0.19	<0.18	<0.18	0.25 J	<0.18	<0.19	0.29 J	<2.4	<0.19
18 **Perfluorooctanesulfonic acid (PFOS)**	**20**	*2*	*7.0 I CI*	*13 I CI*	*6.1*	*5.6*	*2.9 I CL*	<0.46	<4.7	**31**	*7.0*	1.1 J	*13*	*12*	*18*	0.76 J	*13*	14 J	*12*
19 Perfluorononanesulfonic Acid (PFNS)	--	--	<0.15	<0.15	<0.14	<0.13	<0.15	<0.14	<1.4	<0.80	<0.16	<0.15	<0.15	<0.16	<0.15	<0.16	<0.16	<2.0	<0.16
20 Perfluorodecanesulfonic acid (PFDS)	--	--	<0.29	<0.30	<0.28	<0.26	<0.29	<0.28	<2.8	<1.6	<0.32	<0.30	<0.31	<0.33	<0.31	<0.32	<0.31	<4.0	<0.33
21 Perfluorooctanesulfonamide (FOSA)	--	--	<0.32	<0.32	<0.30	<0.29	<0.32	<0.30	<3.0	<1.8	<0.35	<0.33	<0.34	<0.36	<0.34	<0.35	<0.34	<4.4	<0.36
22 N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	--	--	<2.8	<2.9	<2.7	<2.5	<2.8	<2.7	<27	<16	<3.1	<2.9	<3.0	<3.2	<3.0	<3.1	<3.0	<39	<3.2
23 N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	--	--	<1.7	<1.8	<1.6	<1.6	<1.7	<1.6	<16	<9.5	<1.9	<1.8	<1.8	<1.9	<1.8	<1.9	<1.9	<24	<1.9
24 4:2 Fluorotelomer Sulfonic Acid or 4:2 FTSA (4:2 FTS)	--	--	<4.7	<24	<4.5	<4.3	<4.7	<4.5	<45	<26	<5.1	<4.9	<5.0	<5.3	<5.0	<5.3	<5.1	<65	<5.3
25 **6:2 Fluorotelomer sulfonic acid (6:2 FTS)**	--	--	230	790	45	42	80	97	250	4900	470	<1.9	19	29	3.0 J	2.9 J	30	49 J	47
26 **8:2 Fluorotelomer sulfonic acid (8:2 FTS)**	--	--	19	21	1.9 J	1.7 J	2.5 J	2.8 J	<17	17 J	<20	<1.9	<1.9	<2.0	<1.9	<2.0	<2.0	<25	<2.0
27 Perfluorododecanesulfonic acid (PFDos)	--	--	<0.41	<0.42	<0.39	<0.37	<0.41	<0.39	<3.9	<2.3	<0.44	<0.43	<0.43	<0.46	<0.43	<0.46	<0.44	<5.6	<0.46
28 ADONA	--	--	<0.17	<0.18	<0.16	<0.16	<0.17	<0.16	<1.6	<0.95	<0.19	<0.18	<0.18	<0.19	<0.18	<0.19	<0.19	<2.4	<0.19
29 F-53B Major	--	--	<0.22	<0.22	<0.21	<0.20	<0.22	<0.21	<2.1	<1.2	<0.24	<0.23	<0.23	<0.25	<0.23	<0.24	<0.24	<3.0	<0.25
30 HFPO-DA (GenX)	--	--	<1.4	<1.4	<1.3	<1.2	<1.4	<1.3	<13	<7.5	<15	<1.4	<1.4	<1.5	<1.4	<1.5	<1.5	<19	<1.5
31 F-53B Minor	--	--	<0.29	<0.30	<0.28	<0.26	<0.29	<0.28	<2.8	<1.6	<0.32	<0.30	<0.31	<0.33	<0.31	<0.32	<0.31	<4.0	<0.33
32 **10:2 FTS**	--	--	1.5 J	1.1 J	0.28 J	0.28 J	0.87 J	0.90 J	<1.6	<0.95	<1.9	<0.18	<0.18	<0.19	<0.18	<0.19	<0.19	<2.4	<0.19
33 NaDONA	--	--	<0.17	<0.18	<0.16	<0.16	<0.17	<0.16	<1.6	<0.95	<0.19	<0.18	<0.18	<0.19	<0.18	<0.19	<0.19	<2.4	<0.19
34 DONA	--	--	<0.16	<0.17	<0.16	<0.15	<0.16	<0.15	<1.6	<0.90	<0.18	<0.17	<0.17	<0.18	<0.17	<0.18	<0.18	<2.3	<0.18
35 Ammonium Perfluorooctanoate (APFO)	--	--	1.9	2.8	3.4	3.1	1.7 J	1.0 J	<7.6	25	5.6	1.9 J	5.1	5.6	4.0	1.7 J	6.2	13 J	5.2
Total Detected PFAS	--	--	278	890	86	82	100	112	267	5604	568	15	79	92	59	18	115	99	105
PCBs (ug/L)																			
Aroclor 1016[3]	**0.03**	*0.003*	NA	<0.16	<0.064	<0.062	<0.062	<0.063	<0.063	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221[3]	**0.03**	*0.003*	NA	<0.25	<0.19	<0.18	<0.19	<0.19	<0.19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232[3]	**0.03**	*0.003*	NA	<0.089	<0.19	<0.18	<0.19	<0.19	<0.19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242[3]	**0.03**	*0.003*	NA	<0.13	<0.19	<0.18	<0.19	<0.19	<0.19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248[3]	**0.03**	*0.003*	NA	<0.11	<0.19	<0.18	<0.19	<0.19	<0.19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254[3]	**0.03**	*0.003*	NA	<0.11	<0.19	<0.18	<0.19	<0.19	<0.19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260[3]	**0.03**	*0.003*	NA	<0.11	<0.067	<0.064	<0.065	<0.066	<0.065	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
DRO = Diesel Range Organics
PAHs = Polynuclear Aromatic Hydrocarbons
PFAS = Per- and polyfluoroalkyl substances
J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B = Compound was found in the blank and sample.
I = Value is EMPC (estimated maximum possible concentration).
CL = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.
Bold value = NR 140 Enforcement Standard Exceedance
Italic value = NR 140 Preventive Action Limit Exceedance
-- No NR 140 ES or PAL established.
NA = Not analyzed
*Spreadsheet updated with NR 140 Published February 2017 No. 734

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-167874-1
Client Project/Site: ATC - Madison - 60611431

For:
AECOM
1350 Deming Way Suite 100
Middleton, Wisconsin 53562

Attn: Mr. Leo B Linnemanstons, P.G.

Sandie Fredrick

Authorized for release by:
8/14/2019 4:57:00 PM

Sandie Fredrick, Project Manager II
(920)261-1660
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Table of Contents

Job ID: 500-167874-1

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative
500-167874-1

Comments
No additional comments.

Receipt
The samples were received on 8/7/2019 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.1º C and 3.3º C.

Receipt Exceptions
Did not receive DRO bottles for sample 5. Preserved in lab.

Cu, Ni, Zn added at the request of the client to the water samples.

GC/MS VOA
Methylene chloride was detected in the following samples: Trip Blank 1 (500-167874-3), Trip Blank 2 (500-167874-4), WC-1 (500-167874-5) and WC-3 (500-167874-7). The method blank associated with these samples was non-detect for Methylene chloride. Methylene chloride is known lab contaminant; therefore all low level detects for this compound should be suspected as lab contamination.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D: Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for 3 analytes to recover outside criteria for this method when utilizing this list of analytes. The LCS associated with batch 500-498673 had 1 analyte outside control limits: Benzoic acid. The associated LCSD was in control for this analyte. These results have been reported and qualified. (LCS 500-498673/2-A)

Method(s) 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 500-498673 and analytical batch 500-498700 recovered outside control limits for Benzoic acid, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Hexachlorobutadiene, Hexachlorocyclopentadiene, Hexachloroethane, 2-Methylnaphthalene, 1-Methylnaphthalene and 1,2,4-Trichlorobenzene. The % recoveries were in control, with the exception of Benzoic acid in the LCS.

Method(s) 8270D: The following samples were diluted due to the nature of the sample matrix: WC-1 (500-167874-5), WC-2 (500-167874-6), WC-3 (500-167874-7) and WC-4 (500-167874-8). Elevated reporting limits (RLs) are provided.

Method(s) 8270D: The following samples required a dilution due to the nature of the sample matrix: WC-1 (500-167874-5), WC-2 (500-167874-6), WC-3 (500-167874-7) and WC-4 (500-167874-8). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method(s) WI-DRO: The following samples required a dilution due to the nature of the sample matrix: WC-2 (500-167874-6). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) WI-DRO: Surrogate compounds were inadvertently omitted during the extraction process for the following samples: WC-1 (500-167874-5), WC-3 (500-167874-7), (LCS 500-499345/2-A), (LCSD 500-499345/3-A) and (MB 500-499345/1-A). The surrogates within the samples were diluted out due to high target analytes, however, the spike standard recoveries for LCS/LCSD were within control limits; therefore, the data have been reported and qualified.

Method(s) WI-DRO: The following samples required a dilution due to the nature of the sample matrix: WC-1 (500-167874-5) and WC-3 (500-167874-7). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Job ID: 500-167874-1 (Continued)

Laboratory: Eurofins TestAmerica, Chicago (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

LCMS
Method(s) 537 (modified): The laboratory control sample (LCS) for preparation batch 320-313396 and analytical batch 320-314501 recovered outside control limits for the following analytes: Perfluoro-n-octadecanoic acid (PFODA) and Perfluoro-n-hexadecanoic acid (PFHxDA). These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 537 (modified): Several Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: WC-2 (500-167874-6), (500-167874-E-6-B MS) and (500-167874-E-6-C MSD).The samples were re-analyzed with concurring results. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method(s) 537 (modified): Due to the high concentration of 6:2 FTS, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 320-313396 and analytical batch 320-314501 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) 537 (modified): The matrix spike / matrix spike duplicate (MS/MSD) recoveries for Perfluoro-n-hexadecanoic acid (PFHxDA) and Perfluoro-n-octadecanoic acid (PFODA)preparation batch 320-313396 and analytical batch 320-314501 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected.

Method(s) 537 (modified): The matrix spike (MS) recoveries for Perfluoroundecanoic acid (PFUnA) in preparation batch 320-313396 and analytical batch 320-314501 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method(s) 9056A: Continuing calibration blank CCB 500-499086/26 in analytical batch 500-499086 contained Sulfate above the reporting limit (RL). Sample WC-1 (500-167874-5) was not re-extracted and/or re-analyzed because results were greater than 10X the value found in the CCB.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method(s) 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-313407. Method Code: 3535_PFC_Water

Method(s) SHAKE: The following samples were observed to be yellow after extraction.WC-2 (500-167874-6), (500-167874-E-6 MS) and (500-167874-E-6 MSD). Method: Shake_Bath_14D Matrix: Solid Prep Batch: 320-313396

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Client Sample ID: EB08062019 — Lab Sample ID: 500-167874-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.32	J B	1.8	0.15	ng/L	1		537 (modified)	Total/NA

Client Sample ID: FB08062019 — Lab Sample ID: 500-167874-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.30	J B	1.8	0.15	ng/L	1		537 (modified)	Total/NA

Client Sample ID: Trip Blank 1 — Lab Sample ID: 500-167874-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	2.1	J	5.0	1.6	ug/L	1		8260B	Total/NA

Client Sample ID: Trip Blank 2 — Lab Sample ID: 500-167874-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	2.3	J	5.0	1.6	ug/L	1		8260B	Total/NA

Client Sample ID: WC-1 — Lab Sample ID: 500-167874-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.5		0.50	0.15	ug/L	1		8260B	Total/NA
Methylene Chloride	1.8	J	5.0	1.6	ug/L	1		8260B	Total/NA
Naphthalene	0.96	J	1.0	0.34	ug/L	1		8260B	Total/NA
Styrene	1.3		1.0	0.39	ug/L	1		8260B	Total/NA
Toluene	1.5		0.50	0.15	ug/L	1		8260B	Total/NA
1,2,4-Trimethylbenzene	0.75	J	1.0	0.36	ug/L	1		8260B	Total/NA
Xylenes, Total	1.1		1.0	0.22	ug/L	1		8260B	Total/NA
Acenaphthene	26	J	39	12	ug/L	50		8270D	Total/NA
4-Chlorophenyl phenyl ether	31	J	190	25	ug/L	50		8270D	Total/NA
Dibenzofuran	71	J	77	10	ug/L	50		8270D	Total/NA
2,4-Dinitrotoluene	21	J	39	9.5	ug/L	50		8270D	Total/NA
2,6-Dinitrotoluene	25	J	39	2.9	ug/L	50		8270D	Total/NA
Fluorene	24	J	39	9.4	ug/L	50		8270D	Total/NA
2-Methylnaphthalene	3.2	J *	77	2.5	ug/L	50		8270D	Total/NA
4-Nitrophenol	850		770	290	ug/L	50		8270D	Total/NA
WI Diesel Range Organics (C10-C28)	1300		95	31	mg/L	1000		WI-DRO	Total/NA
Arsenic	2.3		1.0	0.23	ug/L	1		6020A	Total Recoverable
Barium	100		2.5	0.73	ug/L	1		6020A	Total Recoverable
Cadmium	0.43	J	0.50	0.17	ug/L	1		6020A	Total Recoverable
Chromium	3.0	J	5.0	1.1	ug/L	1		6020A	Total Recoverable
Lead	11		0.50	0.19	ug/L	1		6020A	Total Recoverable
Selenium	1.7	J	2.5	0.98	ug/L	1		6020A	Total Recoverable
Nickel	6.9		2.0	0.63	ug/L	1		6020A	Total Recoverable
Copper	7.6	B	2.0	0.50	ug/L	1		6020A	Total Recoverable
Zinc	63	B	20	6.9	ug/L	1		6020A	Total Recoverable
Flashpoint	>176		99.0	99.0	Degrees F	1		1010A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Client Sample ID: WC-1 (Continued)

Lab Sample ID: 500-167874-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HEM (Oil & Grease)	383		5.1	1.4	mg/L	1		1664B	Total/NA
Sulfate	52	^	2.0	0.95	mg/L	10		9056A	Total/NA
Cyanide, Total	0.032		0.010	0.0030	mg/L	1		SM 4500 CN E	Total/NA
pH	7.1	HF	0.2	0.2	SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: WC-2

Lab Sample ID: 500-167874-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	200		72	24	ug/Kg	50	☼	8260B	Total/NA
1,2,4-Trimethylbenzene	50	J	72	26	ug/Kg	50	☼	8260B	Total/NA
Acenaphthene	940	J	2000	360	ug/Kg	50	☼	8270D	Total/NA
Acenaphthylene	6300		2000	260	ug/Kg	50	☼	8270D	Total/NA
Anthracene	4900		2000	330	ug/Kg	50	☼	8270D	Total/NA
Benzo[a]anthracene	21000		2000	270	ug/Kg	50	☼	8270D	Total/NA
Benzo[a]pyrene	22000		2000	390	ug/Kg	50	☼	8270D	Total/NA
Benzo[b]fluoranthene	28000		2000	430	ug/Kg	50	☼	8270D	Total/NA
Benzo[g,h,i]perylene	9300		2000	640	ug/Kg	50	☼	8270D	Total/NA
Benzo[k]fluoranthene	9300		2000	590	ug/Kg	50	☼	8270D	Total/NA
Chrysene	21000		2000	550	ug/Kg	50	☼	8270D	Total/NA
Dibenz(a,h)anthracene	2800		2000	390	ug/Kg	50	☼	8270D	Total/NA
Fluoranthene	34000		2000	370	ug/Kg	50	☼	8270D	Total/NA
Fluorene	2000		2000	280	ug/Kg	50	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	9000		2000	520	ug/Kg	50	☼	8270D	Total/NA
1-Methylnaphthalene	1500	J	4000	490	ug/Kg	50	☼	8270D	Total/NA
2-Methylnaphthalene	1800	J	4000	370	ug/Kg	50	☼	8270D	Total/NA
Naphthalene	3800		2000	310	ug/Kg	50	☼	8270D	Total/NA
Phenanthrene	10000		2000	280	ug/Kg	50	☼	8270D	Total/NA
Pyrene	35000		2000	400	ug/Kg	50	☼	8270D	Total/NA
WI Diesel Range Organics (C10-C28)	4000		410	160	mg/Kg	100	☼	WI-DRO	Total/NA
Perfluorohexanoic acid (PFHxA)	0.22	J	0.25	0.052	ug/Kg	1	☼	537 (modified)	Total/NA
6:2 FTS	13		2.5	0.18	ug/Kg	1	☼	537 (modified)	Total/NA
Arsenic	11		1.1	0.37	mg/Kg	1	☼	6010C	Total/NA
Barium	180		1.1	0.12	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.86	B	0.22	0.039	mg/Kg	1	☼	6010C	Total/NA
Chromium	16		1.1	0.54	mg/Kg	1	☼	6010C	Total/NA
Lead	140		0.55	0.25	mg/Kg	1	☼	6010C	Total/NA
Selenium	1.9	B	1.1	0.64	mg/Kg	1	☼	6010C	Total/NA
Silver	1.5		0.55	0.14	mg/Kg	1	☼	6010C	Total/NA
Barium	0.70		0.50	0.050	mg/L	1		6010C	TCLP
Cadmium	0.0024	J	0.0050	0.0020	mg/L	1		6010C	TCLP
Lead	0.018	J	0.050	0.0075	mg/L	1		6010C	TCLP
Mercury	0.83		0.020	0.0066	mg/Kg	1	☼	7471B	Total/NA
Flashpoint	>176		99.0	99.0	Degrees F	1		1010A	Total/NA
Cyanide, Total	4.0		0.60	0.30	mg/Kg	1	☼	9014	Total/NA
pH	8.3		0.2	0.2	SU	1		9045D	Total/NA
Free Liquid	pass				No Unit	1		9095B	Total/NA
Phenolics, Total Recoverable	0.046		0.0050	0.0041	mg/L	1		9066	TCLP

Client Sample ID: WC-3

Lab Sample ID: 500-167874-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.98		0.50	0.15	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: WC-3 (Continued)

Lab Sample ID: 500-167874-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	0.27	J	0.50	0.18	ug/L	1		8260B	Total/NA
Methylene Chloride	1.8	J	5.0	1.6	ug/L	1		8260B	Total/NA
Naphthalene	2.1		1.0	0.34	ug/L	1		8260B	Total/NA
Toluene	0.81		0.50	0.15	ug/L	1		8260B	Total/NA
1,2,4-Trimethylbenzene	1.0		1.0	0.36	ug/L	1		8260B	Total/NA
Xylenes, Total	1.0		1.0	0.22	ug/L	1		8260B	Total/NA
Fluorene	18	J	38	9.3	ug/L	50		8270D	Total/NA
2-Methylnaphthalene	2.9	J *	76	2.5	ug/L	50		8270D	Total/NA
WI Diesel Range Organics (C10-C28)	150		9.6	3.1	mg/L	100		WI-DRO	Total/NA
Arsenic	1.4		1.0	0.23	ug/L	1		6020A	Total Recoverable
Barium	53		2.5	0.73	ug/L	1		6020A	Total Recoverable
Chromium	1.2	J	5.0	1.1	ug/L	1		6020A	Total Recoverable
Lead	0.90		0.50	0.19	ug/L	1		6020A	Total Recoverable
Nickel	1.4	J	2.0	0.63	ug/L	1		6020A	Total Recoverable
Copper	3.9	B	2.0	0.50	ug/L	1		6020A	Total Recoverable
Zinc	11	J B	20	6.9	ug/L	1		6020A	Total Recoverable
Flashpoint	>176		99.0	99.0	Degrees F	1		1010A	Total/NA
HEM (Oil & Grease)	189		5.2	1.4	mg/L	1		1664B	Total/NA
pH	6.9	HF	0.2	0.2	SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: WC-4

Lab Sample ID: 500-167874-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	62		57	19	ug/Kg	50	☼	8260B	Total/NA
sec-Butylbenzene	31	J	57	23	ug/Kg	50	☼	8260B	Total/NA
Toluene	9.0	J	14	8.4	ug/Kg	50	☼	8260B	Total/NA
1,2,4-Trimethylbenzene	68		57	20	ug/Kg	50	☼	8260B	Total/NA
Benzo[a]anthracene	1500	J	1800	240	ug/Kg	50	☼	8270D	Total/NA
Benzo[a]pyrene	1600	J	1800	340	ug/Kg	50	☼	8270D	Total/NA
Benzo[b]fluoranthene	2000		1800	380	ug/Kg	50	☼	8270D	Total/NA
Benzo[g,h,i]perylene	1100	J	1800	570	ug/Kg	50	☼	8270D	Total/NA
Chrysene	1700	J	1800	480	ug/Kg	50	☼	8270D	Total/NA
Fluoranthene	1700	J	1800	330	ug/Kg	50	☼	8270D	Total/NA
Fluorene	780	J	1800	250	ug/Kg	50	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	1000	J	1800	460	ug/Kg	50	☼	8270D	Total/NA
Pyrene	2800		1800	350	ug/Kg	50	☼	8270D	Total/NA
Arsenic	3.7		0.94	0.32	mg/Kg	1	☼	6010C	Total/NA
Barium	26		0.94	0.11	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.76	B	0.19	0.034	mg/Kg	1	☼	6010C	Total/NA
Chromium	4.8		0.94	0.46	mg/Kg	1	☼	6010C	Total/NA
Lead	23		0.47	0.22	mg/Kg	1	☼	6010C	Total/NA
Selenium	1.3	B	0.94	0.55	mg/Kg	1	☼	6010C	Total/NA
Barium	0.18	J	0.50	0.050	mg/L	1		6010C	TCLP
Cadmium	0.0023	J	0.0050	0.0020	mg/L	1		6010C	TCLP
Mercury	0.024		0.016	0.0053	mg/Kg	1	☼	7471B	Total/NA
Flashpoint	>176		99.0	99.0	Degrees F	1		1010A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: WC-4 (Continued)

Lab Sample ID: 500-167874-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	0.63		0.50	0.25	mg/Kg	1	☼	9014	Total/NA
pH	8.9		0.2	0.2	SU	1		9045D	Total/NA
Free Liquid	pass				No Unit	1		9095B	Total/NA
Phenolics, Total Recoverable	0.054		0.0050	0.0041	mg/L	1		9066	TCLP

This Detection Summary does not include radiochemical test results.

Method Summary

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CHI
WI-DRO	Wisconsin - Diesel Range Organics (GC)	WI-DRO	TAL CHI
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
6010C	Metals (ICP)	SW846	TAL CHI
6020A	Metals (ICP/MS)	SW846	TAL CHI
7470A	Mercury (CVAA)	SW846	TAL CHI
7471B	Mercury (CVAA)	SW846	TAL CHI
1010A	Ignitability, Pensky-Martens Closed-Cup Method	SW846	TAL CHI
1664B	HEM and SGT-HEM	1664B	TAL CHI
420.4	Phenolics, Total Recoverable	MCAWW	TAL CHI
9014	Cyanide	SW846	TAL CHI
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL CHI
9045D	pH	SW846	TAL CHI
9056A	Anions, Ion Chromatography	SW846	TAL CHI
9066	Phenolics, Total Recoverable	SW846	TAL CHI
9095B	Paint Filter	SW846	TAL CHI
Moisture	Percent Moisture	EPA	TAL CHI
SM 4500 CN E	Cyanide, Total	SM	TAL CHI
SM 4500 H+ B	pH	SM	TAL CHI
1311	TCLP Extraction	SW846	TAL CHI
1664B	HEM and SGT-HEM (SPE)	1664B	TAL CHI
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CHI
3010A	Preparation, Total Metals	SW846	TAL CHI
3050B	Preparation, Metals	SW846	TAL CHI
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL CHI
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC
3541	Automated Soxhlet Extraction	SW846	TAL CHI
5030B	Purge and Trap	SW846	TAL CHI
7470A	Preparation, Mercury	SW846	TAL CHI
7471B	Preparation, Mercury	SW846	TAL CHI
9010B	Cyanide, Distillation	SW846	TAL CHI
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	SW846	TAL CHI
Distill/CN	Distillation, Cyanide	None	TAL CHI
Distill/Phenol	Distillation, Phenolics	None	TAL CHI
SHAKE	Shake Extraction with Ultrasonic Bath Extraction	SW846	TAL SAC
WI DRO PREP	Wisconsin Extraction (Diesel Range Organics)	WI-DRO	TAL CHI

Protocol References:

1664B = EPA-821-98-002
EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
None = None
SM = "Standard Methods For The Examination Of Water And Wastewater"
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200
TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
500-167874-1	EB08062019	Water	08/06/19 10:00	08/07/19 09:15	
500-167874-2	FB08062019	Water	08/06/19 10:01	08/07/19 09:15	
500-167874-3	Trip Blank 1	Water	08/06/19 10:02	08/07/19 09:15	
500-167874-4	Trip Blank 2	Water	08/06/19 10:03	08/07/19 09:15	
500-167874-5	WC-1	Water	08/06/19 11:00	08/07/19 09:15	
500-167874-6	WC-2	Solid	08/06/19 11:30	08/07/19 09:15	
500-167874-7	WC-3	Water	08/06/19 12:00	08/07/19 09:15	
500-167874-8	WC-4	Solid	08/06/19 12:30	08/07/19 09:15	

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Client Sample ID: EB08062019
Date Collected: 08/06/19 10:00
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-1
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.32		1.8	0.32	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluoropentanoic acid (PFPeA)	<0.44		1.8	0.44	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluorohexanoic acid (PFHxA)	<0.52		1.8	0.52	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluoroheptanoic acid (PFHpA)	<0.23		1.8	0.23	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluorooctanoic acid (PFOA)	<0.77		1.8	0.77	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluorononanoic acid (PFNA)	<0.24		1.8	0.24	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluoroundecanoic acid (PFUnA)	<0.99		1.8	0.99	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluorododecanoic acid (PFDoA)	<0.50		1.8	0.50	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.8	1.2	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluorotetradecanoic acid (PFTeA)	<0.26		1.8	0.26	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.80		1.8	0.80	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluorobutanesulfonic acid (PFBS)	<0.18		1.8	0.18	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.41		1.8	0.41	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluorohexanesulfonic acid (PFHxS)	**0.32**	**J B**	1.8	0.15	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.17		1.8	0.17	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluorooctanesulfonic acid (PFOS)	<0.49		1.8	0.49	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluorononanesulfonic acid (PFNS)	<0.14		1.8	0.14	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluorooctanesulfonamide (FOSA)	<0.32		1.8	0.32	ng/L		08/08/19 11:24	08/09/19 06:34	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.8		18	2.8	ng/L		08/08/19 11:24	08/09/19 06:34	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.7		18	1.7	ng/L		08/08/19 11:24	08/09/19 06:34	1
4:2 FTS	<4.7		18	4.7	ng/L		08/08/19 11:24	08/09/19 06:34	1
6:2 FTS	<1.8		18	1.8	ng/L		08/08/19 11:24	08/09/19 06:34	1
8:2 FTS	<1.8		18	1.8	ng/L		08/08/19 11:24	08/09/19 06:34	1
Perfluorododecanesulfonic acid (PFDoS)	<0.41		1.8	0.41	ng/L		08/08/19 11:24	08/09/19 06:34	1
ADONA	<0.17		1.9	0.17	ng/L		08/08/19 11:24	08/09/19 06:34	1
F-53B Major	<0.22		1.8	0.22	ng/L		08/08/19 11:24	08/09/19 06:34	1
HFPO-DA (GenX)	<1.4		3.6	1.4	ng/L		08/08/19 11:24	08/09/19 06:34	1
F-53B Minor	<0.29		1.8	0.29	ng/L		08/08/19 11:24	08/09/19 06:34	1
10:2 FTS	<0.17		1.8	0.17	ng/L		08/08/19 11:24	08/09/19 06:34	1
NaDONA	<0.17		1.9	0.17	ng/L		08/08/19 11:24	08/09/19 06:34	1
DONA	<0.16		1.8	0.16	ng/L		08/08/19 11:24	08/09/19 06:34	1
Ammonium Perfluorooctanoate (APFO)	<0.79		1.9	0.79	ng/L		08/08/19 11:24	08/09/19 06:34	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*91*		*25 - 150*	*08/08/19 11:24*	*08/09/19 06:34*	*1*
13C5 PFPeA	*92*		*25 - 150*	*08/08/19 11:24*	*08/09/19 06:34*	*1*
13C2 PFHxA	*90*		*25 - 150*	*08/08/19 11:24*	*08/09/19 06:34*	*1*
13C4 PFHpA	*93*		*25 - 150*	*08/08/19 11:24*	*08/09/19 06:34*	*1*
13C4 PFOA	*103*		*25 - 150*	*08/08/19 11:24*	*08/09/19 06:34*	*1*
13C5 PFNA	*105*		*25 - 150*	*08/08/19 11:24*	*08/09/19 06:34*	*1*

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Client Sample ID: EB08062019
Date Collected: 08/06/19 10:00
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-1
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	98		25 - 150	08/08/19 11:24	08/09/19 06:34	1
13C2 PFHxDA	95		25 - 150	08/08/19 11:24	08/09/19 06:34	1
13C2 PFUnA	100		25 - 150	08/08/19 11:24	08/09/19 06:34	1
13C2 PFDoA	93		25 - 150	08/08/19 11:24	08/09/19 06:34	1
13C2 PFTeDA	101		25 - 150	08/08/19 11:24	08/09/19 06:34	1
13C3 PFBS	89		25 - 150	08/08/19 11:24	08/09/19 06:34	1
18O2 PFHxS	99		25 - 150	08/08/19 11:24	08/09/19 06:34	1
13C4 PFOS	101		25 - 150	08/08/19 11:24	08/09/19 06:34	1
13C8 FOSA	87		25 - 150	08/08/19 11:24	08/09/19 06:34	1
d3-NMeFOSAA	113		25 - 150	08/08/19 11:24	08/09/19 06:34	1
d5-NEtFOSAA	110		25 - 150	08/08/19 11:24	08/09/19 06:34	1
M2-6:2 FTS	124		25 - 150	08/08/19 11:24	08/09/19 06:34	1
M2-8:2 FTS	112		25 - 150	08/08/19 11:24	08/09/19 06:34	1
M2-4:2 FTS	118		25 - 150	08/08/19 11:24	08/09/19 06:34	1
13C3 HFPO-DA	92		25 - 150	08/08/19 11:24	08/09/19 06:34	1

Client Sample ID: FB08062019

Date Collected: 08/06/19 10:01
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-2

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.31		1.8	0.31	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluoropentanoic acid (PFPeA)	<0.43		1.8	0.43	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluorohexanoic acid (PFHxA)	<0.51		1.8	0.51	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluoroheptanoic acid (PFHpA)	<0.22		1.8	0.22	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluorooctanoic acid (PFOA)	<0.75		1.8	0.75	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluorononanoic acid (PFNA)	<0.24		1.8	0.24	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluoroundecanoic acid (PFUnA)	<0.98		1.8	0.98	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluorododecanoic acid (PFDoA)	<0.49		1.8	0.49	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.8	1.2	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluorotetradecanoic acid (PFTeA)	<0.26		1.8	0.26	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.79		1.8	0.79	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluorobutanesulfonic acid (PFBS)	<0.18		1.8	0.18	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.41		1.8	0.41	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluorohexanesulfonic acid (PFHxS)	**0.30**	**J B**	1.8	0.15	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.17		1.8	0.17	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluorooctanesulfonic acid (PFOS)	<0.48		1.8	0.48	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluorononanesulfonic acid (PFNS)	<0.14		1.8	0.14	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluorodecanesulfonic acid (PFDS)	<0.28		1.8	0.28	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluorooctanesulfonamide (FOSA)	<0.31		1.8	0.31	ng/L		08/08/19 11:24	08/09/19 06:42	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.8		18	2.8	ng/L		08/08/19 11:24	08/09/19 06:42	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.7		18	1.7	ng/L		08/08/19 11:24	08/09/19 06:42	1
4:2 FTS	<4.6		18	4.6	ng/L		08/08/19 11:24	08/09/19 06:42	1
6:2 FTS	<1.8		18	1.8	ng/L		08/08/19 11:24	08/09/19 06:42	1
8:2 FTS	<1.8		18	1.8	ng/L		08/08/19 11:24	08/09/19 06:42	1
Perfluorododecanesulfonic acid (PFDoS)	<0.40		1.8	0.40	ng/L		08/08/19 11:24	08/09/19 06:42	1
ADONA	<0.17		1.9	0.17	ng/L		08/08/19 11:24	08/09/19 06:42	1
F-53B Major	<0.21		1.8	0.21	ng/L		08/08/19 11:24	08/09/19 06:42	1
HFPO-DA (GenX)	<1.3		3.5	1.3	ng/L		08/08/19 11:24	08/09/19 06:42	1
F-53B Minor	<0.28		1.8	0.28	ng/L		08/08/19 11:24	08/09/19 06:42	1
10:2 FTS	<0.17		1.8	0.17	ng/L		08/08/19 11:24	08/09/19 06:42	1
NaDONA	<0.17		1.9	0.17	ng/L		08/08/19 11:24	08/09/19 06:42	1
DONA	<0.16		1.8	0.16	ng/L		08/08/19 11:24	08/09/19 06:42	1
Ammonium Perfluorooctanoate (APFO)	<0.78		1.9	0.78	ng/L		08/08/19 11:24	08/09/19 06:42	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*91*		*25 - 150*	*08/08/19 11:24*	*08/09/19 06:42*	*1*
13C5 PFPeA	*94*		*25 - 150*	*08/08/19 11:24*	*08/09/19 06:42*	*1*
13C2 PFHxA	*88*		*25 - 150*	*08/08/19 11:24*	*08/09/19 06:42*	*1*
13C4 PFHpA	*95*		*25 - 150*	*08/08/19 11:24*	*08/09/19 06:42*	*1*
13C4 PFOA	*104*		*25 - 150*	*08/08/19 11:24*	*08/09/19 06:42*	*1*
13C5 PFNA	*100*		*25 - 150*	*08/08/19 11:24*	*08/09/19 06:42*	*1*

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Client Sample ID: FB08062019
Date Collected: 08/06/19 10:01
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-2
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	101		25 - 150	08/08/19 11:24	08/09/19 06:42	1
13C2 PFHxDA	96		25 - 150	08/08/19 11:24	08/09/19 06:42	1
13C2 PFUnA	99		25 - 150	08/08/19 11:24	08/09/19 06:42	1
13C2 PFDoA	92		25 - 150	08/08/19 11:24	08/09/19 06:42	1
13C2 PFTeDA	104		25 - 150	08/08/19 11:24	08/09/19 06:42	1
13C3 PFBS	90		25 - 150	08/08/19 11:24	08/09/19 06:42	1
18O2 PFHxS	95		25 - 150	08/08/19 11:24	08/09/19 06:42	1
13C4 PFOS	102		25 - 150	08/08/19 11:24	08/09/19 06:42	1
13C8 FOSA	89		25 - 150	08/08/19 11:24	08/09/19 06:42	1
d3-NMeFOSAA	106		25 - 150	08/08/19 11:24	08/09/19 06:42	1
d5-NEtFOSAA	108		25 - 150	08/08/19 11:24	08/09/19 06:42	1
M2-6:2 FTS	117		25 - 150	08/08/19 11:24	08/09/19 06:42	1
M2-8:2 FTS	131		25 - 150	08/08/19 11:24	08/09/19 06:42	1
M2-4:2 FTS	105		25 - 150	08/08/19 11:24	08/09/19 06:42	1
13C3 HFPO-DA	89		25 - 150	08/08/19 11:24	08/09/19 06:42	1

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Client Sample ID: Trip Blank 1
Date Collected: 08/06/19 10:02
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			08/09/19 11:08	1
Bromobenzene	<0.36		1.0	0.36	ug/L			08/09/19 11:08	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			08/09/19 11:08	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			08/09/19 11:08	1
Bromoform	<0.48		1.0	0.48	ug/L			08/09/19 11:08	1
Bromomethane	<0.80		3.0	0.80	ug/L			08/09/19 11:08	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			08/09/19 11:08	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			08/09/19 11:08	1
Chloroethane	<0.51		1.0	0.51	ug/L			08/09/19 11:08	1
Chloroform	<0.37		2.0	0.37	ug/L			08/09/19 11:08	1
Chloromethane	<0.32		1.0	0.32	ug/L			08/09/19 11:08	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			08/09/19 11:08	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			08/09/19 11:08	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			08/09/19 11:08	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			08/09/19 11:08	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			08/09/19 11:08	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			08/09/19 11:08	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			08/09/19 11:08	1
Dibromomethane	<0.27		1.0	0.27	ug/L			08/09/19 11:08	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			08/09/19 11:08	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			08/09/19 11:08	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			08/09/19 11:08	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			08/09/19 11:08	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			08/09/19 11:08	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			08/09/19 11:08	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			08/09/19 11:08	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			08/09/19 11:08	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			08/09/19 11:08	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			08/09/19 11:08	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			08/09/19 11:08	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			08/09/19 11:08	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			08/09/19 11:08	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			08/09/19 11:08	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			08/09/19 11:08	1
Methylene Chloride	**2.1**	**J**	5.0	1.6	ug/L			08/09/19 11:08	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			08/09/19 11:08	1
Naphthalene	<0.34		1.0	0.34	ug/L			08/09/19 11:08	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			08/09/19 11:08	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			08/09/19 11:08	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			08/09/19 11:08	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			08/09/19 11:08	1
Styrene	<0.39		1.0	0.39	ug/L			08/09/19 11:08	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			08/09/19 11:08	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			08/09/19 11:08	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			08/09/19 11:08	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			08/09/19 11:08	1
Toluene	<0.15		0.50	0.15	ug/L			08/09/19 11:08	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			08/09/19 11:08	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			08/09/19 11:08	1

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Client Sample ID: Trip Blank 1

Date Collected: 08/06/19 10:02
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-3

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			08/09/19 11:08	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			08/09/19 11:08	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			08/09/19 11:08	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			08/09/19 11:08	1
Trichloroethene	<0.16		0.50	0.16	ug/L			08/09/19 11:08	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			08/09/19 11:08	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			08/09/19 11:08	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			08/09/19 11:08	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			08/09/19 11:08	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			08/09/19 11:08	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			08/09/19 11:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*72 - 124*		*08/09/19 11:08*	*1*
Dibromofluoromethane (Surr)	*95*		*75 - 120*		*08/09/19 11:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*75 - 126*		*08/09/19 11:08*	*1*
Toluene-d8 (Surr)	*107*		*75 - 120*		*08/09/19 11:08*	*1*

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Client Sample ID: Trip Blank 2
Date Collected: 08/06/19 10:03
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			08/09/19 11:34	1
Bromobenzene	<0.36		1.0	0.36	ug/L			08/09/19 11:34	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			08/09/19 11:34	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			08/09/19 11:34	1
Bromoform	<0.48		1.0	0.48	ug/L			08/09/19 11:34	1
Bromomethane	<0.80		3.0	0.80	ug/L			08/09/19 11:34	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			08/09/19 11:34	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			08/09/19 11:34	1
Chloroethane	<0.51		1.0	0.51	ug/L			08/09/19 11:34	1
Chloroform	<0.37		2.0	0.37	ug/L			08/09/19 11:34	1
Chloromethane	<0.32		1.0	0.32	ug/L			08/09/19 11:34	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			08/09/19 11:34	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			08/09/19 11:34	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			08/09/19 11:34	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			08/09/19 11:34	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			08/09/19 11:34	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			08/09/19 11:34	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			08/09/19 11:34	1
Dibromomethane	<0.27		1.0	0.27	ug/L			08/09/19 11:34	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			08/09/19 11:34	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			08/09/19 11:34	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			08/09/19 11:34	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			08/09/19 11:34	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			08/09/19 11:34	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			08/09/19 11:34	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			08/09/19 11:34	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			08/09/19 11:34	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			08/09/19 11:34	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			08/09/19 11:34	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			08/09/19 11:34	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			08/09/19 11:34	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			08/09/19 11:34	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			08/09/19 11:34	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			08/09/19 11:34	1
Methylene Chloride	**2.3**	**J**	5.0	1.6	ug/L			08/09/19 11:34	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			08/09/19 11:34	1
Naphthalene	<0.34		1.0	0.34	ug/L			08/09/19 11:34	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			08/09/19 11:34	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			08/09/19 11:34	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			08/09/19 11:34	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			08/09/19 11:34	1
Styrene	<0.39		1.0	0.39	ug/L			08/09/19 11:34	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			08/09/19 11:34	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			08/09/19 11:34	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			08/09/19 11:34	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			08/09/19 11:34	1
Toluene	<0.15		0.50	0.15	ug/L			08/09/19 11:34	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			08/09/19 11:34	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			08/09/19 11:34	1

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Client Sample ID: Trip Blank 2
Date Collected: 08/06/19 10:03
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			08/09/19 11:34	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			08/09/19 11:34	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			08/09/19 11:34	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			08/09/19 11:34	1
Trichloroethene	<0.16		0.50	0.16	ug/L			08/09/19 11:34	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			08/09/19 11:34	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			08/09/19 11:34	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			08/09/19 11:34	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			08/09/19 11:34	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			08/09/19 11:34	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			08/09/19 11:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*72 - 124*		*08/09/19 11:34*	*1*
Dibromofluoromethane (Surr)	*98*		*75 - 120*		*08/09/19 11:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*75 - 126*		*08/09/19 11:34*	*1*
Toluene-d8 (Surr)	*104*		*75 - 120*		*08/09/19 11:34*	*1*

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Client Sample ID: WC-1

Date Collected: 08/06/19 11:00
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-5

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3.5**		0.50	0.15	ug/L			08/09/19 12:00	1
Bromobenzene	<0.36		1.0	0.36	ug/L			08/09/19 12:00	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			08/09/19 12:00	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			08/09/19 12:00	1
Bromoform	<0.48		1.0	0.48	ug/L			08/09/19 12:00	1
Bromomethane	<0.80		3.0	0.80	ug/L			08/09/19 12:00	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			08/09/19 12:00	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			08/09/19 12:00	1
Chloroethane	<0.51		1.0	0.51	ug/L			08/09/19 12:00	1
Chloroform	<0.37		2.0	0.37	ug/L			08/09/19 12:00	1
Chloromethane	<0.32		1.0	0.32	ug/L			08/09/19 12:00	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			08/09/19 12:00	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			08/09/19 12:00	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			08/09/19 12:00	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			08/09/19 12:00	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			08/09/19 12:00	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			08/09/19 12:00	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			08/09/19 12:00	1
Dibromomethane	<0.27		1.0	0.27	ug/L			08/09/19 12:00	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			08/09/19 12:00	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			08/09/19 12:00	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			08/09/19 12:00	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			08/09/19 12:00	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			08/09/19 12:00	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			08/09/19 12:00	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			08/09/19 12:00	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			08/09/19 12:00	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			08/09/19 12:00	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			08/09/19 12:00	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			08/09/19 12:00	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			08/09/19 12:00	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			08/09/19 12:00	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			08/09/19 12:00	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			08/09/19 12:00	1
Methylene Chloride	**1.8**	**J**	5.0	1.6	ug/L			08/09/19 12:00	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			08/09/19 12:00	1
Naphthalene	**0.96**	**J**	1.0	0.34	ug/L			08/09/19 12:00	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			08/09/19 12:00	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			08/09/19 12:00	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			08/09/19 12:00	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			08/09/19 12:00	1
Styrene	**1.3**		1.0	0.39	ug/L			08/09/19 12:00	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			08/09/19 12:00	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			08/09/19 12:00	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			08/09/19 12:00	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			08/09/19 12:00	1
Toluene	**1.5**		0.50	0.15	ug/L			08/09/19 12:00	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			08/09/19 12:00	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			08/09/19 12:00	1

Client Sample ID: WC-1
Date Collected: 08/06/19 11:00
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			08/09/19 12:00	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			08/09/19 12:00	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			08/09/19 12:00	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			08/09/19 12:00	1
Trichloroethene	<0.16		0.50	0.16	ug/L			08/09/19 12:00	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			08/09/19 12:00	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			08/09/19 12:00	1
1,2,4-Trimethylbenzene	**0.75**	**J**	1.0	0.36	ug/L			08/09/19 12:00	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			08/09/19 12:00	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			08/09/19 12:00	1
Xylenes, Total	**1.1**		1.0	0.22	ug/L			08/09/19 12:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*72 - 124*		*08/09/19 12:00*	*1*
Dibromofluoromethane (Surr)	*98*		*75 - 120*		*08/09/19 12:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*75 - 126*		*08/09/19 12:00*	*1*
Toluene-d8 (Surr)	*105*		*75 - 120*		*08/09/19 12:00*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**26**	**J**	39	12	ug/L		08/08/19 07:37	08/13/19 18:49	50
Acenaphthylene	<10		39	10	ug/L		08/08/19 07:37	08/13/19 18:49	50
Anthracene	<13		39	13	ug/L		08/08/19 07:37	08/13/19 18:49	50
Benzo[a]anthracene	<2.2		7.7	2.2	ug/L		08/08/19 07:37	08/13/19 18:49	50
Benzo[a]pyrene	<3.8		7.7	3.8	ug/L		08/08/19 07:37	08/13/19 18:49	50
Benzo[b]fluoranthene	<3.1		7.7	3.1	ug/L		08/08/19 07:37	08/13/19 18:49	50
Benzo[g,h,i]perylene	<15		39	15	ug/L		08/08/19 07:37	08/13/19 18:49	50
Benzoic acid	<220	*	770	220	ug/L		08/08/19 07:37	08/13/19 18:49	50
Benzo[k]fluoranthene	<2.5		7.7	2.5	ug/L		08/08/19 07:37	08/13/19 18:49	50
Benzyl alcohol	<230		770	230	ug/L		08/08/19 07:37	08/13/19 18:49	50
Bis(2-chloroethoxy)methane	<11		77	11	ug/L		08/08/19 07:37	08/13/19 18:49	50
Bis(2-chloroethyl)ether	<11		77	11	ug/L		08/08/19 07:37	08/13/19 18:49	50
Bis(2-ethylhexyl) phthalate	<66		390	66	ug/L		08/08/19 07:37	08/13/19 18:49	50
4-Bromophenyl phenyl ether	<21		190	21	ug/L		08/08/19 07:37	08/13/19 18:49	50
Butyl benzyl phthalate	<19		77	19	ug/L		08/08/19 07:37	08/13/19 18:49	50
Carbazole	<14		190	14	ug/L		08/08/19 07:37	08/13/19 18:49	50
4-Chloroaniline	<78		390	78	ug/L		08/08/19 07:37	08/13/19 18:49	50
4-Chloro-3-methylphenol	<89		390	89	ug/L		08/08/19 07:37	08/13/19 18:49	50
2-Chloronaphthalene	<9.1		77	9.1	ug/L		08/08/19 07:37	08/13/19 18:49	50
2-Chlorophenol	<22		190	22	ug/L		08/08/19 07:37	08/13/19 18:49	50
4-Chlorophenyl phenyl ether	**31**	**J**	190	25	ug/L		08/08/19 07:37	08/13/19 18:49	50
Chrysene	<2.6		7.7	2.6	ug/L		08/08/19 07:37	08/13/19 18:49	50
Dibenz(a,h)anthracene	<2.0		12	2.0	ug/L		08/08/19 07:37	08/13/19 18:49	50
Dibenzofuran	**71**	**J**	77	10	ug/L		08/08/19 07:37	08/13/19 18:49	50
1,2-Dichlorobenzene	<9.5	*	77	9.5	ug/L		08/08/19 07:37	08/13/19 18:49	50
1,3-Dichlorobenzene	<8.1	*	77	8.1	ug/L		08/08/19 07:37	08/13/19 18:49	50
1,4-Dichlorobenzene	<8.1	*	77	8.1	ug/L		08/08/19 07:37	08/13/19 18:49	50
3,3'-Dichlorobenzidine	<66		190	66	ug/L		08/08/19 07:37	08/13/19 18:49	50
2,4-Dichlorophenol	<100		390	100	ug/L		08/08/19 07:37	08/13/19 18:49	50
Diethyl phthalate	<14		190	14	ug/L		08/08/19 07:37	08/13/19 18:49	50

Client Sample ID: WC-1
Date Collected: 08/06/19 11:00
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dimethylphenol	<70		390	70	ug/L		08/08/19 07:37	08/13/19 18:49	50
Dimethyl phthalate	<12		190	12	ug/L		08/08/19 07:37	08/13/19 18:49	50
Di-n-butyl phthalate	<28		190	28	ug/L		08/08/19 07:37	08/13/19 18:49	50
4,6-Dinitro-2-methylphenol	<230		770	230	ug/L		08/08/19 07:37	08/13/19 18:49	50
2,4-Dinitrophenol	<330		770	330	ug/L		08/08/19 07:37	08/13/19 18:49	50
2,4-Dinitrotoluene	**21**	**J**	39	9.5	ug/L		08/08/19 07:37	08/13/19 18:49	50
2,6-Dinitrotoluene	**25**	**J**	39	2.9	ug/L		08/08/19 07:37	08/13/19 18:49	50
Di-n-octyl phthalate	<41		390	41	ug/L		08/08/19 07:37	08/13/19 18:49	50
Fluoranthene	<18		39	18	ug/L		08/08/19 07:37	08/13/19 18:49	50
Fluorene	**24**	**J**	39	9.4	ug/L		08/08/19 07:37	08/13/19 18:49	50
Hexachlorobenzene	<3.1		19	3.1	ug/L		08/08/19 07:37	08/13/19 18:49	50
Hexachlorobutadiene	<20	*	190	20	ug/L		08/08/19 07:37	08/13/19 18:49	50
Hexachlorocyclopentadiene	<250	*	770	250	ug/L		08/08/19 07:37	08/13/19 18:49	50
Hexachloroethane	<23	*	190	23	ug/L		08/08/19 07:37	08/13/19 18:49	50
Indeno[1,2,3-cd]pyrene	<2.9		7.7	2.9	ug/L		08/08/19 07:37	08/13/19 18:49	50
Isophorone	<15		77	15	ug/L		08/08/19 07:37	08/13/19 18:49	50
1-Methylnaphthalene	<12	*	77	12	ug/L		08/08/19 07:37	08/13/19 18:49	50
2-Methylnaphthalene	**3.2**	**J ***	77	2.5	ug/L		08/08/19 07:37	08/13/19 18:49	50
2-Methylphenol	<12		77	12	ug/L		08/08/19 07:37	08/13/19 18:49	50
3 & 4 Methylphenol	<17		77	17	ug/L		08/08/19 07:37	08/13/19 18:49	50
Naphthalene	<12		39	12	ug/L		08/08/19 07:37	08/13/19 18:49	50
2-Nitroaniline	<50		190	50	ug/L		08/08/19 07:37	08/13/19 18:49	50
3-Nitroaniline	<69		390	69	ug/L		08/08/19 07:37	08/13/19 18:49	50
4-Nitroaniline	<64		390	64	ug/L		08/08/19 07:37	08/13/19 18:49	50
Nitrobenzene	<17		39	17	ug/L		08/08/19 07:37	08/13/19 18:49	50
2-Nitrophenol	<97		390	97	ug/L		08/08/19 07:37	08/13/19 18:49	50
4-Nitrophenol	**850**		770	290	ug/L		08/08/19 07:37	08/13/19 18:49	50
N-Nitrosodi-n-propylamine	<5.9		19	5.9	ug/L		08/08/19 07:37	08/13/19 18:49	50
N-Nitrosodiphenylamine	<14		77	14	ug/L		08/08/19 07:37	08/13/19 18:49	50
2,2'-oxybis[1-chloropropane]	<15		77	15	ug/L		08/08/19 07:37	08/13/19 18:49	50
Pentachlorophenol	<150		770	150	ug/L		08/08/19 07:37	08/13/19 18:49	50
Phenanthrene	<12		39	12	ug/L		08/08/19 07:37	08/13/19 18:49	50
Phenol	<26		190	26	ug/L		08/08/19 07:37	08/13/19 18:49	50
Pyrene	<16		39	16	ug/L		08/08/19 07:37	08/13/19 18:49	50
1,2,4-Trichlorobenzene	<9.1	*	77	9.1	ug/L		08/08/19 07:37	08/13/19 18:49	50
2,4,5-Trichlorophenol	<99		390	99	ug/L		08/08/19 07:37	08/13/19 18:49	50
2,4,6-Trichlorophenol	<28		190	28	ug/L		08/08/19 07:37	08/13/19 18:49	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*D*	*34 - 110*	*08/08/19 07:37*	*08/13/19 18:49*	*50*
2-Fluorophenol (Surr)	*0*	*D*	*27 - 110*	*08/08/19 07:37*	*08/13/19 18:49*	*50*
Nitrobenzene-d5 (Surr)	*0*	*D*	*36 - 120*	*08/08/19 07:37*	*08/13/19 18:49*	*50*
Phenol-d5 (Surr)	*0*	*D*	*20 - 110*	*08/08/19 07:37*	*08/13/19 18:49*	*50*
Terphenyl-d14 (Surr)	*0*	*D*	*40 - 145*	*08/08/19 07:37*	*08/13/19 18:49*	*50*
2,4,6-Tribromophenol (Surr)	*0*	*D*	*40 - 145*	*08/08/19 07:37*	*08/13/19 18:49*	*50*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
WI Diesel Range Organics (C10-C28)	**1300**		95	31	mg/L		08/13/19 07:49	08/14/19 12:27	1000

Client Sample ID: WC-1

Date Collected: 08/06/19 11:00
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-5

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Nonane	*0*	*D*	*42 - 111*	*08/13/19 07:49*	*08/14/19 12:27*	*1000*

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.3**		1.0	0.23	ug/L		08/08/19 07:52	08/08/19 16:34	1
Barium	**100**		2.5	0.73	ug/L		08/08/19 07:52	08/09/19 12:05	1
Cadmium	**0.43**	**J**	0.50	0.17	ug/L		08/08/19 07:52	08/08/19 16:34	1
Chromium	**3.0**	**J**	5.0	1.1	ug/L		08/08/19 07:52	08/08/19 16:34	1
Lead	**11**		0.50	0.19	ug/L		08/08/19 07:52	08/08/19 16:34	1
Selenium	**1.7**	**J**	2.5	0.98	ug/L		08/08/19 07:52	08/08/19 16:34	1
Silver	<0.12		0.50	0.12	ug/L		08/08/19 07:52	08/08/19 16:34	1
Nickel	**6.9**		2.0	0.63	ug/L		08/08/19 07:52	08/09/19 12:05	1
Copper	**7.6**	**B**	2.0	0.50	ug/L		08/08/19 07:52	08/12/19 16:02	1
Zinc	**63**	**B**	20	6.9	ug/L		08/08/19 07:52	08/09/19 12:05	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		08/08/19 10:35	08/09/19 08:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	**>176**		99.0	99.0	Degrees F			08/14/19 10:45	1
HEM (Oil & Grease)	**383**		5.1	1.4	mg/L		08/07/19 19:11	08/07/19 20:10	1
Phenolics, Total Recoverable	<0.0041		0.0050	0.0041	mg/L		08/08/19 07:35	08/08/19 09:36	1
Sulfate	**52**	**^**	2.0	0.95	mg/L			08/10/19 06:56	10
Cyanide, Total	**0.032**		0.010	0.0030	mg/L		08/08/19 10:40	08/08/19 15:10	1
pH	**7.1**	**HF**	0.2	0.2	SU			08/14/19 15:11	1

Client Sample ID: WC-2

Date Collected: 08/06/19 11:30
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-6

Matrix: Solid
Percent Solids: 82.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<10		18	10	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Bromobenzene	<25		72	25	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Bromochloromethane	<31		72	31	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Bromodichloromethane	<27		72	27	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Bromoform	<35		72	35	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Bromomethane	<57		210	57	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Carbon tetrachloride	<27		72	27	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Chlorobenzene	<28		72	28	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Chloroethane	<36		72	36	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Chloroform	<26		140	26	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Chloromethane	<23		72	23	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
2-Chlorotoluene	<22		72	22	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
4-Chlorotoluene	<25		72	25	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
cis-1,2-Dichloroethene	<29		72	29	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
cis-1,3-Dichloropropene	<30		72	30	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Dibromochloromethane	<35		72	35	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,2-Dibromo-3-Chloropropane	<140		360	140	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,2-Dibromoethane	<28		72	28	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Dibromomethane	<19		72	19	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,2-Dichlorobenzene	<24		72	24	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,3-Dichlorobenzene	<29		72	29	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,4-Dichlorobenzene	<26		72	26	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Dichlorodifluoromethane	<48		210	48	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,1-Dichloroethane	<29		72	29	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,2-Dichloroethane	<28		72	28	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,1-Dichloroethene	<28		72	28	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,2-Dichloropropane	<31		72	31	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,3-Dichloropropane	<26		72	26	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
2,2-Dichloropropane	<32		72	32	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,1-Dichloropropene	<21		72	21	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Ethylbenzene	<13		18	13	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Hexachlorobutadiene	<32		72	32	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Isopropylbenzene	<27		72	27	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Isopropyl ether	<20		72	20	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Methylene Chloride	<120		360	120	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Methyl tert-butyl ether	<28		72	28	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Naphthalene	**200**		72	24	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
n-Butylbenzene	<28		72	28	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
N-Propylbenzene	<30		72	30	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
p-Isopropyltoluene	<26		72	26	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
sec-Butylbenzene	<28		72	28	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Styrene	<28		72	28	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
tert-Butylbenzene	<28		72	28	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,1,1,2-Tetrachloroethane	<33		72	33	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,1,2,2-Tetrachloroethane	<28		72	28	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Tetrachloroethene	<26		72	26	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Toluene	<11		18	11	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
trans-1,2-Dichloroethene	<25		72	25	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
trans-1,3-Dichloropropene	<26		72	26	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50

Client Sample ID: WC-2
Date Collected: 08/06/19 11:30
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-6
Matrix: Solid
Percent Solids: 82.2

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<33		72	33	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,2,4-Trichlorobenzene	<24		72	24	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,1,1-Trichloroethane	<27		72	27	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,1,2-Trichloroethane	<25		72	25	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Trichloroethene	<12		36	12	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Trichlorofluoromethane	<31		72	31	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,2,3-Trichloropropane	<30		140	30	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,2,4-Trimethylbenzene	**50**	**J**	72	26	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
1,3,5-Trimethylbenzene	<27		72	27	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Vinyl chloride	<19		72	19	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50
Xylenes, Total	<16		36	16	ug/Kg	☼	08/13/19 10:00	08/14/19 06:44	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*75 - 126*	*08/13/19 10:00*	*08/14/19 06:44*	*50*
Toluene-d8 (Surr)	*93*		*75 - 120*	*08/13/19 10:00*	*08/14/19 06:44*	*50*
4-Bromofluorobenzene (Surr)	*100*		*72 - 124*	*08/13/19 10:00*	*08/14/19 06:44*	*50*
Dibromofluoromethane (Surr)	*93*		*75 - 120*	*08/13/19 10:00*	*08/14/19 06:44*	*50*

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.010		0.020	0.010	mg/L			08/12/19 10:59	20
Carbon tetrachloride	<0.010		0.020	0.010	mg/L			08/12/19 10:59	20
Chlorobenzene	<0.010		0.020	0.010	mg/L			08/12/19 10:59	20
Chloroform	<0.020		0.040	0.020	mg/L			08/12/19 10:59	20
1,2-Dichloroethane	<0.010		0.020	0.010	mg/L			08/12/19 10:59	20
1,1-Dichloroethene	<0.010		0.020	0.010	mg/L			08/12/19 10:59	20
Methyl Ethyl Ketone	<0.050		0.10	0.050	mg/L			08/12/19 10:59	20
Tetrachloroethene	<0.010		0.020	0.010	mg/L			08/12/19 10:59	20
Trichloroethene	<0.010		0.020	0.010	mg/L			08/12/19 10:59	20
Vinyl chloride	<0.010		0.020	0.010	mg/L			08/12/19 10:59	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*72 - 124*		*08/12/19 10:59*	*20*
Dibromofluoromethane (Surr)	*100*		*75 - 120*		*08/12/19 10:59*	*20*
1,2-Dichloroethane-d4 (Surr)	*108*		*75 - 126*		*08/12/19 10:59*	*20*
Toluene-d8 (Surr)	*102*		*75 - 120*		*08/12/19 10:59*	*20*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**940**	**J**	2000	360	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Acenaphthylene	**6300**		2000	260	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Anthracene	**4900**		2000	330	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Benzo[a]anthracene	**21000**		2000	270	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Benzo[a]pyrene	**22000**		2000	390	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Benzo[b]fluoranthene	**28000**		2000	430	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Benzo[g,h,i]perylene	**9300**		2000	640	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Benzoic acid	<20000		100000	20000	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Benzo[k]fluoranthene	**9300**		2000	590	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Benzyl alcohol	<20000		40000	20000	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Bis(2-chloroethoxy)methane	<2000		10000	2000	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50

Client Sample ID: WC-2
Date Collected: 08/06/19 11:30
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-6
Matrix: Solid
Percent Solids: 82.2

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	<3000		10000	3000	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Bis(2-ethylhexyl) phthalate	<3700		10000	3700	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
4-Bromophenyl phenyl ether	<2600		10000	2600	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Butyl benzyl phthalate	<3800		10000	3800	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Carbazole	<5000		10000	5000	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
4-Chloroaniline	<9400		40000	9400	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
4-Chloro-3-methylphenol	<6800		20000	6800	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
2-Chloronaphthalene	<2200		10000	2200	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
2-Chlorophenol	<3400		10000	3400	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
4-Chlorophenyl phenyl ether	<2300		10000	2300	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Chrysene	**21000**		2000	550	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Dibenz(a,h)anthracene	**2800**		2000	390	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Dibenzofuran	<2300		10000	2300	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
1,2-Dichlorobenzene	<2400		10000	2400	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
1,3-Dichlorobenzene	<2300		10000	2300	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
1,4-Dichlorobenzene	<2600		10000	2600	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
3,3'-Dichlorobenzidine	<2800		10000	2800	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
2,4-Dichlorophenol	<4800		20000	4800	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Diethyl phthalate	<3400		10000	3400	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
2,4-Dimethylphenol	<7600		20000	7600	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Dimethyl phthalate	<2600		10000	2600	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Di-n-butyl phthalate	<3000		10000	3000	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
4,6-Dinitro-2-methylphenol	<16000		40000	16000	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
2,4-Dinitrophenol	<35000		40000	35000	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
2,4-Dinitrotoluene	<3200		10000	3200	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
2,6-Dinitrotoluene	<3900		10000	3900	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Di-n-octyl phthalate	<3300		10000	3300	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Fluoranthene	**34000**		2000	370	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Fluorene	**2000**		2000	280	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Hexachlorobenzene	<460		4000	460	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Hexachlorobutadiene	<3100		10000	3100	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Hexachlorocyclopentadiene	<12000		40000	12000	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Hexachloroethane	<3000		10000	3000	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Indeno[1,2,3-cd]pyrene	**9000**		2000	520	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Isophorone	<2200		10000	2200	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
1-Methylnaphthalene	**1500**	**J**	4000	490	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
2-Methylnaphthalene	**1800**	**J**	4000	370	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
2-Methylphenol	<3200		10000	3200	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
3 & 4 Methylphenol	<3300		10000	3300	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Naphthalene	**3800**		2000	310	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
2-Nitroaniline	<2700		10000	2700	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
3-Nitroaniline	<6200		20000	6200	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
4-Nitroaniline	<8400		20000	8400	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Nitrobenzene	<500		2000	500	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
2-Nitrophenol	<4700		20000	4700	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
4-Nitrophenol	<19000		40000	19000	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
N-Nitrosodi-n-propylamine	<2400		4000	2400	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
N-Nitrosodiphenylamine	<2400		10000	2400	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
2,2'-oxybis[1-chloropropane]	<2300		10000	2300	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50

Client Sample ID: WC-2
Date Collected: 08/06/19 11:30
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-6
Matrix: Solid
Percent Solids: 82.2

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	<32000		40000	32000	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Phenanthrene	**10000**		2000	280	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Phenol	<4400		10000	4400	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
Pyrene	**35000**		2000	400	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
1,2,4-Trichlorobenzene	<2200		10000	2200	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
2,4,5-Trichlorophenol	<4600		20000	4600	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50
2,4,6-Trichlorophenol	<6900		20000	6900	ug/Kg	☼	08/07/19 18:48	08/14/19 13:44	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*D*	*43 - 145*	*08/07/19 18:48*	*08/14/19 13:44*	*50*
2-Fluorophenol (Surr)	*0*	*D*	*31 - 166*	*08/07/19 18:48*	*08/14/19 13:44*	*50*
Nitrobenzene-d5 (Surr)	*0*	*D*	*37 - 147*	*08/07/19 18:48*	*08/14/19 13:44*	*50*
Phenol-d5 (Surr)	*0*	*D*	*30 - 153*	*08/07/19 18:48*	*08/14/19 13:44*	*50*
Terphenyl-d14 (Surr)	*0*	*D*	*42 - 157*	*08/07/19 18:48*	*08/14/19 13:44*	*50*
2,4,6-Tribromophenol (Surr)	*0*	*D*	*31 - 143*	*08/07/19 18:48*	*08/14/19 13:44*	*50*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.020		0.020	0.020	mg/L		08/12/19 21:51	08/13/19 16:38	1
2,4-Dinitrotoluene	<0.010		0.010	0.010	mg/L		08/12/19 21:51	08/13/19 16:38	1
Hexachlorobenzene	<0.0050		0.0050	0.0050	mg/L		08/12/19 21:51	08/13/19 16:38	1
Hexachlorobutadiene	<0.050		0.050	0.050	mg/L		08/12/19 21:51	08/13/19 16:38	1
Hexachloroethane	<0.050		0.050	0.050	mg/L		08/12/19 21:51	08/13/19 16:38	1
2-Methylphenol	<0.020	F1	0.020	0.020	mg/L		08/12/19 21:51	08/13/19 16:38	1
3 & 4 Methylphenol	<0.020	F1	0.020	0.020	mg/L		08/12/19 21:51	08/13/19 16:38	1
Nitrobenzene	<0.010		0.010	0.010	mg/L		08/12/19 21:51	08/13/19 16:38	1
Pentachlorophenol	<0.20		0.20	0.20	mg/L		08/12/19 21:51	08/13/19 16:38	1
Pyridine	<0.20		0.20	0.20	mg/L		08/12/19 21:51	08/13/19 16:38	1
2,4,5-Trichlorophenol	<0.10	F1	0.10	0.10	mg/L		08/12/19 21:51	08/13/19 16:38	1
2,4,6-Trichlorophenol	<0.050	F1	0.050	0.050	mg/L		08/12/19 21:51	08/13/19 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*73*		*34 - 110*	*08/12/19 21:51*	*08/13/19 16:38*	*1*
2-Fluorophenol (Surr)	*34*		*27 - 110*	*08/12/19 21:51*	*08/13/19 16:38*	*1*
Nitrobenzene-d5 (Surr)	*77*		*36 - 120*	*08/12/19 21:51*	*08/13/19 16:38*	*1*
Phenol-d5 (Surr)	*30*		*20 - 100*	*08/12/19 21:51*	*08/13/19 16:38*	*1*
Terphenyl-d14 (Surr)	*96*		*40 - 145*	*08/12/19 21:51*	*08/13/19 16:38*	*1*
2,4,6-Tribromophenol (Surr)	*77*		*40 - 145*	*08/12/19 21:51*	*08/13/19 16:38*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
WI Diesel Range Organics (C10-C28)	**4000**		410	160	mg/Kg	☼	08/08/19 13:34	08/09/19 20:54	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Nonane	*0*	*D*	*44 - 148*	*08/08/19 13:34*	*08/09/19 20:54*	*100*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.034		0.25	0.034	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluoropentanoic acid (PFPeA)	<0.095		0.25	0.095	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1

Client Sample ID: WC-2

Date Collected: 08/06/19 11:30
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-6

Matrix: Solid
Percent Solids: 82.2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**0.22**	**J**	0.25	0.052	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluoroheptanoic acid (PFHpA)	<0.036		0.25	0.036	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluorooctanoic acid (PFOA)	<0.11		0.25	0.11	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluorononanoic acid (PFNA)	<0.044		0.25	0.044	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluorodecanoic acid (PFDA)	<0.027		0.25	0.027	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluoroundecanoic acid (PFUnA)	<0.044	F1	0.25	0.044	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluorododecanoic acid (PFDoA)	<0.082		0.25	0.082	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluorotridecanoic acid (PFTriA)	<0.063		0.25	0.063	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluorotetradecanoic acid (PFTeA)	<0.066		0.25	0.066	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.054	* F1	0.25	0.054	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.034	* F1	0.25	0.034	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluorobutanesulfonic acid (PFBS)	<0.031		0.25	0.031	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluorohexanesulfonic acid (PFHxS)	<0.038		0.25	0.038	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.043		0.25	0.043	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluorodecanesulfonic acid (PFDS)	<0.048		0.25	0.048	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluorooctanesulfonic acid (PFOS)	<0.25		0.61	0.25	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluorooctanesulfonamide (FOSA)	<0.10		0.25	0.10	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluoropentanesulfonic acid (PFPeS)	<0.025		0.25	0.025	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluorononanesulfonic acid (PFNS)	<0.025		0.25	0.025	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.48		2.5	0.48	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.45		2.5	0.45	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
4:2 FTS	<0.45		2.5	0.45	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
6:2 FTS	**13**		2.5	0.18	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
8:2 FTS	<0.31		2.5	0.31	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
10:2 FTS	<0.061		0.25	0.061	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Perfluorododecanesulfonic acid (PFDoS)	<0.074		0.25	0.074	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
ADONA	<0.023		0.26	0.023	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
F-53B Major	<0.033		0.25	0.033	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
HFPO-DA (GenX)	<0.14		0.31	0.14	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
F-53B Minor	<0.027		0.25	0.027	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
NaDONA	<0.023		0.26	0.023	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
DONA	<0.022		0.25	0.022	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1
Ammonium Perfluorooctanoate (APFO)	<0.11		0.26	0.11	ug/Kg	☼	08/08/19 10:51	08/12/19 04:17	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*72*		*25 - 150*	*08/08/19 10:51*	*08/12/19 04:17*	*1*
13C4 PFBA	*99*		*25 - 150*	*08/08/19 10:51*	*08/12/19 04:17*	*1*
13C5 PFPeA	*94*		*25 - 150*	*08/08/19 10:51*	*08/12/19 04:17*	*1*
13C2 PFHxA	*93*		*25 - 150*	*08/08/19 10:51*	*08/12/19 04:17*	*1*
13C4 PFHpA	*93*		*25 - 150*	*08/08/19 10:51*	*08/12/19 04:17*	*1*
13C4 PFOA	*97*		*25 - 150*	*08/08/19 10:51*	*08/12/19 04:17*	*1*
13C5 PFNA	*104*		*25 - 150*	*08/08/19 10:51*	*08/12/19 04:17*	*1*
13C2 PFDA	*102*		*25 - 150*	*08/08/19 10:51*	*08/12/19 04:17*	*1*
13C2 PFUnA	*109*		*25 - 150*	*08/08/19 10:51*	*08/12/19 04:17*	*1*

Client Sample ID: WC-2
Date Collected: 08/06/19 11:30
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-6
Matrix: Solid
Percent Solids: 82.2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDoA	102		25 - 150	08/08/19 10:51	08/12/19 04:17	1
13C2 PFTeDA	109		25 - 150	08/08/19 10:51	08/12/19 04:17	1
13C2 PFHxDA	101		25 - 150	08/08/19 10:51	08/12/19 04:17	1
13C3 PFBS	96		25 - 150	08/08/19 10:51	08/12/19 04:17	1
18O2 PFHxS	100		25 - 150	08/08/19 10:51	08/12/19 04:17	1
13C4 PFOS	91		25 - 150	08/08/19 10:51	08/12/19 04:17	1
d3-NMeFOSAA	142		25 - 150	08/08/19 10:51	08/12/19 04:17	1
d5-NEtFOSAA	171	*	25 - 150	08/08/19 10:51	08/12/19 04:17	1
M2-4:2 FTS	131		25 - 150	08/08/19 10:51	08/12/19 04:17	1
M2-6:2 FTS	187	*	25 - 150	08/08/19 10:51	08/12/19 04:17	1
M2-8:2 FTS	235	*	25 - 150	08/08/19 10:51	08/12/19 04:17	1
13C3 HFPO-DA	94		25 - 150	08/08/19 10:51	08/12/19 04:17	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**11**		1.1	0.37	mg/Kg	☼	08/07/19 15:58	08/08/19 11:37	1
Barium	**180**		1.1	0.12	mg/Kg	☼	08/07/19 15:58	08/08/19 11:37	1
Cadmium	**0.86**	**B**	0.22	0.039	mg/Kg	☼	08/07/19 15:58	08/08/19 11:37	1
Chromium	**16**		1.1	0.54	mg/Kg	☼	08/07/19 15:58	08/08/19 11:37	1
Lead	**140**		0.55	0.25	mg/Kg	☼	08/07/19 15:58	08/08/19 11:37	1
Selenium	**1.9**	**B**	1.1	0.64	mg/Kg	☼	08/07/19 15:58	08/08/19 11:37	1
Silver	**1.5**		0.55	0.14	mg/Kg	☼	08/07/19 15:58	08/08/19 11:37	1

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.010		0.050	0.010	mg/L		08/09/19 08:18	08/09/19 18:34	1
Barium	**0.70**		0.50	0.050	mg/L		08/09/19 08:18	08/09/19 18:34	1
Cadmium	**0.0024**	**J**	0.0050	0.0020	mg/L		08/09/19 08:18	08/09/19 18:34	1
Chromium	<0.010		0.025	0.010	mg/L		08/09/19 08:18	08/09/19 18:34	1
Lead	**0.018**	**J**	0.050	0.0075	mg/L		08/09/19 08:18	08/09/19 18:34	1
Selenium	<0.020		0.050	0.020	mg/L		08/09/19 08:18	08/09/19 18:34	1
Silver	<0.010		0.025	0.010	mg/L		08/09/19 08:18	08/09/19 18:34	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		08/09/19 10:05	08/09/19 16:45	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.83**		0.020	0.0066	mg/Kg	☼	08/08/19 13:55	08/09/19 10:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	**>176**		99.0	99.0	Degrees F			08/14/19 13:35	1
Phenolics, Total Recoverable	<0.49		0.59	0.49	mg/Kg	☼	08/08/19 07:35	08/08/19 09:46	1
Cyanide, Total	**4.0**		0.60	0.30	mg/Kg	☼	08/12/19 11:30	08/12/19 16:17	1
Sulfide	<5.6		12	5.6	mg/Kg	☼	08/12/19 08:05	08/12/19 10:44	1
pH	**8.3**		0.2	0.2	SU			08/09/19 15:44	1
Free Liquid	**pass**				No Unit			08/13/19 01:42	1

Client Sample Results

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Client Sample ID: WC-2
Date Collected: 08/06/19 11:30
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-6
Matrix: Solid
Percent Solids: 82.2

General Chemistry - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenolics, Total Recoverable	0.046		0.0050	0.0041	mg/L		08/12/19 15:00	08/13/19 09:15	1

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Client Sample ID: WC-3
Date Collected: 08/06/19 12:00
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.98**		0.50	0.15	ug/L			08/09/19 12:26	1
Bromobenzene	<0.36		1.0	0.36	ug/L			08/09/19 12:26	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			08/09/19 12:26	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			08/09/19 12:26	1
Bromoform	<0.48		1.0	0.48	ug/L			08/09/19 12:26	1
Bromomethane	<0.80		3.0	0.80	ug/L			08/09/19 12:26	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			08/09/19 12:26	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			08/09/19 12:26	1
Chloroethane	<0.51		1.0	0.51	ug/L			08/09/19 12:26	1
Chloroform	<0.37		2.0	0.37	ug/L			08/09/19 12:26	1
Chloromethane	<0.32		1.0	0.32	ug/L			08/09/19 12:26	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			08/09/19 12:26	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			08/09/19 12:26	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			08/09/19 12:26	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			08/09/19 12:26	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			08/09/19 12:26	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			08/09/19 12:26	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			08/09/19 12:26	1
Dibromomethane	<0.27		1.0	0.27	ug/L			08/09/19 12:26	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			08/09/19 12:26	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			08/09/19 12:26	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			08/09/19 12:26	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			08/09/19 12:26	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			08/09/19 12:26	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			08/09/19 12:26	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			08/09/19 12:26	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			08/09/19 12:26	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			08/09/19 12:26	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			08/09/19 12:26	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			08/09/19 12:26	1
Ethylbenzene	**0.27**	**J**	0.50	0.18	ug/L			08/09/19 12:26	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			08/09/19 12:26	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			08/09/19 12:26	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			08/09/19 12:26	1
Methylene Chloride	**1.8**	**J**	5.0	1.6	ug/L			08/09/19 12:26	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			08/09/19 12:26	1
Naphthalene	**2.1**		1.0	0.34	ug/L			08/09/19 12:26	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			08/09/19 12:26	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			08/09/19 12:26	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			08/09/19 12:26	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			08/09/19 12:26	1
Styrene	<0.39		1.0	0.39	ug/L			08/09/19 12:26	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			08/09/19 12:26	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			08/09/19 12:26	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			08/09/19 12:26	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			08/09/19 12:26	1
Toluene	**0.81**		0.50	0.15	ug/L			08/09/19 12:26	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			08/09/19 12:26	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			08/09/19 12:26	1

Client Sample ID: WC-3
Date Collected: 08/06/19 12:00
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			08/09/19 12:26	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			08/09/19 12:26	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			08/09/19 12:26	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			08/09/19 12:26	1
Trichloroethene	<0.16		0.50	0.16	ug/L			08/09/19 12:26	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			08/09/19 12:26	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			08/09/19 12:26	1
1,2,4-Trimethylbenzene	**1.0**		1.0	0.36	ug/L			08/09/19 12:26	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			08/09/19 12:26	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			08/09/19 12:26	1
Xylenes, Total	**1.0**		1.0	0.22	ug/L			08/09/19 12:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*72 - 124*		*08/09/19 12:26*	*1*
Dibromofluoromethane (Surr)	*97*		*75 - 120*		*08/09/19 12:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 126*		*08/09/19 12:26*	*1*
Toluene-d8 (Surr)	*106*		*75 - 120*		*08/09/19 12:26*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<12		38	12	ug/L		08/08/19 07:37	08/13/19 19:15	50
Acenaphthylene	<10		38	10	ug/L		08/08/19 07:37	08/13/19 19:15	50
Anthracene	<13		38	13	ug/L		08/08/19 07:37	08/13/19 19:15	50
Benzo[a]anthracene	<2.2		7.6	2.2	ug/L		08/08/19 07:37	08/13/19 19:15	50
Benzo[a]pyrene	<3.8		7.6	3.8	ug/L		08/08/19 07:37	08/13/19 19:15	50
Benzo[b]fluoranthene	<3.1		7.6	3.1	ug/L		08/08/19 07:37	08/13/19 19:15	50
Benzo[g,h,i]perylene	<14		38	14	ug/L		08/08/19 07:37	08/13/19 19:15	50
Benzoic acid	<220	*	760	220	ug/L		08/08/19 07:37	08/13/19 19:15	50
Benzo[k]fluoranthene	<2.4		7.6	2.4	ug/L		08/08/19 07:37	08/13/19 19:15	50
Benzyl alcohol	<230		760	230	ug/L		08/08/19 07:37	08/13/19 19:15	50
Bis(2-chloroethoxy)methane	<11		76	11	ug/L		08/08/19 07:37	08/13/19 19:15	50
Bis(2-chloroethyl)ether	<11		76	11	ug/L		08/08/19 07:37	08/13/19 19:15	50
Bis(2-ethylhexyl) phthalate	<65		380	65	ug/L		08/08/19 07:37	08/13/19 19:15	50
4-Bromophenyl phenyl ether	<21		190	21	ug/L		08/08/19 07:37	08/13/19 19:15	50
Butyl benzyl phthalate	<18		76	18	ug/L		08/08/19 07:37	08/13/19 19:15	50
Carbazole	<13		190	13	ug/L		08/08/19 07:37	08/13/19 19:15	50
4-Chloroaniline	<77		380	77	ug/L		08/08/19 07:37	08/13/19 19:15	50
4-Chloro-3-methylphenol	<88		380	88	ug/L		08/08/19 07:37	08/13/19 19:15	50
2-Chloronaphthalene	<9.0		76	9.0	ug/L		08/08/19 07:37	08/13/19 19:15	50
2-Chlorophenol	<21		190	21	ug/L		08/08/19 07:37	08/13/19 19:15	50
4-Chlorophenyl phenyl ether	<24		190	24	ug/L		08/08/19 07:37	08/13/19 19:15	50
Chrysene	<2.6		7.6	2.6	ug/L		08/08/19 07:37	08/13/19 19:15	50
Dibenz(a,h)anthracene	<1.9		11	1.9	ug/L		08/08/19 07:37	08/13/19 19:15	50
Dibenzofuran	<10		76	10	ug/L		08/08/19 07:37	08/13/19 19:15	50
1,2-Dichlorobenzene	<9.4	*	76	9.4	ug/L		08/08/19 07:37	08/13/19 19:15	50
1,3-Dichlorobenzene	<8.0	*	76	8.0	ug/L		08/08/19 07:37	08/13/19 19:15	50
1,4-Dichlorobenzene	<8.0	*	76	8.0	ug/L		08/08/19 07:37	08/13/19 19:15	50
3,3'-Dichlorobenzidine	<65		190	65	ug/L		08/08/19 07:37	08/13/19 19:15	50
2,4-Dichlorophenol	<99		380	99	ug/L		08/08/19 07:37	08/13/19 19:15	50
Diethyl phthalate	<14		190	14	ug/L		08/08/19 07:37	08/13/19 19:15	50

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Client Sample ID: WC-3
Date Collected: 08/06/19 12:00
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-7
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dimethylphenol	<69		380	69	ug/L		08/08/19 07:37	08/13/19 19:15	50
Dimethyl phthalate	<12		190	12	ug/L		08/08/19 07:37	08/13/19 19:15	50
Di-n-butyl phthalate	<28		190	28	ug/L		08/08/19 07:37	08/13/19 19:15	50
4,6-Dinitro-2-methylphenol	<230		760	230	ug/L		08/08/19 07:37	08/13/19 19:15	50
2,4-Dinitrophenol	<330		760	330	ug/L		08/08/19 07:37	08/13/19 19:15	50
2,4-Dinitrotoluene	<9.3		38	9.3	ug/L		08/08/19 07:37	08/13/19 19:15	50
2,6-Dinitrotoluene	<2.8		38	2.8	ug/L		08/08/19 07:37	08/13/19 19:15	50
Di-n-octyl phthalate	<40		380	40	ug/L		08/08/19 07:37	08/13/19 19:15	50
Fluoranthene	<17		38	17	ug/L		08/08/19 07:37	08/13/19 19:15	50
Fluorene	**18**	**J**	38	9.3	ug/L		08/08/19 07:37	08/13/19 19:15	50
Hexachlorobenzene	<3.0		19	3.0	ug/L		08/08/19 07:37	08/13/19 19:15	50
Hexachlorobutadiene	<20	*	190	20	ug/L		08/08/19 07:37	08/13/19 19:15	50
Hexachlorocyclopentadiene	<240	*	760	240	ug/L		08/08/19 07:37	08/13/19 19:15	50
Hexachloroethane	<23	*	190	23	ug/L		08/08/19 07:37	08/13/19 19:15	50
Indeno[1,2,3-cd]pyrene	<2.9		7.6	2.9	ug/L		08/08/19 07:37	08/13/19 19:15	50
Isophorone	<14		76	14	ug/L		08/08/19 07:37	08/13/19 19:15	50
1-Methylnaphthalene	<11	*	76	11	ug/L		08/08/19 07:37	08/13/19 19:15	50
2-Methylnaphthalene	**2.9**	**J ***	76	2.5	ug/L		08/08/19 07:37	08/13/19 19:15	50
2-Methylphenol	<12		76	12	ug/L		08/08/19 07:37	08/13/19 19:15	50
3 & 4 Methylphenol	<17		76	17	ug/L		08/08/19 07:37	08/13/19 19:15	50
Naphthalene	<12		38	12	ug/L		08/08/19 07:37	08/13/19 19:15	50
2-Nitroaniline	<49		190	49	ug/L		08/08/19 07:37	08/13/19 19:15	50
3-Nitroaniline	<68		380	68	ug/L		08/08/19 07:37	08/13/19 19:15	50
4-Nitroaniline	<63		380	63	ug/L		08/08/19 07:37	08/13/19 19:15	50
Nitrobenzene	<17		38	17	ug/L		08/08/19 07:37	08/13/19 19:15	50
2-Nitrophenol	<95		380	95	ug/L		08/08/19 07:37	08/13/19 19:15	50
4-Nitrophenol	<280		760	280	ug/L		08/08/19 07:37	08/13/19 19:15	50
N-Nitrosodi-n-propylamine	<5.9		19	5.9	ug/L		08/08/19 07:37	08/13/19 19:15	50
N-Nitrosodiphenylamine	<14		76	14	ug/L		08/08/19 07:37	08/13/19 19:15	50
2,2'-oxybis[1-chloropropane]	<14		76	14	ug/L		08/08/19 07:37	08/13/19 19:15	50
Pentachlorophenol	<150		760	150	ug/L		08/08/19 07:37	08/13/19 19:15	50
Phenanthrene	<11		38	11	ug/L		08/08/19 07:37	08/13/19 19:15	50
Phenol	<26		190	26	ug/L		08/08/19 07:37	08/13/19 19:15	50
Pyrene	<16		38	16	ug/L		08/08/19 07:37	08/13/19 19:15	50
1,2,4-Trichlorobenzene	<9.0	*	76	9.0	ug/L		08/08/19 07:37	08/13/19 19:15	50
2,4,5-Trichlorophenol	<98		380	98	ug/L		08/08/19 07:37	08/13/19 19:15	50
2,4,6-Trichlorophenol	<27		190	27	ug/L		08/08/19 07:37	08/13/19 19:15	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*D*	*34 - 110*	*08/08/19 07:37*	*08/13/19 19:15*	*50*
2-Fluorophenol (Surr)	*0*	*D*	*27 - 110*	*08/08/19 07:37*	*08/13/19 19:15*	*50*
Nitrobenzene-d5 (Surr)	*0*	*D*	*36 - 120*	*08/08/19 07:37*	*08/13/19 19:15*	*50*
Phenol-d5 (Surr)	*0*	*D*	*20 - 110*	*08/08/19 07:37*	*08/13/19 19:15*	*50*
Terphenyl-d14 (Surr)	*0*	*D*	*40 - 145*	*08/08/19 07:37*	*08/13/19 19:15*	*50*
2,4,6-Tribromophenol (Surr)	*0*	*D*	*40 - 145*	*08/08/19 07:37*	*08/13/19 19:15*	*50*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
WI Diesel Range Organics (C10-C28)	**150**		9.6	3.1	mg/L		08/13/19 07:49	08/14/19 11:51	100

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Client Sample ID: WC-3

Date Collected: 08/06/19 12:00
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-7

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Nonane	*0*	*D*	*42 - 111*	*08/13/19 07:49*	*08/14/19 11:51*	*100*

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.4**		1.0	0.23	ug/L		08/08/19 07:52	08/08/19 16:38	1
Barium	**53**		2.5	0.73	ug/L		08/08/19 07:52	08/09/19 12:09	1
Cadmium	<0.17		0.50	0.17	ug/L		08/08/19 07:52	08/08/19 16:38	1
Chromium	**1.2**	**J**	5.0	1.1	ug/L		08/08/19 07:52	08/08/19 16:38	1
Lead	**0.90**		0.50	0.19	ug/L		08/08/19 07:52	08/08/19 16:38	1
Selenium	<0.98		2.5	0.98	ug/L		08/08/19 07:52	08/08/19 16:38	1
Silver	<0.12		0.50	0.12	ug/L		08/08/19 07:52	08/08/19 16:38	1
Nickel	**1.4**	**J**	2.0	0.63	ug/L		08/08/19 07:52	08/09/19 12:09	1
Copper	**3.9**	**B**	2.0	0.50	ug/L		08/08/19 07:52	08/12/19 16:06	1
Zinc	**11**	**J B**	20	6.9	ug/L		08/08/19 07:52	08/09/19 12:09	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		08/08/19 10:35	08/09/19 08:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	**>176**		99.0	99.0	Degrees F			08/14/19 12:10	1
HEM (Oil & Grease)	**189**		5.2	1.4	mg/L		08/07/19 19:21	08/07/19 20:10	1
pH	**6.9**	**HF**	0.2	0.2	SU			08/14/19 15:19	1

Client Sample ID: WC-4
Date Collected: 08/06/19 12:30
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-8
Matrix: Solid
Percent Solids: 93.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<8.3		14	8.3	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Bromobenzene	<20		57	20	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Bromochloromethane	<24		57	24	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Bromodichloromethane	<21		57	21	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Bromoform	<28		57	28	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Bromomethane	<45		170	45	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Carbon tetrachloride	<22		57	22	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Chlorobenzene	<22		57	22	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Chloroethane	<29		57	29	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Chloroform	<21		110	21	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Chloromethane	<18		57	18	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
2-Chlorotoluene	<18		57	18	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
4-Chlorotoluene	<20		57	20	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
cis-1,2-Dichloroethene	<23		57	23	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
cis-1,3-Dichloropropene	<24		57	24	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Dibromochloromethane	<28		57	28	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,2-Dibromo-3-Chloropropane	<110		290	110	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,2-Dibromoethane	<22		57	22	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Dibromomethane	<15		57	15	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,2-Dichlorobenzene	<19		57	19	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,3-Dichlorobenzene	<23		57	23	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,4-Dichlorobenzene	<21		57	21	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Dichlorodifluoromethane	<38		170	38	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,1-Dichloroethane	<23		57	23	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,2-Dichloroethane	<22		57	22	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,1-Dichloroethene	<22		57	22	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,2-Dichloropropane	<24		57	24	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,3-Dichloropropane	<21		57	21	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
2,2-Dichloropropane	<25		57	25	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,1-Dichloropropene	<17		57	17	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Ethylbenzene	<10		14	10	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Hexachlorobutadiene	<25		57	25	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Isopropylbenzene	<22		57	22	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Isopropyl ether	<16		57	16	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Methylene Chloride	<93		290	93	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Methyl tert-butyl ether	<22		57	22	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Naphthalene	**62**		57	19	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
n-Butylbenzene	<22		57	22	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
N-Propylbenzene	<24		57	24	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
p-Isopropyltoluene	<21		57	21	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
sec-Butylbenzene	**31**	**J**	57	23	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Styrene	<22		57	22	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
tert-Butylbenzene	<23		57	23	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,1,1,2-Tetrachloroethane	<26		57	26	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,1,2,2-Tetrachloroethane	<23		57	23	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Tetrachloroethene	<21		57	21	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Toluene	**9.0**	**J**	14	8.4	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
trans-1,2-Dichloroethene	<20		57	20	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
trans-1,3-Dichloropropene	<21		57	21	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50

Client Sample ID: WC-4
Date Collected: 08/06/19 12:30
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-8
Matrix: Solid
Percent Solids: 93.4

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<26		57	26	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,2,4-Trichlorobenzene	<20		57	20	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,1,1-Trichloroethane	<22		57	22	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,1,2-Trichloroethane	<20		57	20	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Trichloroethene	<9.4		29	9.4	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Trichlorofluoromethane	<24		57	24	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,2,3-Trichloropropane	<24		110	24	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,2,4-Trimethylbenzene	**68**		57	20	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
1,3,5-Trimethylbenzene	<22		57	22	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Vinyl chloride	<15		57	15	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50
Xylenes, Total	<13		29	13	ug/Kg	☼	08/13/19 10:00	08/14/19 07:09	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*75 - 126*	*08/13/19 10:00*	*08/14/19 07:09*	*50*
Toluene-d8 (Surr)	*94*		*75 - 120*	*08/13/19 10:00*	*08/14/19 07:09*	*50*
4-Bromofluorobenzene (Surr)	*103*		*72 - 124*	*08/13/19 10:00*	*08/14/19 07:09*	*50*
Dibromofluoromethane (Surr)	*93*		*75 - 120*	*08/13/19 10:00*	*08/14/19 07:09*	*50*

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.010		0.020	0.010	mg/L			08/12/19 11:42	20
Carbon tetrachloride	<0.010		0.020	0.010	mg/L			08/12/19 11:42	20
Chlorobenzene	<0.010		0.020	0.010	mg/L			08/12/19 11:42	20
Chloroform	<0.020		0.040	0.020	mg/L			08/12/19 11:42	20
1,2-Dichloroethane	<0.010		0.020	0.010	mg/L			08/12/19 11:42	20
1,1-Dichloroethene	<0.010		0.020	0.010	mg/L			08/12/19 11:42	20
Methyl Ethyl Ketone	<0.050		0.10	0.050	mg/L			08/12/19 11:42	20
Tetrachloroethene	<0.010		0.020	0.010	mg/L			08/12/19 11:42	20
Trichloroethene	<0.010		0.020	0.010	mg/L			08/12/19 11:42	20
Vinyl chloride	<0.010		0.020	0.010	mg/L			08/12/19 11:42	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*72 - 124*		*08/12/19 11:42*	*20*
Dibromofluoromethane (Surr)	*99*		*75 - 120*		*08/12/19 11:42*	*20*
1,2-Dichloroethane-d4 (Surr)	*109*		*75 - 126*		*08/12/19 11:42*	*20*
Toluene-d8 (Surr)	*102*		*75 - 120*		*08/12/19 11:42*	*20*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<320		1800	320	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Acenaphthylene	<230		1800	230	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Anthracene	<300		1800	300	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Benzo[a]anthracene	**1500**	**J**	1800	240	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Benzo[a]pyrene	**1600**	**J**	1800	340	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Benzo[b]fluoranthene	**2000**		1800	380	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Benzo[g,h,i]perylene	**1100**	**J**	1800	570	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Benzoic acid	<18000		89000	18000	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Benzo[k]fluoranthene	<520		1800	520	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Benzyl alcohol	<18000		36000	18000	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Bis(2-chloroethoxy)methane	<1800		8900	1800	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50

Client Sample ID: WC-4
Date Collected: 08/06/19 12:30
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-8
Matrix: Solid
Percent Solids: 93.4

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	<2700		8900	2700	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Bis(2-ethylhexyl) phthalate	<3200		8900	3200	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
4-Bromophenyl phenyl ether	<2300		8900	2300	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Butyl benzyl phthalate	<3400		8900	3400	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Carbazole	<4400		8900	4400	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
4-Chloroaniline	<8300		36000	8300	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
4-Chloro-3-methylphenol	<6000		18000	6000	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
2-Chloronaphthalene	<2000		8900	2000	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
2-Chlorophenol	<3000		8900	3000	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
4-Chlorophenyl phenyl ether	<2100		8900	2100	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Chrysene	**1700**	**J**	1800	480	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Dibenz(a,h)anthracene	<340		1800	340	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Dibenzofuran	<2100		8900	2100	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
1,2-Dichlorobenzene	<2100		8900	2100	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
1,3-Dichlorobenzene	<2000		8900	2000	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
1,4-Dichlorobenzene	<2300		8900	2300	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
3,3'-Dichlorobenzidine	<2500		8900	2500	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
2,4-Dichlorophenol	<4200		18000	4200	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Diethyl phthalate	<3000		8900	3000	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
2,4-Dimethylphenol	<6700		18000	6700	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Dimethyl phthalate	<2300		8900	2300	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Di-n-butyl phthalate	<2700		8900	2700	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
4,6-Dinitro-2-methylphenol	<14000		36000	14000	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
2,4-Dinitrophenol	<31000		36000	31000	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
2,4-Dinitrotoluene	<2800		8900	2800	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
2,6-Dinitrotoluene	<3500		8900	3500	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Di-n-octyl phthalate	<2900		8900	2900	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Fluoranthene	**1700**	**J**	1800	330	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Fluorene	**780**	**J**	1800	250	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Hexachlorobenzene	<410		3600	410	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Hexachlorobutadiene	<2800		8900	2800	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Hexachlorocyclopentadiene	<10000		36000	10000	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Hexachloroethane	<2700		8900	2700	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Indeno[1,2,3-cd]pyrene	**1000**	**J**	1800	460	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Isophorone	<2000		8900	2000	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
1-Methylnaphthalene	<430		3600	430	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
2-Methylnaphthalene	<330		3600	330	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
2-Methylphenol	<2800		8900	2800	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
3 & 4 Methylphenol	<2900		8900	2900	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Naphthalene	<270		1800	270	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
2-Nitroaniline	<2400		8900	2400	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
3-Nitroaniline	<5500		18000	5500	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
4-Nitroaniline	<7400		18000	7400	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Nitrobenzene	<440		1800	440	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
2-Nitrophenol	<4200		18000	4200	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
4-Nitrophenol	<17000		36000	17000	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
N-Nitrosodi-n-propylamine	<2200		3600	2200	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
N-Nitrosodiphenylamine	<2100		8900	2100	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
2,2'-oxybis[1-chloropropane]	<2000		8900	2000	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50

Client Sample ID: WC-4
Date Collected: 08/06/19 12:30
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-8
Matrix: Solid
Percent Solids: 93.4

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	<28000		36000	28000	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Phenanthrene	<250		1800	250	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Phenol	<3900		8900	3900	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
Pyrene	**2800**		1800	350	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
1,2,4-Trichlorobenzene	<1900		8900	1900	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
2,4,5-Trichlorophenol	<4000		18000	4000	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50
2,4,6-Trichlorophenol	<6100		18000	6100	ug/Kg	☼	08/07/19 18:48	08/13/19 10:23	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*D*	*43 - 145*	*08/07/19 18:48*	*08/13/19 10:23*	*50*
2-Fluorophenol (Surr)	*0*	*D*	*31 - 166*	*08/07/19 18:48*	*08/13/19 10:23*	*50*
Nitrobenzene-d5 (Surr)	*0*	*D*	*37 - 147*	*08/07/19 18:48*	*08/13/19 10:23*	*50*
Phenol-d5 (Surr)	*0*	*D*	*30 - 153*	*08/07/19 18:48*	*08/13/19 10:23*	*50*
Terphenyl-d14 (Surr)	*0*	*D*	*42 - 157*	*08/07/19 18:48*	*08/13/19 10:23*	*50*
2,4,6-Tribromophenol (Surr)	*0*	*D*	*31 - 143*	*08/07/19 18:48*	*08/13/19 10:23*	*50*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.020		0.020	0.020	mg/L		08/12/19 21:51	08/13/19 17:04	1
2,4-Dinitrotoluene	<0.010		0.010	0.010	mg/L		08/12/19 21:51	08/13/19 17:04	1
Hexachlorobenzene	<0.0050		0.0050	0.0050	mg/L		08/12/19 21:51	08/13/19 17:04	1
Hexachlorobutadiene	<0.050		0.050	0.050	mg/L		08/12/19 21:51	08/13/19 17:04	1
Hexachloroethane	<0.050		0.050	0.050	mg/L		08/12/19 21:51	08/13/19 17:04	1
2-Methylphenol	<0.020		0.020	0.020	mg/L		08/12/19 21:51	08/13/19 17:04	1
3 & 4 Methylphenol	<0.020		0.020	0.020	mg/L		08/12/19 21:51	08/13/19 17:04	1
Nitrobenzene	<0.010		0.010	0.010	mg/L		08/12/19 21:51	08/13/19 17:04	1
Pentachlorophenol	<0.20		0.20	0.20	mg/L		08/12/19 21:51	08/13/19 17:04	1
Pyridine	<0.20		0.20	0.20	mg/L		08/12/19 21:51	08/13/19 17:04	1
2,4,5-Trichlorophenol	<0.10		0.10	0.10	mg/L		08/12/19 21:51	08/13/19 17:04	1
2,4,6-Trichlorophenol	<0.050		0.050	0.050	mg/L		08/12/19 21:51	08/13/19 17:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*77*		*34 - 110*	*08/12/19 21:51*	*08/13/19 17:04*	*1*
2-Fluorophenol (Surr)	*37*		*27 - 110*	*08/12/19 21:51*	*08/13/19 17:04*	*1*
Nitrobenzene-d5 (Surr)	*82*		*36 - 120*	*08/12/19 21:51*	*08/13/19 17:04*	*1*
Phenol-d5 (Surr)	*31*		*20 - 100*	*08/12/19 21:51*	*08/13/19 17:04*	*1*
Terphenyl-d14 (Surr)	*100*		*40 - 145*	*08/12/19 21:51*	*08/13/19 17:04*	*1*
2,4,6-Tribromophenol (Surr)	*83*		*40 - 145*	*08/12/19 21:51*	*08/13/19 17:04*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**3.7**		0.94	0.32	mg/Kg	☼	08/07/19 15:58	08/08/19 11:41	1
Barium	**26**		0.94	0.11	mg/Kg	☼	08/07/19 15:58	08/08/19 11:41	1
Cadmium	**0.76**	**B**	0.19	0.034	mg/Kg	☼	08/07/19 15:58	08/08/19 11:41	1
Chromium	**4.8**		0.94	0.46	mg/Kg	☼	08/07/19 15:58	08/08/19 11:41	1
Lead	**23**		0.47	0.22	mg/Kg	☼	08/07/19 15:58	08/08/19 11:41	1
Selenium	**1.3**	**B**	0.94	0.55	mg/Kg	☼	08/07/19 15:58	08/08/19 11:41	1
Silver	<0.12		0.47	0.12	mg/Kg	☼	08/07/19 15:58	08/08/19 11:41	1

Client Sample Results

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Client Sample ID: WC-4

Date Collected: 08/06/19 12:30
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-8

Matrix: Solid
Percent Solids: 93.4

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.010		0.050	0.010	mg/L		08/09/19 08:18	08/09/19 18:38	1
Barium	**0.18**	**J**	0.50	0.050	mg/L		08/09/19 08:18	08/09/19 18:38	1
Cadmium	**0.0023**	**J**	0.0050	0.0020	mg/L		08/09/19 08:18	08/09/19 18:38	1
Chromium	<0.010		0.025	0.010	mg/L		08/09/19 08:18	08/09/19 18:38	1
Lead	<0.0075		0.050	0.0075	mg/L		08/09/19 08:18	08/09/19 18:38	1
Selenium	<0.020		0.050	0.020	mg/L		08/09/19 08:18	08/09/19 18:38	1
Silver	<0.010		0.025	0.010	mg/L		08/09/19 08:18	08/09/19 18:38	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		08/09/19 10:05	08/09/19 16:50	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.024**		0.016	0.0053	mg/Kg	☼	08/08/19 13:55	08/09/19 10:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	**>176**		99.0	99.0	Degrees F			08/14/19 15:00	1
Phenolics, Total Recoverable	<0.42		0.51	0.42	mg/Kg	☼	08/08/19 07:35	08/08/19 09:47	1
Cyanide, Total	**0.63**		0.50	0.25	mg/Kg	☼	08/12/19 11:30	08/12/19 16:17	1
Sulfide	<4.7		10	4.7	mg/Kg	☼	08/12/19 08:05	08/12/19 10:55	1
pH	**8.9**		0.2	0.2	SU			08/09/19 15:48	1
Free Liquid	**pass**				No Unit			08/13/19 01:45	1

General Chemistry - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenolics, Total Recoverable	**0.054**		0.0050	0.0041	mg/L		08/12/19 15:00	08/13/19 09:15	1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
X	Surrogate is outside control limits

LCMS

Qualifier	Qualifier Description
*	Isotope Dilution analyte is outside acceptance limits.
*	LCS or LCSD is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

QC Association Summary

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

GC/MS VOA

Analysis Batch: 498887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-3	Trip Blank 1	Total/NA	Water	8260B	
500-167874-4	Trip Blank 2	Total/NA	Water	8260B	
500-167874-5	WC-1	Total/NA	Water	8260B	
500-167874-7	WC-3	Total/NA	Water	8260B	
MB 500-498887/6	Method Blank	Total/NA	Water	8260B	
LCS 500-498887/4	Lab Control Sample	Total/NA	Water	8260B	

Leach Batch: 499026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	TCLP	Solid	1311	
500-167874-8	WC-4	TCLP	Solid	1311	
LB 500-499026/1-A	Method Blank	TCLP	Solid	1311	

Analysis Batch: 499147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	TCLP	Solid	8260B	499026
500-167874-8	WC-4	TCLP	Solid	8260B	499026
LB 500-499026/1-A	Method Blank	TCLP	Solid	8260B	499026
MB 500-499147/6	Method Blank	Total/NA	Solid	8260B	
LCS 500-499147/4	Lab Control Sample	Total/NA	Solid	8260B	

Prep Batch: 499430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	5030B	
500-167874-8	WC-4	Total/NA	Solid	5030B	

Analysis Batch: 499516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	8260B	499430
500-167874-8	WC-4	Total/NA	Solid	8260B	499430
MB 500-499516/6	Method Blank	Total/NA	Solid	8260B	
LCS 500-499516/4	Lab Control Sample	Total/NA	Solid	8260B	

GC/MS Semi VOA

Prep Batch: 498637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	3541	
500-167874-8	WC-4	Total/NA	Solid	3541	
MB 500-498637/1-A	Method Blank	Total/NA	Solid	3541	
LCS 500-498637/2-A	Lab Control Sample	Total/NA	Solid	3541	

Prep Batch: 498673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total/NA	Water	3510C	
500-167874-7	WC-3	Total/NA	Water	3510C	
MB 500-498673/1-A	Method Blank	Total/NA	Water	3510C	
LCS 500-498673/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 500-498673/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

GC/MS Semi VOA

Analysis Batch: 498694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-498637/1-A	Method Blank	Total/NA	Solid	8270D	498637
LCS 500-498637/2-A	Lab Control Sample	Total/NA	Solid	8270D	498637

Analysis Batch: 498700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-498673/1-A	Method Blank	Total/NA	Water	8270D	498673
LCS 500-498673/2-A	Lab Control Sample	Total/NA	Water	8270D	498673
LCSD 500-498673/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	498673

Leach Batch: 498793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	TCLP	Solid	1311	
500-167874-8	WC-4	TCLP	Solid	1311	
LB 500-498793/1-E	Method Blank	TCLP	Solid	1311	
500-167874-6 MS	WC-2	TCLP	Solid	1311	

Prep Batch: 499301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	TCLP	Solid	3510C	498793
500-167874-8	WC-4	TCLP	Solid	3510C	498793
LB 500-498793/1-E	Method Blank	TCLP	Solid	3510C	498793
MB 500-499301/1-A	Method Blank	Total/NA	Solid	3510C	
LCS 500-499301/2-A	Lab Control Sample	Total/NA	Solid	3510C	
500-167874-6 MS	WC-2	TCLP	Solid	3510C	498793

Analysis Batch: 499351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total/NA	Water	8270D	498673
500-167874-6	WC-2	TCLP	Solid	8270D	499301
500-167874-7	WC-3	Total/NA	Water	8270D	498673
500-167874-8	WC-4	TCLP	Solid	8270D	499301
LB 500-498793/1-E	Method Blank	TCLP	Solid	8270D	499301
MB 500-499301/1-A	Method Blank	Total/NA	Solid	8270D	499301
LCS 500-499301/2-A	Lab Control Sample	Total/NA	Solid	8270D	499301
500-167874-6 MS	WC-2	TCLP	Solid	8270D	499301

Analysis Batch: 499358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-8	WC-4	Total/NA	Solid	8270D	498637

Analysis Batch: 499586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	8270D	498637

GC Semi VOA

Prep Batch: 498802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	WI DRO PREP	
MB 500-498802/1-A	Method Blank	Total/NA	Solid	WI DRO PREP	
LCS 500-498802/2-A	Lab Control Sample	Total/NA	Solid	WI DRO PREP	

GC Semi VOA (Continued)

Prep Batch: 498802 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 500-498802/3-A	Lab Control Sample Dup	Total/NA	Solid	WI DRO PREP	

Analysis Batch: 498970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	WI-DRO	498802
MB 500-498802/1-A	Method Blank	Total/NA	Solid	WI-DRO	498802
LCS 500-498802/2-A	Lab Control Sample	Total/NA	Solid	WI-DRO	498802
LCSD 500-498802/3-A	Lab Control Sample Dup	Total/NA	Solid	WI-DRO	498802

Prep Batch: 499345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total/NA	Water	3510C	
500-167874-7	WC-3	Total/NA	Water	3510C	
MB 500-499345/1-A	Method Blank	Total/NA	Water	3510C	
LCS 500-499345/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 500-499345/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 499435

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total/NA	Water	WI-DRO	499345
500-167874-7	WC-3	Total/NA	Water	WI-DRO	499345
MB 500-499345/1-A	Method Blank	Total/NA	Water	WI-DRO	499345
LCS 500-499345/2-A	Lab Control Sample	Total/NA	Water	WI-DRO	499345
LCSD 500-499345/3-A	Lab Control Sample Dup	Total/NA	Water	WI-DRO	499345

LCMS

Prep Batch: 313396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	SHAKE	
MB 320-313396/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-313396/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
500-167874-6 MS	WC-2	Total/NA	Solid	SHAKE	
500-167874-6 MSD	WC-2	Total/NA	Solid	SHAKE	

Prep Batch: 313407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-1	EB08062019	Total/NA	Water	3535	
500-167874-2	FB08062019	Total/NA	Water	3535	
MB 320-313407/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-313407/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-313407/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 313692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-1	EB08062019	Total/NA	Water	537 (modified)	313407
500-167874-2	FB08062019	Total/NA	Water	537 (modified)	313407
MB 320-313407/1-A	Method Blank	Total/NA	Water	537 (modified)	313407
LCS 320-313407/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	313407
LCSD 320-313407/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	313407

QC Association Summary

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

LCMS

Analysis Batch: 314501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	537 (modified)	313396
MB 320-313396/1-A	Method Blank	Total/NA	Solid	537 (modified)	313396
LCS 320-313396/2-A	Lab Control Sample	Total/NA	Solid	537 (modified)	313396
500-167874-6 MS	WC-2	Total/NA	Solid	537 (modified)	313396
500-167874-6 MSD	WC-2	Total/NA	Solid	537 (modified)	313396

Metals

Prep Batch: 498631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	3050B	
500-167874-8	WC-4	Total/NA	Solid	3050B	
MB 500-498631/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 500-498631/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Prep Batch: 498679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total Recoverable	Water	3005A	
500-167874-7	WC-3	Total Recoverable	Water	3005A	
MB 500-498679/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-498679/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 498752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total/NA	Water	7470A	
500-167874-7	WC-3	Total/NA	Water	7470A	
MB 500-498752/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-498752/13-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 498771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	7471B	
500-167874-8	WC-4	Total/NA	Solid	7471B	
MB 500-498771/12-A	Method Blank	Total/NA	Solid	7471B	
LCS 500-498771/13-A	Lab Control Sample	Total/NA	Solid	7471B	

Leach Batch: 498793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	TCLP	Solid	1311	
500-167874-8	WC-4	TCLP	Solid	1311	
LB 500-498793/1-B	Method Blank	TCLP	Solid	1311	
LB 500-498793/1-C	Method Blank	TCLP	Solid	1311	

Analysis Batch: 498801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	6010C	498631
500-167874-8	WC-4	Total/NA	Solid	6010C	498631
MB 500-498631/1-A	Method Blank	Total/NA	Solid	6010C	498631
LCS 500-498631/2-A	Lab Control Sample	Total/NA	Solid	6010C	498631

Metals

Prep Batch: 498938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	TCLP	Solid	3010A	498793
500-167874-8	WC-4	TCLP	Solid	3010A	498793
LB 500-498793/1-B	Method Blank	TCLP	Solid	3010A	498793
LCS 500-498938/2-A	Lab Control Sample	Total/NA	Solid	3010A	

Analysis Batch: 498960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total Recoverable	Water	6020A	498679
500-167874-7	WC-3	Total Recoverable	Water	6020A	498679
MB 500-498679/1-A	Method Blank	Total Recoverable	Water	6020A	498679
LCS 500-498679/2-A	Lab Control Sample	Total Recoverable	Water	6020A	498679

Prep Batch: 498963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	TCLP	Solid	7470A	498793
500-167874-8	WC-4	TCLP	Solid	7470A	498793
LB 500-498793/1-C	Method Blank	TCLP	Solid	7470A	498793
MB 500-498963/12-A	Method Blank	Total/NA	Solid	7470A	
LCS 500-498963/13-A	Lab Control Sample	Total/NA	Solid	7470A	

Analysis Batch: 498989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total/NA	Water	7470A	498752
500-167874-7	WC-3	Total/NA	Water	7470A	498752
MB 500-498752/12-A	Method Blank	Total/NA	Water	7470A	498752
LCS 500-498752/13-A	Lab Control Sample	Total/NA	Water	7470A	498752

Analysis Batch: 499016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	7471B	498771
500-167874-8	WC-4	Total/NA	Solid	7471B	498771
MB 500-498771/12-A	Method Blank	Total/NA	Solid	7471B	498771
LCS 500-498771/13-A	Lab Control Sample	Total/NA	Solid	7471B	498771

Analysis Batch: 499072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	TCLP	Solid	7470A	498963
500-167874-8	WC-4	TCLP	Solid	7470A	498963
LB 500-498793/1-C	Method Blank	TCLP	Solid	7470A	498963
MB 500-498963/12-A	Method Blank	Total/NA	Solid	7470A	498963
LCS 500-498963/13-A	Lab Control Sample	Total/NA	Solid	7470A	498963

Analysis Batch: 499131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	TCLP	Solid	6010C	498938
500-167874-8	WC-4	TCLP	Solid	6010C	498938
LB 500-498793/1-B	Method Blank	TCLP	Solid	6010C	498938
LCS 500-498938/2-A	Lab Control Sample	Total/NA	Solid	6010C	498938

Metals

Analysis Batch: 499204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total Recoverable	Water	6020A	498679
500-167874-7	WC-3	Total Recoverable	Water	6020A	498679
MB 500-498679/1-A	Method Blank	Total Recoverable	Water	6020A	498679
LCS 500-498679/2-A	Lab Control Sample	Total Recoverable	Water	6020A	498679

Analysis Batch: 499398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total Recoverable	Water	6020A	498679
500-167874-7	WC-3	Total Recoverable	Water	6020A	498679
MB 500-498679/1-A	Method Blank	Total Recoverable	Water	6020A	498679
LCS 500-498679/2-A	Lab Control Sample	Total Recoverable	Water	6020A	498679

General Chemistry

Prep Batch: 498619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total/NA	Water	Distill/Phenol	
500-167874-6	WC-2	Total/NA	Solid	Distill/Phenol	
500-167874-8	WC-4	Total/NA	Solid	Distill/Phenol	
MB 500-498619/15-A	Method Blank	Total/NA	Solid	Distill/Phenol	
MB 500-498619/1-A	Method Blank	Total/NA	Water	Distill/Phenol	
LCS 500-498619/16-A	Lab Control Sample	Total/NA	Solid	Distill/Phenol	
LCS 500-498619/2-A	Lab Control Sample	Total/NA	Water	Distill/Phenol	
500-167874-8 MS	WC-4	Total/NA	Solid	Distill/Phenol	
500-167874-8 MSD	WC-4	Total/NA	Solid	Distill/Phenol	

Prep Batch: 498633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total/NA	Water	1664B	
500-167874-7	WC-3	Total/NA	Water	1664B	
MB 500-498633/17-A	Method Blank	Total/NA	Water	1664B	
LCS 500-498633/2-A	Lab Control Sample	Total/NA	Water	1664B	

Analysis Batch: 498634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total/NA	Water	1664B	498633
500-167874-7	WC-3	Total/NA	Water	1664B	498633
MB 500-498633/17-A	Method Blank	Total/NA	Water	1664B	498633
LCS 500-498633/2-A	Lab Control Sample	Total/NA	Water	1664B	498633

Analysis Batch: 498715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	Moisture	
500-167874-8	WC-4	Total/NA	Solid	Moisture	

Analysis Batch: 498744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total/NA	Water	420.4	498619
500-167874-6	WC-2	Total/NA	Solid	420.4	498619
500-167874-8	WC-4	Total/NA	Solid	420.4	498619
MB 500-498619/15-A	Method Blank	Total/NA	Solid	420.4	498619

General Chemistry (Continued)

Analysis Batch: 498744 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-498619/1-A	Method Blank	Total/NA	Water	420.4	498619
LCS 500-498619/16-A	Lab Control Sample	Total/NA	Solid	420.4	498619
LCS 500-498619/2-A	Lab Control Sample	Total/NA	Water	420.4	498619
500-167874-8 MS	WC-4	Total/NA	Solid	420.4	498619
500-167874-8 MSD	WC-4	Total/NA	Solid	420.4	498619

Prep Batch: 498764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total/NA	Water	Distill/CN	
MB 500-498764/1-A	Method Blank	Total/NA	Water	9010B	
HLCS 500-498764/2-A	Lab Control Sample	Total/NA	Water	9010B	
LCS 500-498764/3-A	Lab Control Sample	Total/NA	Water	9010B	
LLCS 500-498764/4-A	Lab Control Sample	Total/NA	Water	9010B	

Leach Batch: 498793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	TCLP	Solid	1311	
500-167874-8	WC-4	TCLP	Solid	1311	

Analysis Batch: 498837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total/NA	Water	SM 4500 CN E	498764
MB 500-498764/1-A	Method Blank	Total/NA	Water	SM 4500 CN E	498764
HLCS 500-498764/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	498764
LCS 500-498764/3-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	498764
LLCS 500-498764/4-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	498764

Prep Batch: 498940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	9030B	
500-167874-8	WC-4	Total/NA	Solid	9030B	
MB 500-498940/1-A	Method Blank	Total/NA	Solid	9030B	
LCS 500-498940/2-A	Lab Control Sample	Total/NA	Solid	9030B	
500-167874-6 MS	WC-2	Total/NA	Solid	9030B	
500-167874-6 MSD	WC-2	Total/NA	Solid	9030B	

Analysis Batch: 499027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	9045D	
500-167874-8	WC-4	Total/NA	Solid	9045D	
LCS 500-499027/5	Lab Control Sample	Total/NA	Solid	9045D	
LCSD 500-499027/6	Lab Control Sample Dup	Total/NA	Solid	9045D	

Analysis Batch: 499086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total/NA	Water	9056A	
MB 500-499086/3	Method Blank	Total/NA	Water	9056A	
LCS 500-499086/4	Lab Control Sample	Total/NA	Water	9056A	

General Chemistry

Prep Batch: 499201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	9010B	
500-167874-8	WC-4	Total/NA	Solid	9010B	
MB 500-499201/1-A	Method Blank	Total/NA	Solid	9010B	
HLCS 500-499201/2-A	Lab Control Sample	Total/NA	Solid	9010B	
LCS 500-499201/3-A	Lab Control Sample	Total/NA	Solid	9010B	
LLCS 500-499201/4-A	Lab Control Sample	Total/NA	Solid	9010B	

Analysis Batch: 499214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	9034	498940
500-167874-8	WC-4	Total/NA	Solid	9034	498940
MB 500-498940/1-A	Method Blank	Total/NA	Solid	9034	498940
LCS 500-498940/2-A	Lab Control Sample	Total/NA	Solid	9034	498940
500-167874-6 MS	WC-2	Total/NA	Solid	9034	498940
500-167874-6 MSD	WC-2	Total/NA	Solid	9034	498940

Prep Batch: 499294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	TCLP	Solid	Distill/Phenol	498793
500-167874-8	WC-4	TCLP	Solid	Distill/Phenol	498793
MB 500-499294/15-A	Method Blank	Total/NA	Solid	Distill/Phenol	
LCS 500-499294/16-A	Lab Control Sample	Total/NA	Solid	Distill/Phenol	

Analysis Batch: 499307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	9095B	
500-167874-8	WC-4	Total/NA	Solid	9095B	

Analysis Batch: 499401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	Total/NA	Solid	9014	499201
500-167874-8	WC-4	Total/NA	Solid	9014	499201
MB 500-499201/1-A	Method Blank	Total/NA	Solid	9014	499201
HLCS 500-499201/2-A	Lab Control Sample	Total/NA	Solid	9014	499201
LCS 500-499201/3-A	Lab Control Sample	Total/NA	Solid	9014	499201
LLCS 500-499201/4-A	Lab Control Sample	Total/NA	Solid	9014	499201

Analysis Batch: 499406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-6	WC-2	TCLP	Solid	9066	499294
500-167874-8	WC-4	TCLP	Solid	9066	499294
MB 500-499294/15-A	Method Blank	Total/NA	Solid	9066	499294
LCS 500-499294/16-A	Lab Control Sample	Total/NA	Solid	9066	499294

Analysis Batch: 499682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total/NA	Water	SM 4500 H+ B	
500-167874-7	WC-3	Total/NA	Water	SM 4500 H+ B	
LCS 500-499682/5	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
LCSD 500-499682/6	Lab Control Sample Dup	Total/NA	Water	SM 4500 H+ B	
500-167874-5 DU	WC-1	Total/NA	Water	SM 4500 H+ B	

General Chemistry (Continued)

Analysis Batch: 499682 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-7 DU	WC-3	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 499712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-167874-5	WC-1	Total/NA	Water	1010A	
500-167874-6	WC-2	Total/NA	Solid	1010A	
500-167874-7	WC-3	Total/NA	Water	1010A	
500-167874-8	WC-4	Total/NA	Solid	1010A	

Surrogate Summary

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	TOL	BFB	DBFM
Lab Sample ID	Client Sample ID	(75-126)	(75-120)	(72-124)	(75-120)
500-167874-6	WC-2	93	93	100	93
500-167874-8	WC-4	94	94	103	93
LCS 500-499147/4	Lab Control Sample	103	104	103	101
LCS 500-499516/4	Lab Control Sample	93	95	99	97
MB 500-499147/6	Method Blank	105	102	110	98
MB 500-499516/6	Method Blank	96	92	110	96

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid — **Prep Type: TCLP**

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	DCA	TOL
Lab Sample ID	Client Sample ID	(72-124)	(75-120)	(75-126)	(75-120)
500-167874-6	WC-2	109	100	108	102
500-167874-8	WC-4	112	99	109	102
LB 500-499026/1-A	Method Blank	109	100	107	101

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	DCA	TOL
Lab Sample ID	Client Sample ID	(72-124)	(75-120)	(75-126)	(75-120)
500-167874-3	Trip Blank 1	105	95	94	107
500-167874-4	Trip Blank 2	105	98	110	104
500-167874-5	WC-1	105	98	106	105
500-167874-7	WC-3	102	97	102	106
LCS 500-498887/4	Lab Control Sample	108	104	114	104
MB 500-498887/6	Method Blank	105	100	113	104

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Surrogate Summary

Client: AECOM
Job ID: 500-167874-1
Project/Site: ATC - Madison - 60611431

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPHL	TBP
Lab Sample ID	Client Sample ID	(43-145)	(31-166)	(37-147)	(30-153)	(42-157)	(31-143)
500-167874-6	WC-2	0 D	0 D	0 D	0 D	0 D	0 D
500-167874-8	WC-4	0 D	0 D	0 D	0 D	0 D	0 D
LCS 500-498637/2-A	Lab Control Sample	108	104	83	95	109	83
MB 500-498637/1-A	Method Blank	100	108	80	96	137	75

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPHL	TBP
Lab Sample ID	Client Sample ID	(34-110)	(27-110)	(36-120)	(20-100)	(40-145)	(40-145)
LCS 500-499301/2-A	Lab Control Sample	77	50	78	34	95	90
MB 500-499301/1-A	Method Blank	69	37	76	31	97	80

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: TCLP**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPHL	TBP
Lab Sample ID	Client Sample ID	(34-110)	(27-110)	(36-120)	(20-100)	(40-145)	(40-145)
500-167874-6	WC-2	73	34	77	30	96	77
500-167874-6 MS	WC-2	59	39	60	27	78	70
500-167874-8	WC-4	77	37	82	31	100	83
LB 500-498793/1-E	Method Blank	75	37	78	31	102	80

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Surrogate Summary

Client: AECOM
Job ID: 500-167874-1
Project/Site: ATC - Madison - 60611431

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	FBP (34-110)	2FP (27-110)	NBZ (36-120)	PHL (20-110)	TPHL (40-145)	TBP (40-145)
500-167874-5	WC-1	0 D	0 D	0 D	0 D	0 D	0 D
500-167874-7	WC-3	0 D	0 D	0 D	0 D	0 D	0 D
LCS 500-498673/2-A	Lab Control Sample	68	80	98	61	101	124
LCSD 500-498673/3-A	Lab Control Sample Dup	70	78	96	61	91	123
MB 500-498673/1-A	Method Blank	76	75	107	67	109	119

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	C9 (44-148)
500-167874-6	WC-2	0 D
LCS 500-498802/2-A	Lab Control Sample	83
LCSD 500-498802/3-A	Lab Control Sample Dup	84
MB 500-498802/1-A	Method Blank	83

Surrogate Legend

C9 = n-Nonane

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	C9 (42-111)
500-167874-5	WC-1	0 D
500-167874-7	WC-3	0 D
LCS 500-499345/2-A	Lab Control Sample	20 X
LCSD 500-499345/3-A	Lab Control Sample Dup	28 X
MB 500-499345/1-A	Method Blank	25 X

Surrogate Legend

C9 = n-Nonane

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-498887/6
Matrix: Water
Analysis Batch: 498887

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			08/09/19 10:40	1
Bromobenzene	<0.36		1.0	0.36	ug/L			08/09/19 10:40	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			08/09/19 10:40	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			08/09/19 10:40	1
Bromoform	<0.48		1.0	0.48	ug/L			08/09/19 10:40	1
Bromomethane	<0.80		3.0	0.80	ug/L			08/09/19 10:40	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			08/09/19 10:40	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			08/09/19 10:40	1
Chloroethane	<0.51		1.0	0.51	ug/L			08/09/19 10:40	1
Chloroform	<0.37		2.0	0.37	ug/L			08/09/19 10:40	1
Chloromethane	<0.32		1.0	0.32	ug/L			08/09/19 10:40	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			08/09/19 10:40	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			08/09/19 10:40	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			08/09/19 10:40	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			08/09/19 10:40	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			08/09/19 10:40	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			08/09/19 10:40	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			08/09/19 10:40	1
Dibromomethane	<0.27		1.0	0.27	ug/L			08/09/19 10:40	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			08/09/19 10:40	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			08/09/19 10:40	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			08/09/19 10:40	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			08/09/19 10:40	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			08/09/19 10:40	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			08/09/19 10:40	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			08/09/19 10:40	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			08/09/19 10:40	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			08/09/19 10:40	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			08/09/19 10:40	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			08/09/19 10:40	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			08/09/19 10:40	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			08/09/19 10:40	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			08/09/19 10:40	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			08/09/19 10:40	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			08/09/19 10:40	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			08/09/19 10:40	1
Naphthalene	<0.34		1.0	0.34	ug/L			08/09/19 10:40	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			08/09/19 10:40	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			08/09/19 10:40	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			08/09/19 10:40	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			08/09/19 10:40	1
Styrene	<0.39		1.0	0.39	ug/L			08/09/19 10:40	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			08/09/19 10:40	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			08/09/19 10:40	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			08/09/19 10:40	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			08/09/19 10:40	1
Toluene	<0.15		0.50	0.15	ug/L			08/09/19 10:40	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			08/09/19 10:40	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-498887/6
Matrix: Water
Analysis Batch: 498887

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			08/09/19 10:40	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			08/09/19 10:40	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			08/09/19 10:40	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			08/09/19 10:40	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			08/09/19 10:40	1
Trichloroethene	<0.16		0.50	0.16	ug/L			08/09/19 10:40	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			08/09/19 10:40	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			08/09/19 10:40	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			08/09/19 10:40	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			08/09/19 10:40	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			08/09/19 10:40	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			08/09/19 10:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*72 - 124*		*08/09/19 10:40*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 120*		*08/09/19 10:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*113*		*75 - 126*		*08/09/19 10:40*	*1*
Toluene-d8 (Surr)	*104*		*75 - 120*		*08/09/19 10:40*	*1*

Lab Sample ID: LCS 500-498887/4
Matrix: Water
Analysis Batch: 498887

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	46.7		ug/L		93	70 - 120
Bromobenzene	50.0	46.5		ug/L		93	70 - 122
Bromochloromethane	50.0	46.1		ug/L		92	65 - 122
Bromodichloromethane	50.0	47.3		ug/L		95	69 - 120
Bromoform	50.0	38.2		ug/L		76	56 - 132
Bromomethane	50.0	62.1		ug/L		124	40 - 152
Carbon tetrachloride	50.0	46.4		ug/L		93	59 - 133
Chlorobenzene	50.0	47.0		ug/L		94	70 - 120
Chloroethane	50.0	63.0		ug/L		126	48 - 136
Chloroform	50.0	48.6		ug/L		97	70 - 120
Chloromethane	50.0	40.1		ug/L		80	56 - 152
2-Chlorotoluene	50.0	49.7		ug/L		99	70 - 125
4-Chlorotoluene	50.0	50.1		ug/L		100	68 - 124
cis-1,2-Dichloroethene	50.0	47.6		ug/L		95	70 - 125
cis-1,3-Dichloropropene	50.0	46.5		ug/L		93	64 - 127
Dibromochloromethane	50.0	43.7		ug/L		87	68 - 125
1,2-Dibromo-3-Chloropropane	50.0	46.7		ug/L		93	56 - 123
1,2-Dibromoethane	50.0	47.9		ug/L		96	70 - 125
Dibromomethane	50.0	49.0		ug/L		98	70 - 120
1,2-Dichlorobenzene	50.0	45.7		ug/L		91	70 - 125
1,3-Dichlorobenzene	50.0	46.1		ug/L		92	70 - 125
1,4-Dichlorobenzene	50.0	44.9		ug/L		90	70 - 120
Dichlorodifluoromethane	50.0	46.0		ug/L		92	40 - 159
1,1-Dichloroethane	50.0	47.2		ug/L		94	70 - 125

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-498887/4
Matrix: Water
Analysis Batch: 498887

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	50.0	52.6		ug/L		105	68 - 127
1,1-Dichloroethene	50.0	46.5		ug/L		93	67 - 122
1,2-Dichloropropane	50.0	45.4		ug/L		91	67 - 130
1,3-Dichloropropane	50.0	48.7		ug/L		97	62 - 136
2,2-Dichloropropane	50.0	45.6		ug/L		91	58 - 139
1,1-Dichloropropene	50.0	48.3		ug/L		97	70 - 121
Ethylbenzene	50.0	46.5		ug/L		93	70 - 123
Hexachlorobutadiene	50.0	44.6		ug/L		89	51 - 150
Isopropylbenzene	50.0	49.0		ug/L		98	70 - 126
Methylene Chloride	50.0	48.0		ug/L		96	69 - 125
Methyl tert-butyl ether	50.0	48.5		ug/L		97	55 - 123
Naphthalene	50.0	43.6		ug/L		87	53 - 144
n-Butylbenzene	50.0	50.9		ug/L		102	68 - 125
N-Propylbenzene	50.0	50.2		ug/L		100	69 - 127
p-Isopropyltoluene	50.0	49.2		ug/L		98	70 - 125
sec-Butylbenzene	50.0	49.0		ug/L		98	70 - 123
Styrene	50.0	47.0		ug/L		94	70 - 120
tert-Butylbenzene	50.0	47.4		ug/L		95	70 - 121
1,1,1,2-Tetrachloroethane	50.0	43.1		ug/L		86	70 - 125
1,1,2,2-Tetrachloroethane	50.0	50.4		ug/L		101	62 - 140
Tetrachloroethene	50.0	43.7		ug/L		87	70 - 128
Toluene	50.0	45.8		ug/L		92	70 - 125
trans-1,2-Dichloroethene	50.0	45.8		ug/L		92	70 - 125
trans-1,3-Dichloropropene	50.0	47.5		ug/L		95	62 - 128
1,2,3-Trichlorobenzene	50.0	44.5		ug/L		89	51 - 145
1,2,4-Trichlorobenzene	50.0	44.7		ug/L		89	57 - 137
1,1,1-Trichloroethane	50.0	47.8		ug/L		96	70 - 125
1,1,2-Trichloroethane	50.0	48.1		ug/L		96	71 - 130
Trichloroethene	50.0	46.6		ug/L		93	70 - 125
Trichlorofluoromethane	50.0	51.9		ug/L		104	55 - 128
1,2,3-Trichloropropane	50.0	53.0		ug/L		106	50 - 133
1,2,4-Trimethylbenzene	50.0	48.4		ug/L		97	70 - 123
1,3,5-Trimethylbenzene	50.0	49.6		ug/L		99	70 - 123
Vinyl chloride	50.0	45.0		ug/L		90	64 - 126
Xylenes, Total	100	91.4		ug/L		91	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*72 - 124*
Dibromofluoromethane (Surr)	*104*		*75 - 120*
1,2-Dichloroethane-d4 (Surr)	*114*		*75 - 126*
Toluene-d8 (Surr)	*104*		*75 - 120*

Lab Sample ID: MB 500-499147/6
Matrix: Solid
Analysis Batch: 499147

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00050		0.0010	0.00050	mg/L			08/12/19 10:04	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-499147/6
Matrix: Solid
Analysis Batch: 499147

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Ethyl Ketone	<0.0025		0.0050	0.0025	mg/L			08/12/19 10:04	1
Carbon tetrachloride	<0.00050		0.0010	0.00050	mg/L			08/12/19 10:04	1
Chlorobenzene	<0.00050		0.0010	0.00050	mg/L			08/12/19 10:04	1
Chloroform	<0.0010		0.0020	0.0010	mg/L			08/12/19 10:04	1
1,2-Dichloroethane	<0.00050		0.0010	0.00050	mg/L			08/12/19 10:04	1
1,1-Dichloroethene	<0.00050		0.0010	0.00050	mg/L			08/12/19 10:04	1
Tetrachloroethene	<0.00050		0.0010	0.00050	mg/L			08/12/19 10:04	1
Trichloroethene	<0.00050		0.0010	0.00050	mg/L			08/12/19 10:04	1
Vinyl chloride	<0.00050		0.0010	0.00050	mg/L			08/12/19 10:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*72 - 124*		*08/12/19 10:04*	*1*
Dibromofluoromethane (Surr)	*98*		*75 - 120*		*08/12/19 10:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*75 - 126*		*08/12/19 10:04*	*1*
Toluene-d8 (Surr)	*102*		*75 - 120*		*08/12/19 10:04*	*1*

Lab Sample ID: LCS 500-499147/4
Matrix: Solid
Analysis Batch: 499147

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.0534		mg/L		107	70 - 120
Methyl Ethyl Ketone	0.0500	0.0512		mg/L		102	46 - 144
Carbon tetrachloride	0.0500	0.0562		mg/L		112	59 - 133
Chlorobenzene	0.0500	0.0516		mg/L		103	70 - 120
Chloroform	0.0500	0.0522		mg/L		104	70 - 120
1,2-Dichloroethane	0.0500	0.0518		mg/L		104	68 - 127
1,1-Dichloroethene	0.0500	0.0519		mg/L		104	67 - 122
Tetrachloroethene	0.0500	0.0541		mg/L		108	70 - 128
Trichloroethene	0.0500	0.0540		mg/L		108	70 - 125
Vinyl chloride	0.0500	0.0503		mg/L		101	64 - 126

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*72 - 124*
Dibromofluoromethane (Surr)	*101*		*75 - 120*
1,2-Dichloroethane-d4 (Surr)	*103*		*75 - 126*
Toluene-d8 (Surr)	*104*		*75 - 120*

Lab Sample ID: MB 500-499516/6
Matrix: Solid
Analysis Batch: 499516

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.25	0.15	ug/Kg			08/13/19 21:54	1
Bromobenzene	<0.36		1.0	0.36	ug/Kg			08/13/19 21:54	1
Bromochloromethane	<0.43		1.0	0.43	ug/Kg			08/13/19 21:54	1
Bromodichloromethane	<0.37		1.0	0.37	ug/Kg			08/13/19 21:54	1
Bromoform	<0.48		1.0	0.48	ug/Kg			08/13/19 21:54	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-499516/6
Matrix: Solid
Analysis Batch: 499516

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	<0.80		3.0	0.80	ug/Kg			08/13/19 21:54	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/Kg			08/13/19 21:54	1
Chlorobenzene	<0.39		1.0	0.39	ug/Kg			08/13/19 21:54	1
Chloroethane	<0.50		1.0	0.50	ug/Kg			08/13/19 21:54	1
Chloroform	<0.37		2.0	0.37	ug/Kg			08/13/19 21:54	1
Chloromethane	<0.32		1.0	0.32	ug/Kg			08/13/19 21:54	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/Kg			08/13/19 21:54	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/Kg			08/13/19 21:54	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/Kg			08/13/19 21:54	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/Kg			08/13/19 21:54	1
Dibromochloromethane	<0.49		1.0	0.49	ug/Kg			08/13/19 21:54	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/Kg			08/13/19 21:54	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/Kg			08/13/19 21:54	1
Dibromomethane	<0.27		1.0	0.27	ug/Kg			08/13/19 21:54	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/Kg			08/13/19 21:54	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/Kg			08/13/19 21:54	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/Kg			08/13/19 21:54	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/Kg			08/13/19 21:54	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/Kg			08/13/19 21:54	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/Kg			08/13/19 21:54	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/Kg			08/13/19 21:54	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/Kg			08/13/19 21:54	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/Kg			08/13/19 21:54	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/Kg			08/13/19 21:54	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/Kg			08/13/19 21:54	1
Ethylbenzene	<0.18		0.25	0.18	ug/Kg			08/13/19 21:54	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/Kg			08/13/19 21:54	1
Isopropylbenzene	<0.38		1.0	0.38	ug/Kg			08/13/19 21:54	1
Isopropyl ether	<0.28		1.0	0.28	ug/Kg			08/13/19 21:54	1
Methylene Chloride	<1.6		5.0	1.6	ug/Kg			08/13/19 21:54	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/Kg			08/13/19 21:54	1
Naphthalene	<0.33		1.0	0.33	ug/Kg			08/13/19 21:54	1
n-Butylbenzene	<0.39		1.0	0.39	ug/Kg			08/13/19 21:54	1
N-Propylbenzene	<0.41		1.0	0.41	ug/Kg			08/13/19 21:54	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/Kg			08/13/19 21:54	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/Kg			08/13/19 21:54	1
Styrene	<0.39		1.0	0.39	ug/Kg			08/13/19 21:54	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/Kg			08/13/19 21:54	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/Kg			08/13/19 21:54	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/Kg			08/13/19 21:54	1
Tetrachloroethene	<0.37		1.0	0.37	ug/Kg			08/13/19 21:54	1
Toluene	<0.15		0.25	0.15	ug/Kg			08/13/19 21:54	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/Kg			08/13/19 21:54	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/Kg			08/13/19 21:54	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/Kg			08/13/19 21:54	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/Kg			08/13/19 21:54	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/Kg			08/13/19 21:54	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/Kg			08/13/19 21:54	1
Trichloroethene	<0.16		0.50	0.16	ug/Kg			08/13/19 21:54	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-499516/6
Matrix: Solid
Analysis Batch: 499516

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	<0.43		1.0	0.43	ug/Kg			08/13/19 21:54	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/Kg			08/13/19 21:54	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/Kg			08/13/19 21:54	1
1,3,5-Trimethylbenzene	<0.38		1.0	0.38	ug/Kg			08/13/19 21:54	1
Vinyl chloride	<0.26		1.0	0.26	ug/Kg			08/13/19 21:54	1
Xylenes, Total	<0.22		0.50	0.22	ug/Kg			08/13/19 21:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*72 - 124*		*08/13/19 21:54*	*1*
Dibromofluoromethane (Surr)	*96*		*75 - 120*		*08/13/19 21:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*75 - 126*		*08/13/19 21:54*	*1*
Toluene-d8 (Surr)	*92*		*75 - 120*		*08/13/19 21:54*	*1*

Lab Sample ID: LCS 500-499516/4
Matrix: Solid
Analysis Batch: 499516

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	45.4		ug/Kg		91	70 - 120
Bromobenzene	50.0	46.7		ug/Kg		93	70 - 122
Bromochloromethane	50.0	47.7		ug/Kg		95	65 - 122
Bromodichloromethane	50.0	41.4		ug/Kg		83	69 - 120
Bromoform	50.0	45.6		ug/Kg		91	56 - 132
Bromomethane	50.0	50.0		ug/Kg		100	40 - 152
Carbon tetrachloride	50.0	45.1		ug/Kg		90	59 - 133
Chlorobenzene	50.0	44.0		ug/Kg		88	70 - 120
Chloroethane	50.0	51.7		ug/Kg		103	48 - 136
Chloroform	50.0	43.8		ug/Kg		88	70 - 120
Chloromethane	50.0	56.9		ug/Kg		114	56 - 152
2-Chlorotoluene	50.0	45.9		ug/Kg		92	70 - 125
4-Chlorotoluene	50.0	44.8		ug/Kg		90	68 - 124
cis-1,2-Dichloroethene	50.0	47.6		ug/Kg		95	70 - 125
cis-1,3-Dichloropropene	50.0	40.4		ug/Kg		81	64 - 127
Dibromochloromethane	50.0	42.1		ug/Kg		84	68 - 125
1,2-Dibromo-3-Chloropropane	50.0	37.5		ug/Kg		75	56 - 123
1,2-Dibromoethane	50.0	44.2		ug/Kg		88	70 - 125
Dibromomethane	50.0	43.0		ug/Kg		86	70 - 120
1,2-Dichlorobenzene	50.0	47.8		ug/Kg		96	70 - 125
1,3-Dichlorobenzene	50.0	48.1		ug/Kg		96	70 - 125
1,4-Dichlorobenzene	50.0	46.7		ug/Kg		93	70 - 120
Dichlorodifluoromethane	50.0	36.6		ug/Kg		73	40 - 159
1,1-Dichloroethane	50.0	48.2		ug/Kg		96	70 - 125
1,2-Dichloroethane	50.0	41.9		ug/Kg		84	68 - 127
1,1-Dichloroethene	50.0	44.7		ug/Kg		89	67 - 122
1,2-Dichloropropane	50.0	47.4		ug/Kg		95	67 - 130
1,3-Dichloropropane	50.0	43.2		ug/Kg		86	62 - 136
2,2-Dichloropropane	50.0	49.7		ug/Kg		99	58 - 139
1,1-Dichloropropene	50.0	46.1		ug/Kg		92	70 - 121

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-499516/4
Matrix: Solid
Analysis Batch: 499516

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	50.0	47.0		ug/Kg		94	70 - 123
Hexachlorobutadiene	50.0	48.8		ug/Kg		98	51 - 150
Isopropylbenzene	50.0	45.9		ug/Kg		92	70 - 126
Methylene Chloride	50.0	46.4		ug/Kg		93	69 - 125
Methyl tert-butyl ether	50.0	44.1		ug/Kg		88	55 - 123
Naphthalene	50.0	43.2		ug/Kg		86	53 - 144
n-Butylbenzene	50.0	47.4		ug/Kg		95	68 - 125
N-Propylbenzene	50.0	46.8		ug/Kg		94	69 - 127
p-Isopropyltoluene	50.0	47.1		ug/Kg		94	70 - 125
sec-Butylbenzene	50.0	47.3		ug/Kg		95	70 - 123
Styrene	50.0	47.0		ug/Kg		94	70 - 120
tert-Butylbenzene	50.0	46.2		ug/Kg		92	70 - 121
1,1,1,2-Tetrachloroethane	50.0	46.0		ug/Kg		92	70 - 125
1,1,2,2-Tetrachloroethane	50.0	45.9		ug/Kg		92	62 - 140
Tetrachloroethene	50.0	45.5		ug/Kg		91	70 - 128
Toluene	50.0	42.0		ug/Kg		84	70 - 125
trans-1,2-Dichloroethene	50.0	47.1		ug/Kg		94	70 - 125
trans-1,3-Dichloropropene	50.0	40.1		ug/Kg		80	62 - 128
1,2,3-Trichlorobenzene	50.0	44.7		ug/Kg		89	51 - 145
1,2,4-Trichlorobenzene	50.0	45.1		ug/Kg		90	57 - 137
1,1,1-Trichloroethane	50.0	47.8		ug/Kg		96	70 - 125
1,1,2-Trichloroethane	50.0	41.6		ug/Kg		83	71 - 130
Trichloroethene	50.0	43.9		ug/Kg		88	70 - 125
Trichlorofluoromethane	50.0	43.7		ug/Kg		87	55 - 128
1,2,3-Trichloropropane	50.0	43.3		ug/Kg		87	50 - 133
1,2,4-Trimethylbenzene	50.0	45.6		ug/Kg		91	70 - 123
1,3,5-Trimethylbenzene	50.0	45.6		ug/Kg		91	70 - 123
Vinyl chloride	50.0	48.5		ug/Kg		97	64 - 126
Xylenes, Total	100	89.0		ug/Kg		89	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*72 - 124*
Dibromofluoromethane (Surr)	*97*		*75 - 120*
1,2-Dichloroethane-d4 (Surr)	*93*		*75 - 126*
Toluene-d8 (Surr)	*95*		*75 - 120*

Lab Sample ID: LB 500-499026/1-A
Matrix: Solid
Analysis Batch: 499147

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.010		0.020	0.010	mg/L			08/12/19 10:31	20
Methyl Ethyl Ketone	<0.050		0.10	0.050	mg/L			08/12/19 10:31	20
Carbon tetrachloride	<0.010		0.020	0.010	mg/L			08/12/19 10:31	20
Chlorobenzene	<0.010		0.020	0.010	mg/L			08/12/19 10:31	20
Chloroform	<0.020		0.040	0.020	mg/L			08/12/19 10:31	20
1,2-Dichloroethane	<0.010		0.020	0.010	mg/L			08/12/19 10:31	20
1,1-Dichloroethene	<0.010		0.020	0.010	mg/L			08/12/19 10:31	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LB 500-499026/1-A
Matrix: Solid
Analysis Batch: 499147

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	<0.010		0.020	0.010	mg/L			08/12/19 10:31	20
Trichloroethene	<0.010		0.020	0.010	mg/L			08/12/19 10:31	20
Vinyl chloride	<0.010		0.020	0.010	mg/L			08/12/19 10:31	20

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*72 - 124*		*08/12/19 10:31*	*20*
Dibromofluoromethane (Surr)	*100*		*75 - 120*		*08/12/19 10:31*	*20*
1,2-Dichloroethane-d4 (Surr)	*107*		*75 - 126*		*08/12/19 10:31*	*20*
Toluene-d8 (Surr)	*101*		*75 - 120*		*08/12/19 10:31*	*20*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-498637/1-A
Matrix: Solid
Analysis Batch: 498694

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498637

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<6.0		33	6.0	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Acenaphthylene	<4.4		33	4.4	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Anthracene	<5.6		33	5.6	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Benzo[a]anthracene	<4.5		33	4.5	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Benzo[a]pyrene	<6.4		33	6.4	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Benzo[b]fluoranthene	<7.2		33	7.2	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Benzo[g,h,i]perylene	<11		33	11	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Benzoic acid	<330		1700	330	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Benzo[k]fluoranthene	<9.8		33	9.8	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Benzyl alcohol	<330		670	330	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Bis(2-chloroethoxy)methane	<34		170	34	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Bis(2-chloroethyl)ether	<50		170	50	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Bis(2-ethylhexyl) phthalate	<61		170	61	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
4-Bromophenyl phenyl ether	<44		170	44	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Butyl benzyl phthalate	<63		170	63	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Carbazole	<83		170	83	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
4-Chloroaniline	<160		670	160	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
4-Chloro-3-methylphenol	<110		330	110	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
2-Chloronaphthalene	<37		170	37	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
2-Chlorophenol	<57		170	57	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
4-Chlorophenyl phenyl ether	<39		170	39	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Chrysene	<9.1		33	9.1	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Dibenz(a,h)anthracene	<6.4		33	6.4	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Dibenzofuran	<39		170	39	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
1,2-Dichlorobenzene	<40		170	40	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
1,3-Dichlorobenzene	<37		170	37	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
1,4-Dichlorobenzene	<43		170	43	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
3,3'-Dichlorobenzidine	<47		170	47	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
2,4-Dichlorophenol	<79		330	79	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Diethyl phthalate	<56		170	56	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
2,4-Dimethylphenol	<130		330	130	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Dimethyl phthalate	<43		170	43	ug/Kg		08/07/19 18:48	08/08/19 12:53	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-498637/1-A
Matrix: Solid
Analysis Batch: 498694

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498637

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	<51		170	51	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
4,6-Dinitro-2-methylphenol	<270		670	270	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
2,4-Dinitrophenol	<590		670	590	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
2,4-Dinitrotoluene	<53		170	53	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
2,6-Dinitrotoluene	<65		170	65	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Di-n-octyl phthalate	<54		170	54	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Fluoranthene	<6.2		33	6.2	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Fluorene	<4.7		33	4.7	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Hexachlorobenzene	<7.7		67	7.7	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Hexachlorobutadiene	<52		170	52	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Hexachlorocyclopentadiene	<190		670	190	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Hexachloroethane	<51		170	51	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Indeno[1,2,3-cd]pyrene	<8.6		33	8.6	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Isophorone	<37		170	37	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
1-Methylnaphthalene	<8.1		67	8.1	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
2-Methylnaphthalene	<6.1		67	6.1	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
2-Methylphenol	<53		170	53	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
3 & 4 Methylphenol	<55		170	55	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Naphthalene	<5.1		33	5.1	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
2-Nitroaniline	<45		170	45	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
3-Nitroaniline	<100		330	100	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
4-Nitroaniline	<140		330	140	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Nitrobenzene	<8.3		33	8.3	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
2-Nitrophenol	<79		330	79	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
4-Nitrophenol	<320		670	320	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
N-Nitrosodi-n-propylamine	<41		67	41	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
N-Nitrosodiphenylamine	<39		170	39	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
2,2'-oxybis[1-chloropropane]	<39		170	39	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Pentachlorophenol	<530		670	530	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Phenanthrene	<4.6		33	4.6	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Phenol	<74		170	74	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
Pyrene	<6.6		33	6.6	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
1,2,4-Trichlorobenzene	<36		170	36	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
2,4,5-Trichlorophenol	<76		330	76	ug/Kg		08/07/19 18:48	08/08/19 12:53	1
2,4,6-Trichlorophenol	<110		330	110	ug/Kg		08/07/19 18:48	08/08/19 12:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*100*		*43 - 145*	*08/07/19 18:48*	*08/08/19 12:53*	*1*
2-Fluorophenol (Surr)	*108*		*31 - 166*	*08/07/19 18:48*	*08/08/19 12:53*	*1*
Nitrobenzene-d5 (Surr)	*80*		*37 - 147*	*08/07/19 18:48*	*08/08/19 12:53*	*1*
Phenol-d5 (Surr)	*96*		*30 - 153*	*08/07/19 18:48*	*08/08/19 12:53*	*1*
Terphenyl-d14 (Surr)	*137*		*42 - 157*	*08/07/19 18:48*	*08/08/19 12:53*	*1*
2,4,6-Tribromophenol (Surr)	*75*		*31 - 143*	*08/07/19 18:48*	*08/08/19 12:53*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-498637/2-A
Matrix: Solid
Analysis Batch: 498694

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498637

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	1330	1350		ug/Kg		101	65 - 124
Acenaphthylene	1330	1310		ug/Kg		98	68 - 120
Anthracene	1330	1410		ug/Kg		106	70 - 114
Benzo[a]anthracene	1330	1370		ug/Kg		103	67 - 122
Benzo[a]pyrene	1330	1300		ug/Kg		97	65 - 133
Benzo[b]fluoranthene	1330	1290		ug/Kg		97	69 - 129
Benzo[g,h,i]perylene	1330	1360		ug/Kg		102	72 - 131
Benzoic acid	2670	471	J	ug/Kg		18	10 - 100
Benzo[k]fluoranthene	1330	1310		ug/Kg		98	68 - 127
Benzyl alcohol	1330	890		ug/Kg		67	21 - 139
Bis(2-chloroethoxy)methane	1330	1130		ug/Kg		84	60 - 112
Bis(2-chloroethyl)ether	1330	972		ug/Kg		73	55 - 111
Bis(2-ethylhexyl) phthalate	1330	1360		ug/Kg		102	72 - 131
4-Bromophenyl phenyl ether	1330	1330		ug/Kg		100	68 - 118
Butyl benzyl phthalate	1330	1250		ug/Kg		94	71 - 129
Carbazole	1330	1450		ug/Kg		109	65 - 142
4-Chloroaniline	1330	1070		ug/Kg		80	30 - 150
4-Chloro-3-methylphenol	1330	1210		ug/Kg		91	65 - 122
2-Chloronaphthalene	1330	1270		ug/Kg		95	69 - 114
2-Chlorophenol	1330	1170		ug/Kg		88	64 - 110
4-Chlorophenyl phenyl ether	1330	1260		ug/Kg		95	62 - 119
Chrysene	1330	1280		ug/Kg		96	63 - 120
Dibenz(a,h)anthracene	1330	1370		ug/Kg		103	64 - 131
Dibenzofuran	1330	1270		ug/Kg		95	66 - 115
1,2-Dichlorobenzene	1330	1120		ug/Kg		84	62 - 110
1,3-Dichlorobenzene	1330	1110		ug/Kg		83	65 - 124
1,4-Dichlorobenzene	1330	1130		ug/Kg		85	61 - 110
3,3'-Dichlorobenzidine	1330	1030		ug/Kg		77	35 - 128
2,4-Dichlorophenol	1330	1230		ug/Kg		92	58 - 120
Diethyl phthalate	1330	1350		ug/Kg		101	58 - 120
2,4-Dimethylphenol	1330	1190		ug/Kg		89	60 - 110
Dimethyl phthalate	1330	1230		ug/Kg		92	69 - 116
Di-n-butyl phthalate	1330	1370		ug/Kg		103	65 - 120
4,6-Dinitro-2-methylphenol	2670	620	J	ug/Kg		23	10 - 110
2,4-Dinitrophenol	2670	<590		ug/Kg		21	10 - 100
2,4-Dinitrotoluene	1330	1270		ug/Kg		95	69 - 124
2,6-Dinitrotoluene	1330	1260		ug/Kg		95	70 - 123
Di-n-octyl phthalate	1330	1400		ug/Kg		105	68 - 134
Fluoranthene	1330	1400		ug/Kg		105	62 - 120
Fluorene	1330	1350		ug/Kg		101	62 - 120
Hexachlorobenzene	1330	1470		ug/Kg		110	63 - 124
Hexachlorobutadiene	1330	1240		ug/Kg		93	56 - 120
Hexachlorocyclopentadiene	1330	660	J	ug/Kg		49	10 - 133
Hexachloroethane	1330	1120		ug/Kg		84	60 - 114
Indeno[1,2,3-cd]pyrene	1330	1370		ug/Kg		103	68 - 130
Isophorone	1330	1120		ug/Kg		84	55 - 110
1-Methylnaphthalene	1330	1230		ug/Kg		92	68 - 111
2-Methylnaphthalene	1330	1240		ug/Kg		93	69 - 112

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-498637/2-A
Matrix: Solid
Analysis Batch: 498694

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498637

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylphenol	1330	1060		ug/Kg		80	60 - 120
3 & 4 Methylphenol	1330	1100		ug/Kg		83	57 - 120
Naphthalene	1330	1230		ug/Kg		93	63 - 110
2-Nitroaniline	1330	1220		ug/Kg		92	57 - 124
3-Nitroaniline	1330	989		ug/Kg		74	40 - 122
4-Nitroaniline	1330	1120		ug/Kg		84	60 - 160
Nitrobenzene	1330	1150		ug/Kg		86	60 - 116
2-Nitrophenol	1330	1230		ug/Kg		92	60 - 120
4-Nitrophenol	2670	1450		ug/Kg		55	30 - 122
N-Nitrosodi-n-propylamine	1330	1160		ug/Kg		87	56 - 118
N-Nitrosodiphenylamine	1330	1370		ug/Kg		103	65 - 112
2,2'-oxybis[1-chloropropane]	1330	1140		ug/Kg		86	40 - 124
Pentachlorophenol	2670	1360		ug/Kg		51	13 - 112
Phenanthrene	1330	1370		ug/Kg		103	62 - 120
Phenol	1330	1140		ug/Kg		85	56 - 122
Pyrene	1330	1290		ug/Kg		97	61 - 128
1,2,4-Trichlorobenzene	1330	1250		ug/Kg		94	66 - 117
2,4,5-Trichlorophenol	1330	1180		ug/Kg		89	50 - 120
2,4,6-Trichlorophenol	1330	1130		ug/Kg		85	57 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*108*		*43 - 145*
2-Fluorophenol (Surr)	*104*		*31 - 166*
Nitrobenzene-d5 (Surr)	*83*		*37 - 147*
Phenol-d5 (Surr)	*95*		*30 - 153*
Terphenyl-d14 (Surr)	*109*		*42 - 157*
2,4,6-Tribromophenol (Surr)	*83*		*31 - 143*

Lab Sample ID: MB 500-498673/1-A
Matrix: Water
Analysis Batch: 498700

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498673

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.25		0.80	0.25	ug/L		08/08/19 07:37	08/08/19 15:13	1
Acenaphthylene	<0.21		0.80	0.21	ug/L		08/08/19 07:37	08/08/19 15:13	1
Anthracene	<0.27		0.80	0.27	ug/L		08/08/19 07:37	08/08/19 15:13	1
Benzo[a]anthracene	<0.045		0.16	0.045	ug/L		08/08/19 07:37	08/08/19 15:13	1
Benzo[a]pyrene	<0.079		0.16	0.079	ug/L		08/08/19 07:37	08/08/19 15:13	1
Benzo[b]fluoranthene	<0.065		0.16	0.065	ug/L		08/08/19 07:37	08/08/19 15:13	1
Benzo[g,h,i]perylene	<0.30		0.80	0.30	ug/L		08/08/19 07:37	08/08/19 15:13	1
Benzoic acid	<4.6		16	4.6	ug/L		08/08/19 07:37	08/08/19 15:13	1
Benzo[k]fluoranthene	<0.051		0.16	0.051	ug/L		08/08/19 07:37	08/08/19 15:13	1
Benzyl alcohol	<4.8		16	4.8	ug/L		08/08/19 07:37	08/08/19 15:13	1
Bis(2-chloroethoxy)methane	<0.23		1.6	0.23	ug/L		08/08/19 07:37	08/08/19 15:13	1
Bis(2-chloroethyl)ether	<0.23		1.6	0.23	ug/L		08/08/19 07:37	08/08/19 15:13	1
Bis(2-ethylhexyl) phthalate	<1.4		8.0	1.4	ug/L		08/08/19 07:37	08/08/19 15:13	1
4-Bromophenyl phenyl ether	<0.43		4.0	0.43	ug/L		08/08/19 07:37	08/08/19 15:13	1
Butyl benzyl phthalate	<0.38		1.6	0.38	ug/L		08/08/19 07:37	08/08/19 15:13	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-498673/1-A
Matrix: Water
Analysis Batch: 498700

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498673

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbazole	<0.28		4.0	0.28	ug/L		08/08/19 07:37	08/08/19 15:13	1
4-Chloroaniline	<1.6		8.0	1.6	ug/L		08/08/19 07:37	08/08/19 15:13	1
4-Chloro-3-methylphenol	<1.8		8.0	1.8	ug/L		08/08/19 07:37	08/08/19 15:13	1
2-Chloronaphthalene	<0.19		1.6	0.19	ug/L		08/08/19 07:37	08/08/19 15:13	1
2-Chlorophenol	<0.45		4.0	0.45	ug/L		08/08/19 07:37	08/08/19 15:13	1
4-Chlorophenyl phenyl ether	<0.51		4.0	0.51	ug/L		08/08/19 07:37	08/08/19 15:13	1
Chrysene	<0.055		0.16	0.055	ug/L		08/08/19 07:37	08/08/19 15:13	1
Dibenz(a,h)anthracene	<0.041		0.24	0.041	ug/L		08/08/19 07:37	08/08/19 15:13	1
Dibenzofuran	<0.21		1.6	0.21	ug/L		08/08/19 07:37	08/08/19 15:13	1
1,2-Dichlorobenzene	<0.20		1.6	0.20	ug/L		08/08/19 07:37	08/08/19 15:13	1
1,3-Dichlorobenzene	<0.17		1.6	0.17	ug/L		08/08/19 07:37	08/08/19 15:13	1
1,4-Dichlorobenzene	<0.17		1.6	0.17	ug/L		08/08/19 07:37	08/08/19 15:13	1
3,3'-Dichlorobenzidine	<1.4		4.0	1.4	ug/L		08/08/19 07:37	08/08/19 15:13	1
2,4-Dichlorophenol	<2.1		8.0	2.1	ug/L		08/08/19 07:37	08/08/19 15:13	1
Diethyl phthalate	<0.29		4.0	0.29	ug/L		08/08/19 07:37	08/08/19 15:13	1
2,4-Dimethylphenol	<1.4		8.0	1.4	ug/L		08/08/19 07:37	08/08/19 15:13	1
Dimethyl phthalate	<0.25		4.0	0.25	ug/L		08/08/19 07:37	08/08/19 15:13	1
Di-n-butyl phthalate	<0.58		4.0	0.58	ug/L		08/08/19 07:37	08/08/19 15:13	1
4,6-Dinitro-2-methylphenol	<4.7		16	4.7	ug/L		08/08/19 07:37	08/08/19 15:13	1
2,4-Dinitrophenol	<6.9		16	6.9	ug/L		08/08/19 07:37	08/08/19 15:13	1
2,4-Dinitrotoluene	<0.20		0.80	0.20	ug/L		08/08/19 07:37	08/08/19 15:13	1
2,6-Dinitrotoluene	<0.059		0.80	0.059	ug/L		08/08/19 07:37	08/08/19 15:13	1
Di-n-octyl phthalate	<0.84		8.0	0.84	ug/L		08/08/19 07:37	08/08/19 15:13	1
Fluoranthene	<0.36		0.80	0.36	ug/L		08/08/19 07:37	08/08/19 15:13	1
Fluorene	<0.20		0.80	0.20	ug/L		08/08/19 07:37	08/08/19 15:13	1
Hexachlorobenzene	<0.064		0.40	0.064	ug/L		08/08/19 07:37	08/08/19 15:13	1
Hexachlorobutadiene	<0.41		4.0	0.41	ug/L		08/08/19 07:37	08/08/19 15:13	1
Hexachlorocyclopentadiene	<5.1		16	5.1	ug/L		08/08/19 07:37	08/08/19 15:13	1
Hexachloroethane	<0.48		4.0	0.48	ug/L		08/08/19 07:37	08/08/19 15:13	1
Indeno[1,2,3-cd]pyrene	<0.060		0.16	0.060	ug/L		08/08/19 07:37	08/08/19 15:13	1
Isophorone	<0.30		1.6	0.30	ug/L		08/08/19 07:37	08/08/19 15:13	1
1-Methylnaphthalene	<0.24		1.6	0.24	ug/L		08/08/19 07:37	08/08/19 15:13	1
2-Methylnaphthalene	<0.052		1.6	0.052	ug/L		08/08/19 07:37	08/08/19 15:13	1
2-Methylphenol	<0.24		1.6	0.24	ug/L		08/08/19 07:37	08/08/19 15:13	1
3 & 4 Methylphenol	<0.36		1.6	0.36	ug/L		08/08/19 07:37	08/08/19 15:13	1
Naphthalene	<0.25		0.80	0.25	ug/L		08/08/19 07:37	08/08/19 15:13	1
2-Nitroaniline	<1.0		4.0	1.0	ug/L		08/08/19 07:37	08/08/19 15:13	1
3-Nitroaniline	<1.4		8.0	1.4	ug/L		08/08/19 07:37	08/08/19 15:13	1
4-Nitroaniline	<1.3		8.0	1.3	ug/L		08/08/19 07:37	08/08/19 15:13	1
Nitrobenzene	<0.36		0.80	0.36	ug/L		08/08/19 07:37	08/08/19 15:13	1
2-Nitrophenol	<2.0		8.0	2.0	ug/L		08/08/19 07:37	08/08/19 15:13	1
4-Nitrophenol	<5.9		16	5.9	ug/L		08/08/19 07:37	08/08/19 15:13	1
N-Nitrosodi-n-propylamine	<0.12		0.40	0.12	ug/L		08/08/19 07:37	08/08/19 15:13	1
N-Nitrosodiphenylamine	<0.30		1.6	0.30	ug/L		08/08/19 07:37	08/08/19 15:13	1
2,2'-oxybis[1-chloropropane]	<0.30		1.6	0.30	ug/L		08/08/19 07:37	08/08/19 15:13	1
Pentachlorophenol	<3.2		16	3.2	ug/L		08/08/19 07:37	08/08/19 15:13	1
Phenanthrene	<0.24		0.80	0.24	ug/L		08/08/19 07:37	08/08/19 15:13	1
Phenol	<0.54		4.0	0.54	ug/L		08/08/19 07:37	08/08/19 15:13	1
Pyrene	<0.34		0.80	0.34	ug/L		08/08/19 07:37	08/08/19 15:13	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-498673/1-A
Matrix: Water
Analysis Batch: 498700

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498673

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.19		1.6	0.19	ug/L		08/08/19 07:37	08/08/19 15:13	1
2,4,5-Trichlorophenol	<2.1		8.0	2.1	ug/L		08/08/19 07:37	08/08/19 15:13	1
2,4,6-Trichlorophenol	<0.57		4.0	0.57	ug/L		08/08/19 07:37	08/08/19 15:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*76*		*34 - 110*	*08/08/19 07:37*	*08/08/19 15:13*	*1*
2-Fluorophenol (Surr)	*75*		*27 - 110*	*08/08/19 07:37*	*08/08/19 15:13*	*1*
Nitrobenzene-d5 (Surr)	*107*		*36 - 120*	*08/08/19 07:37*	*08/08/19 15:13*	*1*
Phenol-d5 (Surr)	*67*		*20 - 110*	*08/08/19 07:37*	*08/08/19 15:13*	*1*
Terphenyl-d14 (Surr)	*109*		*40 - 145*	*08/08/19 07:37*	*08/08/19 15:13*	*1*
2,4,6-Tribromophenol (Surr)	*119*		*40 - 145*	*08/08/19 07:37*	*08/08/19 15:13*	*1*

Lab Sample ID: LCS 500-498673/2-A
Matrix: Water
Analysis Batch: 498700

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498673

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	32.0	22.8		ug/L		71	46 - 110
Acenaphthylene	32.0	23.1		ug/L		72	47 - 113
Anthracene	32.0	27.1		ug/L		85	67 - 118
Benzo[a]anthracene	32.0	29.6		ug/L		93	70 - 126
Benzo[a]pyrene	32.0	31.3		ug/L		98	70 - 135
Benzo[b]fluoranthene	32.0	27.6		ug/L		86	69 - 136
Benzo[g,h,i]perylene	32.0	33.2		ug/L		104	70 - 135
Benzoic acid	64.0	<4.6	*	ug/L		4	10 - 112
Benzo[k]fluoranthene	32.0	28.7		ug/L		90	70 - 133
Benzyl alcohol	32.0	27.6		ug/L		86	46 - 132
Bis(2-chloroethoxy)methane	32.0	28.7		ug/L		90	59 - 118
Bis(2-chloroethyl)ether	32.0	25.4		ug/L		79	54 - 112
Bis(2-ethylhexyl) phthalate	32.0	32.0		ug/L		100	69 - 136
4-Bromophenyl phenyl ether	32.0	27.4		ug/L		86	58 - 120
Butyl benzyl phthalate	32.0	31.2		ug/L		98	68 - 135
Carbazole	32.0	25.7		ug/L		80	61 - 145
4-Chloroaniline	32.0	25.8		ug/L		81	35 - 128
4-Chloro-3-methylphenol	32.0	30.9		ug/L		97	64 - 128
2-Chloronaphthalene	32.0	20.6		ug/L		64	39 - 110
2-Chlorophenol	32.0	25.4		ug/L		79	59 - 110
4-Chlorophenyl phenyl ether	32.0	23.8		ug/L		74	48 - 116
Chrysene	32.0	29.8		ug/L		93	68 - 129
Dibenz(a,h)anthracene	32.0	34.5		ug/L		108	70 - 134
Dibenzofuran	32.0	23.3		ug/L		73	51 - 110
1,2-Dichlorobenzene	32.0	16.1		ug/L		50	26 - 110
1,3-Dichlorobenzene	32.0	15.8		ug/L		49	22 - 110
1,4-Dichlorobenzene	32.0	15.6		ug/L		49	23 - 110
3,3'-Dichlorobenzidine	32.0	27.1		ug/L		85	60 - 132
2,4-Dichlorophenol	32.0	24.2		ug/L		76	58 - 120
Diethyl phthalate	32.0	28.7		ug/L		90	62 - 123
2,4-Dimethylphenol	32.0	27.4		ug/L		86	51 - 115

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-498673/2-A
Matrix: Water
Analysis Batch: 498700

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498673

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dimethyl phthalate	32.0	26.4		ug/L		82	63 - 122
Di-n-butyl phthalate	32.0	30.6		ug/L		96	69 - 129
4,6-Dinitro-2-methylphenol	64.0	55.2		ug/L		86	50 - 129
2,4-Dinitrophenol	64.0	47.1		ug/L		74	37 - 130
2,4-Dinitrotoluene	32.0	29.0		ug/L		91	63 - 129
2,6-Dinitrotoluene	32.0	28.4		ug/L		89	63 - 129
Di-n-octyl phthalate	32.0	31.7		ug/L		99	68 - 137
Fluoranthene	32.0	29.1		ug/L		91	68 - 126
Fluorene	32.0	24.0		ug/L		75	53 - 120
Hexachlorobenzene	32.0	31.2		ug/L		98	61 - 126
Hexachlorobutadiene	32.0	17.0		ug/L		53	20 - 100
Hexachlorocyclopentadiene	32.0	17.6		ug/L		55	10 - 105
Hexachloroethane	32.0	18.3		ug/L		57	20 - 100
Indeno[1,2,3-cd]pyrene	32.0	35.3		ug/L		110	65 - 133
Isophorone	32.0	28.8		ug/L		90	54 - 127
1-Methylnaphthalene	32.0	19.0		ug/L		59	38 - 110
2-Methylnaphthalene	32.0	19.6		ug/L		61	34 - 110
2-Methylphenol	32.0	24.9		ug/L		78	53 - 115
3 & 4 Methylphenol	32.0	26.1		ug/L		82	50 - 116
Naphthalene	32.0	19.8		ug/L		62	36 - 110
2-Nitroaniline	32.0	36.6		ug/L		114	59 - 138
3-Nitroaniline	32.0	26.0		ug/L		81	47 - 123
4-Nitroaniline	32.0	21.4		ug/L		67	35 - 110
Nitrobenzene	32.0	29.2		ug/L		91	54 - 121
2-Nitrophenol	32.0	23.9		ug/L		75	59 - 115
4-Nitrophenol	64.0	50.0		ug/L		78	20 - 110
N-Nitrosodi-n-propylamine	32.0	25.6		ug/L		80	47 - 131
N-Nitrosodiphenylamine	32.0	26.7		ug/L		83	66 - 120
2,2'-oxybis[1-chloropropane]	32.0	28.9		ug/L		90	38 - 140
Pentachlorophenol	64.0	56.6		ug/L		88	42 - 148
Phenanthrene	32.0	27.3		ug/L		85	65 - 120
Phenol	32.0	18.8		ug/L		59	33 - 100
Pyrene	32.0	29.8		ug/L		93	70 - 126
1,2,4-Trichlorobenzene	32.0	17.4		ug/L		54	26 - 110
2,4,5-Trichlorophenol	32.0	28.1		ug/L		88	63 - 124
2,4,6-Trichlorophenol	32.0	28.3		ug/L		89	62 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*68*		*34 - 110*
2-Fluorophenol (Surr)	*80*		*27 - 110*
Nitrobenzene-d5 (Surr)	*98*		*36 - 120*
Phenol-d5 (Surr)	*61*		*20 - 110*
Terphenyl-d14 (Surr)	*101*		*40 - 145*
2,4,6-Tribromophenol (Surr)	*124*		*40 - 145*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 500-498673/3-A
Matrix: Water
Analysis Batch: 498700

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 498673

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene			32.0	20.1		ug/L		63	46 - 110	12	20
Acenaphthylene			32.0	21.3		ug/L		67	47 - 113	8	20
Anthracene			32.0	27.0		ug/L		84	67 - 118	1	20
Benzo[a]anthracene			32.0	27.7		ug/L		87	70 - 126	7	20
Benzo[a]pyrene			32.0	28.9		ug/L		90	70 - 135	8	20
Benzo[b]fluoranthene			32.0	26.8		ug/L		84	69 - 136	3	20
Benzo[g,h,i]perylene			32.0	31.3		ug/L		98	70 - 135	6	20
Benzoic acid			64.0	6.95	J *	ug/L		11	10 - 112	95	20
Benzo[k]fluoranthene			32.0	29.8		ug/L		93	70 - 133	4	20
Benzyl alcohol			32.0	26.4		ug/L		82	46 - 132	4	20
Bis(2-chloroethoxy)methane			32.0	28.9		ug/L		90	59 - 118	0	20
Bis(2-chloroethyl)ether			32.0	25.4		ug/L		80	54 - 112	0	20
Bis(2-ethylhexyl) phthalate			32.0	30.1		ug/L		94	69 - 136	6	20
4-Bromophenyl phenyl ether			32.0	27.0		ug/L		85	58 - 120	1	20
Butyl benzyl phthalate			32.0	29.3		ug/L		92	68 - 135	6	20
Carbazole			32.0	25.7		ug/L		80	61 - 145	0	20
4-Chloroaniline			32.0	25.4		ug/L		79	35 - 128	2	20
4-Chloro-3-methylphenol			32.0	31.0		ug/L		97	64 - 128	0	20
2-Chloronaphthalene			32.0	17.0		ug/L		53	39 - 110	19	20
2-Chlorophenol			32.0	26.1		ug/L		82	59 - 110	3	20
4-Chlorophenyl phenyl ether			32.0	23.5		ug/L		74	48 - 116	1	20
Chrysene			32.0	27.0		ug/L		84	68 - 129	10	20
Dibenz(a,h)anthracene			32.0	32.2		ug/L		101	70 - 134	7	20
Dibenzofuran			32.0	21.4		ug/L		67	51 - 110	9	20
1,2-Dichlorobenzene			32.0	10.9	*	ug/L		34	26 - 110	38	20
1,3-Dichlorobenzene			32.0	9.29	*	ug/L		29	22 - 110	52	20
1,4-Dichlorobenzene			32.0	10.4	*	ug/L		33	23 - 110	40	20
3,3'-Dichlorobenzidine			32.0	24.3		ug/L		76	60 - 132	11	20
2,4-Dichlorophenol			32.0	24.6		ug/L		77	58 - 120	2	20
Diethyl phthalate			32.0	29.8		ug/L		93	62 - 123	4	20
2,4-Dimethylphenol			32.0	26.7		ug/L		83	51 - 115	3	20
Dimethyl phthalate			32.0	27.2		ug/L		85	63 - 122	3	20
Di-n-butyl phthalate			32.0	29.8		ug/L		93	69 - 129	3	20
4,6-Dinitro-2-methylphenol			64.0	58.9		ug/L		92	50 - 129	6	20
2,4-Dinitrophenol			64.0	54.1		ug/L		85	37 - 130	14	20
2,4-Dinitrotoluene			32.0	30.5		ug/L		95	63 - 129	5	20
2,6-Dinitrotoluene			32.0	29.9		ug/L		93	63 - 129	5	20
Di-n-octyl phthalate			32.0	30.3		ug/L		95	68 - 137	5	20
Fluoranthene			32.0	28.3		ug/L		88	68 - 126	3	20
Fluorene			32.0	22.8		ug/L		71	53 - 120	5	20
Hexachlorobenzene			32.0	31.5		ug/L		98	61 - 126	1	20
Hexachlorobutadiene			32.0	8.10	*	ug/L		25	20 - 100	71	20
Hexachlorocyclopentadiene			32.0	9.34	J *	ug/L		29	10 - 105	62	20
Hexachloroethane			32.0	9.41	*	ug/L		29	20 - 100	64	20
Indeno[1,2,3-cd]pyrene			32.0	32.5		ug/L		102	65 - 133	8	20
Isophorone			32.0	28.1		ug/L		88	54 - 127	2	20
1-Methylnaphthalene			32.0	15.4	*	ug/L		48	38 - 110	21	20
2-Methylnaphthalene			32.0	14.8	*	ug/L		46	34 - 110	28	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 500-498673/3-A
Matrix: Water
Analysis Batch: 498700

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 498673

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Methylphenol			32.0	25.5		ug/L		80	53 - 115	2	20
3 & 4 Methylphenol			32.0	25.7		ug/L		80	50 - 116	2	20
Naphthalene			32.0	16.6		ug/L		52	36 - 110	18	20
2-Nitroaniline			32.0	36.1		ug/L		113	59 - 138	1	20
3-Nitroaniline			32.0	24.8		ug/L		78	47 - 123	5	20
4-Nitroaniline			32.0	20.1		ug/L		63	35 - 110	6	20
Nitrobenzene			32.0	28.9		ug/L		90	54 - 121	1	20
2-Nitrophenol			32.0	24.4		ug/L		76	59 - 115	2	20
4-Nitrophenol			64.0	48.8		ug/L		76	20 - 110	2	20
N-Nitrosodi-n-propylamine			32.0	27.2		ug/L		85	47 - 131	6	20
N-Nitrosodiphenylamine			32.0	28.1		ug/L		88	66 - 120	5	20
2,2'-oxybis[1-chloropropane]			32.0	28.0		ug/L		88	38 - 140	3	20
Pentachlorophenol			64.0	58.4		ug/L		91	42 - 148	3	20
Phenanthrene			32.0	27.2		ug/L		85	65 - 120	1	20
Phenol			32.0	18.8		ug/L		59	33 - 100	0	20
Pyrene			32.0	28.0		ug/L		87	70 - 126	6	20
1,2,4-Trichlorobenzene			32.0	11.1	*	ug/L		35	26 - 110	44	20
2,4,5-Trichlorophenol			32.0	28.7		ug/L		90	63 - 124	2	20
2,4,6-Trichlorophenol			32.0	28.7		ug/L		90	62 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*70*		*34 - 110*
2-Fluorophenol (Surr)	*78*		*27 - 110*
Nitrobenzene-d5 (Surr)	*96*		*36 - 120*
Phenol-d5 (Surr)	*61*		*20 - 110*
Terphenyl-d14 (Surr)	*91*		*40 - 145*
2,4,6-Tribromophenol (Surr)	*123*		*40 - 145*

Lab Sample ID: MB 500-499301/1-A
Matrix: Solid
Analysis Batch: 499351

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499301

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyridine	<0.020		0.020	0.020	mg/L		08/12/19 21:51	08/13/19 14:00	1
1,4-Dichlorobenzene	<0.0020		0.0020	0.0020	mg/L		08/12/19 21:51	08/13/19 14:00	1
2,4-Dinitrotoluene	<0.0010		0.0010	0.0010	mg/L		08/12/19 21:51	08/13/19 14:00	1
Hexachlorobenzene	<0.00050		0.00050	0.00050	mg/L		08/12/19 21:51	08/13/19 14:00	1
Hexachlorobutadiene	<0.0050		0.0050	0.0050	mg/L		08/12/19 21:51	08/13/19 14:00	1
Hexachloroethane	<0.0050		0.0050	0.0050	mg/L		08/12/19 21:51	08/13/19 14:00	1
2-Methylphenol	<0.0020		0.0020	0.0020	mg/L		08/12/19 21:51	08/13/19 14:00	1
3 & 4 Methylphenol	<0.0020		0.0020	0.0020	mg/L		08/12/19 21:51	08/13/19 14:00	1
Nitrobenzene	<0.0010		0.0010	0.0010	mg/L		08/12/19 21:51	08/13/19 14:00	1
Pentachlorophenol	<0.020		0.020	0.020	mg/L		08/12/19 21:51	08/13/19 14:00	1
2,4,5-Trichlorophenol	<0.010		0.010	0.010	mg/L		08/12/19 21:51	08/13/19 14:00	1
2,4,6-Trichlorophenol	<0.0050		0.0050	0.0050	mg/L		08/12/19 21:51	08/13/19 14:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*69*		*34 - 110*	*08/12/19 21:51*	*08/13/19 14:00*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-499301/1-A
Matrix: Solid
Analysis Batch: 499351

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499301

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	37		27 - 110	08/12/19 21:51	08/13/19 14:00	1
Nitrobenzene-d5 (Surr)	76		36 - 120	08/12/19 21:51	08/13/19 14:00	1
Phenol-d5 (Surr)	31		20 - 100	08/12/19 21:51	08/13/19 14:00	1
Terphenyl-d14 (Surr)	97		40 - 145	08/12/19 21:51	08/13/19 14:00	1
2,4,6-Tribromophenol (Surr)	80		40 - 145	08/12/19 21:51	08/13/19 14:00	1

Lab Sample ID: LCS 500-499301/2-A
Matrix: Solid
Analysis Batch: 499351

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499301

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pyridine	0.0800	0.0226		mg/L		28	15 - 110
1,4-Dichlorobenzene	0.0400	0.0221		mg/L		55	23 - 110
2,4-Dinitrotoluene	0.0400	0.0356		mg/L		89	63 - 129
Hexachlorobenzene	0.0400	0.0363		mg/L		91	61 - 126
Hexachlorobutadiene	0.0400	0.0215		mg/L		54	20 - 100
Hexachloroethane	0.0400	0.0202		mg/L		51	20 - 100
2-Methylphenol	0.0400	0.0269		mg/L		67	53 - 115
3 & 4 Methylphenol	0.0400	0.0225		mg/L		56	50 - 116
Nitrobenzene	0.0400	0.0304		mg/L		76	54 - 121
Pentachlorophenol	0.0800	0.0505		mg/L		63	42 - 148
2,4,5-Trichlorophenol	0.0400	0.0317		mg/L		79	63 - 124
2,4,6-Trichlorophenol	0.0400	0.0317		mg/L		79	62 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	77		34 - 110
2-Fluorophenol (Surr)	50		27 - 110
Nitrobenzene-d5 (Surr)	78		36 - 120
Phenol-d5 (Surr)	34		20 - 100
Terphenyl-d14 (Surr)	95		40 - 145
2,4,6-Tribromophenol (Surr)	90		40 - 145

Lab Sample ID: LB 500-498793/1-E
Matrix: Solid
Analysis Batch: 499351

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 499301

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyridine	<0.20		0.20	0.20	mg/L		08/12/19 21:51	08/13/19 13:08	1
1,4-Dichlorobenzene	<0.020		0.020	0.020	mg/L		08/12/19 21:51	08/13/19 13:08	1
2,4-Dinitrotoluene	<0.010		0.010	0.010	mg/L		08/12/19 21:51	08/13/19 13:08	1
Hexachlorobenzene	<0.0050		0.0050	0.0050	mg/L		08/12/19 21:51	08/13/19 13:08	1
Hexachlorobutadiene	<0.050		0.050	0.050	mg/L		08/12/19 21:51	08/13/19 13:08	1
Hexachloroethane	<0.050		0.050	0.050	mg/L		08/12/19 21:51	08/13/19 13:08	1
2-Methylphenol	<0.020		0.020	0.020	mg/L		08/12/19 21:51	08/13/19 13:08	1
3 & 4 Methylphenol	<0.020		0.020	0.020	mg/L		08/12/19 21:51	08/13/19 13:08	1
Nitrobenzene	<0.010		0.010	0.010	mg/L		08/12/19 21:51	08/13/19 13:08	1
Pentachlorophenol	<0.20		0.20	0.20	mg/L		08/12/19 21:51	08/13/19 13:08	1
2,4,5-Trichlorophenol	<0.10		0.10	0.10	mg/L		08/12/19 21:51	08/13/19 13:08	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LB 500-498793/1-E
Matrix: Solid
Analysis Batch: 499351

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 499301

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	<0.050		0.050	0.050	mg/L		08/12/19 21:51	08/13/19 13:08	1

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*75*		*34 - 110*	*08/12/19 21:51*	*08/13/19 13:08*	*1*
2-Fluorophenol (Surr)	*37*		*27 - 110*	*08/12/19 21:51*	*08/13/19 13:08*	*1*
Nitrobenzene-d5 (Surr)	*78*		*36 - 120*	*08/12/19 21:51*	*08/13/19 13:08*	*1*
Phenol-d5 (Surr)	*31*		*20 - 100*	*08/12/19 21:51*	*08/13/19 13:08*	*1*
Terphenyl-d14 (Surr)	*102*		*40 - 145*	*08/12/19 21:51*	*08/13/19 13:08*	*1*
2,4,6-Tribromophenol (Surr)	*80*		*40 - 145*	*08/12/19 21:51*	*08/13/19 13:08*	*1*

Lab Sample ID: 500-167874-6 MS
Matrix: Solid
Analysis Batch: 499351

Client Sample ID: WC-2
Prep Type: TCLP
Prep Batch: 499301

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Pyridine	<0.20		0.800	0.306		mg/L		38	15 - 110
1,4-Dichlorobenzene	<0.020		0.400	0.178		mg/L		44	23 - 110
2,4-Dinitrotoluene	<0.010		0.400	0.271		mg/L		68	63 - 129
Hexachlorobenzene	<0.0050		0.400	0.274		mg/L		68	61 - 126
Hexachlorobutadiene	<0.050		0.400	0.183		mg/L		46	20 - 100
Hexachloroethane	<0.050		0.400	0.168		mg/L		42	20 - 100
2-Methylphenol	<0.020	F1	0.400	0.206	F1	mg/L		52	53 - 115
3 & 4 Methylphenol	<0.020	F1	0.400	0.176	F1	mg/L		44	50 - 116
Nitrobenzene	<0.010		0.400	0.231		mg/L		58	54 - 121
Pentachlorophenol	<0.20		0.800	0.374		mg/L		47	42 - 148
2,4,5-Trichlorophenol	<0.10	F1	0.400	0.237	F1	mg/L		59	63 - 124
2,4,6-Trichlorophenol	<0.050	F1	0.400	0.233	F1	mg/L		58	62 - 121

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*59*		*34 - 110*
2-Fluorophenol (Surr)	*39*		*27 - 110*
Nitrobenzene-d5 (Surr)	*60*		*36 - 120*
Phenol-d5 (Surr)	*27*		*20 - 100*
Terphenyl-d14 (Surr)	*78*		*40 - 145*
2,4,6-Tribromophenol (Surr)	*70*		*40 - 145*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Lab Sample ID: MB 500-498802/1-A
Matrix: Solid
Analysis Batch: 498970

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498802

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
WI Diesel Range Organics (C10-C28)	<1.6		4.0	1.6	mg/Kg		08/08/19 13:34	08/09/19 18:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Nonane	*83*		*44 - 148*	*08/08/19 13:34*	*08/09/19 18:32*	*1*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC) (Continued)

Lab Sample ID: LCS 500-498802/2-A
Matrix: Solid
Analysis Batch: 498970

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498802

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
WI Diesel Range Organics (C10-C28)			20.0	18.4		mg/Kg		92	70 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Nonane	*83*		*44 - 148*

Lab Sample ID: LCSD 500-498802/3-A
Matrix: Solid
Analysis Batch: 498970

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 498802

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
WI Diesel Range Organics (C10-C28)			20.0	19.1		mg/Kg		95	70 - 120	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Nonane	*84*		*44 - 148*

Lab Sample ID: MB 500-499345/1-A
Matrix: Water
Analysis Batch: 499435

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499345

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
WI Diesel Range Organics (C10-C28)	<0.033		0.10	0.033	mg/L		08/13/19 07:49	08/14/19 00:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Nonane	*25*	*X*	*42 - 111*	*08/13/19 07:49*	*08/14/19 00:04*	*1*

Lab Sample ID: LCS 500-499345/2-A
Matrix: Water
Analysis Batch: 499435

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499345

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
WI Diesel Range Organics (C10-C28)			0.400	0.368		mg/L		92	75 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Nonane	*20*	*X*	*42 - 111*

Lab Sample ID: LCSD 500-499345/3-A
Matrix: Water
Analysis Batch: 499435

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 499345

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
WI Diesel Range Organics (C10-C28)			0.400	0.366		mg/L		92	75 - 125	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Nonane	*28*	*X*	*42 - 111*

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-313396/1-A
Matrix: Solid
Analysis Batch: 314501

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 313396

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.0790	J	0.20	0.028	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluoropentanoic acid (PFPeA)	<0.077		0.20	0.077	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluorohexanoic acid (PFHxA)	<0.042		0.20	0.042	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluoroheptanoic acid (PFHpA)	<0.029		0.20	0.029	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluorooctanoic acid (PFOA)	<0.086		0.20	0.086	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluorononanoic acid (PFNA)	<0.036		0.20	0.036	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluorodecanoic acid (PFDA)	<0.022		0.20	0.022	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluoroundecanoic acid (PFUnA)	<0.036		0.20	0.036	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluorododecanoic acid (PFDoA)	<0.067		0.20	0.067	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluorotridecanoic acid (PFTriA)	<0.051		0.20	0.051	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluorotetradecanoic acid (PFTeA)	<0.054		0.20	0.054	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.044		0.20	0.044	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluorobutanesulfonic acid (PFBS)	<0.025		0.20	0.025	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.028		0.20	0.028	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluorohexanesulfonic acid (PFHxS)	<0.031		0.20	0.031	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.035		0.20	0.035	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluorooctanesulfonic acid (PFOS)	<0.20		0.50	0.20	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluorodecanesulfonic acid (PFDS)	<0.039		0.20	0.039	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluorooctanesulfonamide (FOSA)	<0.082		0.20	0.082	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluoropentanesulfonic acid (PFPeS)	<0.020		0.20	0.020	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluorononanesulfonic acid (PFNS)	<0.020		0.20	0.020	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.39		2.0	0.39	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.37		2.0	0.37	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
4:2 FTS	<0.37		2.0	0.37	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
6:2 FTS	<0.15		2.0	0.15	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
8:2 FTS	<0.25		2.0	0.25	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Perfluorododecanesulfonic acid (PFDoS)	<0.060		0.20	0.060	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
ADONA	<0.019		0.21	0.019	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
F-53B Major	<0.027		0.20	0.027	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
HFPO-DA (GenX)	<0.11		0.25	0.11	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
10:2 FTS	<0.050		0.20	0.050	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
F-53B Minor	<0.022		0.20	0.022	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
NaDONA	<0.019		0.21	0.019	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
DONA	<0.018		0.20	0.018	ug/Kg		08/08/19 10:51	08/12/19 04:01	1
Ammonium Perfluorooctanoate (APFO)	<0.089		0.21	0.089	ug/Kg		08/08/19 10:51	08/12/19 04:01	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*95*		*25 - 150*	*08/08/19 10:51*	*08/12/19 04:01*	*1*
13C5 PFPeA	*93*		*25 - 150*	*08/08/19 10:51*	*08/12/19 04:01*	*1*
13C2 PFHxA	*94*		*25 - 150*	*08/08/19 10:51*	*08/12/19 04:01*	*1*
13C4 PFHpA	*93*		*25 - 150*	*08/08/19 10:51*	*08/12/19 04:01*	*1*
13C4 PFOA	*100*		*25 - 150*	*08/08/19 10:51*	*08/12/19 04:01*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-313396/1-A
Matrix: Solid
Analysis Batch: 314501

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 313396

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFNA	98		25 - 150	08/08/19 10:51	08/12/19 04:01	1
13C2 PFDA	94		25 - 150	08/08/19 10:51	08/12/19 04:01	1
13C2 PFHxDA	112		25 - 150	08/08/19 10:51	08/12/19 04:01	1
13C2 PFUnA	97		25 - 150	08/08/19 10:51	08/12/19 04:01	1
13C2 PFDoA	99		25 - 150	08/08/19 10:51	08/12/19 04:01	1
13C2 PFTeDA	107		25 - 150	08/08/19 10:51	08/12/19 04:01	1
13C3 PFBS	92		25 - 150	08/08/19 10:51	08/12/19 04:01	1
18O2 PFHxS	102		25 - 150	08/08/19 10:51	08/12/19 04:01	1
13C4 PFOS	92		25 - 150	08/08/19 10:51	08/12/19 04:01	1
13C8 FOSA	92		25 - 150	08/08/19 10:51	08/12/19 04:01	1
d3-NMeFOSAA	96		25 - 150	08/08/19 10:51	08/12/19 04:01	1
d5-NEtFOSAA	98		25 - 150	08/08/19 10:51	08/12/19 04:01	1
M2-4:2 FTS	108		25 - 150	08/08/19 10:51	08/12/19 04:01	1
M2-6:2 FTS	128		25 - 150	08/08/19 10:51	08/12/19 04:01	1
M2-8:2 FTS	108		25 - 150	08/08/19 10:51	08/12/19 04:01	1
13C3 HFPO-DA	93		25 - 150	08/08/19 10:51	08/12/19 04:01	1

Lab Sample ID: LCS 320-313396/2-A
Matrix: Solid
Analysis Batch: 314501

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 313396

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	2.00	2.07		ug/Kg		103	81 - 133
Perfluoropentanoic acid (PFPeA)	2.00	2.10		ug/Kg		105	79 - 120
Perfluorohexanoic acid (PFHxA)	2.00	2.00		ug/Kg		100	75 - 125
Perfluoroheptanoic acid (PFHpA)	2.00	2.04		ug/Kg		102	76 - 124
Perfluorooctanoic acid (PFOA)	2.00	2.16		ug/Kg		108	76 - 121
Perfluorononanoic acid (PFNA)	2.00	2.05		ug/Kg		102	74 - 126
Perfluorodecanoic acid (PFDA)	2.00	2.07		ug/Kg		104	74 - 124
Perfluoroundecanoic acid (PFUnA)	2.00	1.89		ug/Kg		95	74 - 114
Perfluorododecanoic acid (PFDoA)	2.00	2.29		ug/Kg		114	75 - 123
Perfluorotridecanoic acid (PFTriA)	2.00	2.26		ug/Kg		113	43 - 116
Perfluorotetradecanoic acid (PFTeA)	2.00	2.00		ug/Kg		100	22 - 129
Perfluoro-n-hexadecanoic acid (PFHxDA)	2.00	2.12	*	ug/Kg		106	10 - 100
Perfluorobutanesulfonic acid (PFBS)	1.77	1.84		ug/Kg		104	73 - 142
Perfluoro-n-octadecanoic acid (PFODA)	2.00	2.15	*	ug/Kg		107	10 - 84
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.60		ug/Kg		88	75 - 121
Perfluoroheptanesulfonic Acid (PFHpS)	1.90	1.97		ug/Kg		104	78 - 146
Perfluorooctanesulfonic acid (PFOS)	1.86	1.80		ug/Kg		97	69 - 131
Perfluorodecanesulfonic acid (PFDS)	1.93	1.84		ug/Kg		95	54 - 113

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-313396/2-A
Matrix: Solid
Analysis Batch: 314501

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 313396

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorooctanesulfonamide (FOSA)	2.00	2.11		ug/Kg		105	62 - 135
Perfluoropentanesulfonic acid (PFPeS)	1.88	1.78		ug/Kg		95	70 - 130
Perfluorononanesulfonic acid (PFNS)	1.92	1.86		ug/Kg		97	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.00		ug/Kg		100	65 - 135
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.03		ug/Kg		102	65 - 135
4:2 FTS	1.87	2.16		ug/Kg		116	50 - 150
6:2 FTS	1.90	2.18		ug/Kg		115	65 - 135
8:2 FTS	1.92	2.15		ug/Kg		112	65 - 135
Perfluorododecanesulfonic acid (PFDoS)	1.94	1.94		ug/Kg		100	70 - 130
ADONA	1.97	2.05		ug/Kg		104	70 - 130
F-53B Major	1.86	1.83		ug/Kg		98	70 - 130
HFPO-DA (GenX)	2.00	2.13		ug/Kg		106	70 - 130
10:2 FTS	1.93	2.13		ug/Kg		111	70 - 130
F-53B Minor	1.88	1.98		ug/Kg		105	70 - 130
NaDONA	2.00	2.08		ug/Kg		104	70 - 130
DONA	1.88	1.96		ug/Kg		104	70 - 130
Ammonium Perfluorooctanoate (APFO)	2.08	2.25		ug/Kg		108	76 - 121

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*95*		*25 - 150*
13C5 PFPeA	*94*		*25 - 150*
13C2 PFHxA	*96*		*25 - 150*
13C4 PFHpA	*94*		*25 - 150*
13C4 PFOA	*99*		*25 - 150*
13C5 PFNA	*100*		*25 - 150*
13C2 PFDA	*97*		*25 - 150*
13C2 PFHxDA	*113*		*25 - 150*
13C2 PFUnA	*100*		*25 - 150*
13C2 PFDoA	*101*		*25 - 150*
13C2 PFTeDA	*111*		*25 - 150*
13C3 PFBS	*97*		*25 - 150*
18O2 PFHxS	*101*		*25 - 150*
13C4 PFOS	*100*		*25 - 150*
13C8 FOSA	*94*		*25 - 150*
d3-NMeFOSAA	*97*		*25 - 150*
d5-NEtFOSAA	*97*		*25 - 150*
M2-4:2 FTS	*98*		*25 - 150*
M2-6:2 FTS	*122*		*25 - 150*
M2-8:2 FTS	*101*		*25 - 150*
13C3 HFPO-DA	*96*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-167874-6 MS
Matrix: Solid
Analysis Batch: 314501

Client Sample ID: WC-2
Prep Type: Total/NA
Prep Batch: 313396

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	<0.034		2.42	2.58		ug/Kg	☼	107	81 - 133
Perfluoropentanoic acid (PFPeA)	<0.095		2.42	2.70		ug/Kg	☼	112	79 - 120
Perfluorohexanoic acid (PFHxA)	0.22	J	2.42	2.54		ug/Kg	☼	96	75 - 125
Perfluoroheptanoic acid (PFHpA)	<0.036		2.42	2.65		ug/Kg	☼	110	76 - 124
Perfluorooctanoic acid (PFOA)	<0.11		2.42	2.61		ug/Kg	☼	108	76 - 121
Perfluorononanoic acid (PFNA)	<0.044		2.42	2.34		ug/Kg	☼	97	74 - 126
Perfluorodecanoic acid (PFDA)	<0.027		2.42	2.64		ug/Kg	☼	109	74 - 124
Perfluoroundecanoic acid (PFUnA)	<0.044	F1	2.42	2.77	F1	ug/Kg	☼	115	74 - 114
Perfluorododecanoic acid (PFDoA)	<0.082		2.42	2.48		ug/Kg	☼	103	75 - 123
Perfluorotridecanoic acid (PFTriA)	<0.063		2.42	2.68		ug/Kg	☼	111	43 - 116
Perfluorotetradecanoic acid (PFTeA)	<0.066		2.42	2.31		ug/Kg	☼	96	22 - 129
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.054	* F1	2.42	2.79	F1	ug/Kg	☼	115	10 - 100
Perfluorobutanesulfonic acid (PFBS)	<0.031		2.14	2.25		ug/Kg	☼	105	73 - 142
Perfluoro-n-octadecanoic acid (PFODA)	<0.034	* F1	2.42	2.52	F1	ug/Kg	☼	104	10 - 84
Perfluorohexanesulfonic acid (PFHxS)	<0.038		2.20	1.99		ug/Kg	☼	90	75 - 121
Perfluoroheptanesulfonic Acid (PFHpS)	<0.043		2.30	2.42		ug/Kg	☼	105	78 - 146
Perfluorooctanesulfonic acid (PFOS)	<0.25		2.24	2.21		ug/Kg	☼	98	69 - 131
Perfluorodecanesulfonic acid (PFDS)	<0.048		2.33	2.33		ug/Kg	☼	100	54 - 113
Perfluorooctanesulfonamide (FOSA)	<0.10		2.42	2.75		ug/Kg	☼	114	62 - 135
Perfluoropentanesulfonic acid (PFPeS)	<0.025		2.27	2.28		ug/Kg	☼	101	70 - 130
Perfluorononanesulfonic acid (PFNS)	<0.025		2.32	2.24		ug/Kg	☼	97	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.48		2.42	2.51		ug/Kg	☼	104	65 - 135
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.45		2.42	2.45		ug/Kg	☼	101	65 - 135
4:2 FTS	<0.45		2.26	2.34	J	ug/Kg	☼	104	50 - 150
6:2 FTS	13		2.29	9.20	4	ug/Kg	☼	-146	65 - 135
8:2 FTS	<0.31		2.32	2.37	J	ug/Kg	☼	102	65 - 135
Perfluorododecanesulfonic acid (PFDoS)	<0.074		2.34	2.29		ug/Kg	☼	98	70 - 130
ADONA	<0.023		2.39	2.55		ug/Kg	☼	107	70 - 130
F-53B Major	<0.033		2.25	2.80		ug/Kg	☼	124	70 - 130
HFPO-DA (GenX)	<0.14		2.42	2.45		ug/Kg	☼	101	70 - 130
10:2 FTS	<0.061		2.33	2.36		ug/Kg	☼	101	70 - 130
F-53B Minor	<0.027		2.28	2.90		ug/Kg	☼	127	70 - 130
NaDONA	<0.023		2.42	2.58		ug/Kg	☼	107	70 - 130
DONA	<0.022		2.28	2.43		ug/Kg	☼	107	70 - 130
Ammonium Perfluorooctanoate (APFO)	<0.11		2.52	2.72		ug/Kg	☼	108	76 - 121

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C4 PFBA	92		25 - 150
13C5 PFPeA	89		25 - 150
13C2 PFHxA	87		25 - 150
13C4 PFHpA	90		25 - 150
13C4 PFOA	94		25 - 150
13C5 PFNA	101		25 - 150
13C2 PFDA	99		25 - 150
13C2 PFHxDA	103		25 - 150
13C2 PFUnA	96		25 - 150
13C2 PFDoA	101		25 - 150
13C2 PFTeDA	115		25 - 150
13C3 PFBS	90		25 - 150
18O2 PFHxS	92		25 - 150
13C4 PFOS	90		25 - 150
13C8 FOSA	67		25 - 150
d3-NMeFOSAA	140		25 - 150
d5-NEtFOSAA	159	*	25 - 150
M2-4:2 FTS	115		25 - 150
M2-6:2 FTS	168	*	25 - 150
M2-8:2 FTS	221	*	25 - 150
13C3 HFPO-DA	99		25 - 150

Lab Sample ID: 500-167874-6 MSD
Matrix: Solid
Analysis Batch: 314501

Client Sample ID: WC-2
Prep Type: Total/NA
Prep Batch: 313396

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	<0.034		2.43	2.82		ug/Kg	☼	116	81 - 133	9	30
Perfluoropentanoic acid (PFPeA)	<0.095		2.43	2.67		ug/Kg	☼	110	79 - 120	1	30
Perfluorohexanoic acid (PFHxA)	0.22	J	2.43	2.53		ug/Kg	☼	95	75 - 125	0	30
Perfluoroheptanoic acid (PFHpA)	<0.036		2.43	2.60		ug/Kg	☼	107	76 - 124	2	30
Perfluorooctanoic acid (PFOA)	<0.11		2.43	2.72		ug/Kg	☼	112	76 - 121	4	30
Perfluorononanoic acid (PFNA)	<0.044		2.43	2.36		ug/Kg	☼	97	74 - 126	1	30
Perfluorodecanoic acid (PFDA)	<0.027		2.43	2.46		ug/Kg	☼	101	74 - 124	7	30
Perfluoroundecanoic acid (PFUnA)	<0.044	F1	2.43	2.65		ug/Kg	☼	109	74 - 114	4	30
Perfluorododecanoic acid (PFDoA)	<0.082		2.43	2.64		ug/Kg	☼	108	75 - 123	6	30
Perfluorotridecanoic acid (PFTriA)	<0.063		2.43	2.55		ug/Kg	☼	105	43 - 116	5	30
Perfluorotetradecanoic acid (PFTeA)	<0.066		2.43	2.27		ug/Kg	☼	94	22 - 129	2	30
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.054	* F1	2.43	2.65	F1	ug/Kg	☼	109	10 - 100	5	30
Perfluorobutanesulfonic acid (PFBS)	<0.031		2.15	2.11		ug/Kg	☼	98	73 - 142	6	30
Perfluoro-n-octadecanoic acid (PFODA)	<0.034	* F1	2.43	2.45	F1	ug/Kg	☼	101	10 - 84	3	30
Perfluorohexanesulfonic acid (PFHxS)	<0.038		2.21	2.04		ug/Kg	☼	92	75 - 121	3	30
Perfluoroheptanesulfonic Acid (PFHpS)	<0.043		2.32	2.22		ug/Kg	☼	96	78 - 146	8	30
Perfluorooctanesulfonic acid (PFOS)	<0.25		2.26	2.12		ug/Kg	☼	94	69 - 131	4	30

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-167874-6 MSD
Matrix: Solid
Analysis Batch: 314501

Client Sample ID: WC-2
Prep Type: Total/NA
Prep Batch: 313396

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorodecanesulfonic acid (PFDS)	<0.048		2.34	2.10		ug/Kg	☼	90	54 - 113	10	30
Perfluorooctanesulfonamide (FOSA)	<0.10		2.43	2.53		ug/Kg	☼	104	62 - 135	8	30
Perfluoropentanesulfonic acid (PFPeS)	<0.025		2.28	2.24		ug/Kg	☼	98	70 - 130	2	30
Perfluorononanesulfonic acid (PFNS)	<0.025		2.33	2.15		ug/Kg	☼	92	70 - 130	4	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.48		2.43	2.76		ug/Kg	☼	114	65 - 135	10	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.45		2.43	2.28	J	ug/Kg	☼	94	65 - 135	7	30
4:2 FTS	<0.45		2.27	2.34	J	ug/Kg	☼	103	50 - 150	0	30
6:2 FTS	13		2.31	9.03	4	ug/Kg	☼	-153	65 - 135	2	30
8:2 FTS	<0.31		2.33	2.18	J	ug/Kg	☼	94	65 - 135	8	30
Perfluorododecanesulfonic acid (PFDoS)	<0.074		2.35	2.05		ug/Kg	☼	87	70 - 130	11	30
ADONA	<0.023		2.40	2.33		ug/Kg	☼	97	70 - 130	9	30
F-53B Major	<0.033		2.27	2.75		ug/Kg	☼	121	70 - 130	2	30
HFPO-DA (GenX)	<0.14		2.43	2.26		ug/Kg	☼	93	70 - 130	8	30
10:2 FTS	<0.061		2.34	1.98		ug/Kg	☼	84	70 - 130	18	30
F-53B Minor	<0.027		2.29	2.59		ug/Kg	☼	113	70 - 130	11	30
NaDONA	<0.023		2.43	2.36		ug/Kg	☼	97	70 - 130	9	30
DONA	<0.022		2.29	2.22		ug/Kg	☼	97	70 - 130	9	30
Ammonium Perfluorooctanoate (APFO)	<0.11		2.53	2.83		ug/Kg	☼	112	76 - 121	4	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C4 PFBA	*95*		*25 - 150*
13C5 PFPeA	*90*		*25 - 150*
13C2 PFHxA	*91*		*25 - 150*
13C4 PFHpA	*96*		*25 - 150*
13C4 PFOA	*100*		*25 - 150*
13C5 PFNA	*104*		*25 - 150*
13C2 PFDA	*106*		*25 - 150*
13C2 PFHxDA	*104*		*25 - 150*
13C2 PFUnA	*113*		*25 - 150*
13C2 PFDoA	*109*		*25 - 150*
13C2 PFTeDA	*118*		*25 - 150*
13C3 PFBS	*93*		*25 - 150*
18O2 PFHxS	*98*		*25 - 150*
13C4 PFOS	*99*		*25 - 150*
13C8 FOSA	*70*		*25 - 150*
d3-NMeFOSAA	*132*		*25 - 150*
d5-NEtFOSAA	*175*	*	*25 - 150*
M2-4:2 FTS	*127*		*25 - 150*
M2-6:2 FTS	*191*	*	*25 - 150*
M2-8:2 FTS	*280*	*	*25 - 150*
13C3 HFPO-DA	*118*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-313407/1-A
Matrix: Water
Analysis Batch: 313692

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 313407

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.35		2.0	0.35	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluorotridecanoic acid (PFTriA)	<1.3		2.0	1.3	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluorotetradecanoic acid (PFTeA)	<0.29		2.0	0.29	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.89		2.0	0.89	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.46		2.0	0.46	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluorohexanesulfonic acid (PFHxS)	0.422	J	2.0	0.17	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.19		2.0	0.19	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluorooctanesulfonic acid (PFOS)	0.678	J	2.0	0.54	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluorooctanesulfonamide (FOSA)	<0.35		2.0	0.35	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluorononanesulfonic acid (PFNS)	<0.16		2.0	0.16	ng/L		08/08/19 11:24	08/09/19 06:09	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.1		20	3.1	ng/L		08/08/19 11:24	08/09/19 06:09	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.9		20	1.9	ng/L		08/08/19 11:24	08/09/19 06:09	1
4:2 FTS	<5.2		20	5.2	ng/L		08/08/19 11:24	08/09/19 06:09	1
6:2 FTS	<2.0		20	2.0	ng/L		08/08/19 11:24	08/09/19 06:09	1
8:2 FTS	<2.0		20	2.0	ng/L		08/08/19 11:24	08/09/19 06:09	1
Perfluorododecanesulfonic acid (PFDoS)	<0.45		2.0	0.45	ng/L		08/08/19 11:24	08/09/19 06:09	1
ADONA	<0.19		2.1	0.19	ng/L		08/08/19 11:24	08/09/19 06:09	1
F-53B Major	<0.24		2.0	0.24	ng/L		08/08/19 11:24	08/09/19 06:09	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		08/08/19 11:24	08/09/19 06:09	1
10:2 FTS	<0.19		2.0	0.19	ng/L		08/08/19 11:24	08/09/19 06:09	1
F-53B Minor	<0.32		2.0	0.32	ng/L		08/08/19 11:24	08/09/19 06:09	1
NaDONA	<0.19		2.1	0.19	ng/L		08/08/19 11:24	08/09/19 06:09	1
DONA	<0.18		2.0	0.18	ng/L		08/08/19 11:24	08/09/19 06:09	1
Ammonium Perfluorooctanoate (APFO)	<0.88		2.1	0.88	ng/L		08/08/19 11:24	08/09/19 06:09	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*90*		*25 - 150*	*08/08/19 11:24*	*08/09/19 06:09*	*1*
13C5 PFPeA	*93*		*25 - 150*	*08/08/19 11:24*	*08/09/19 06:09*	*1*
13C2 PFHxA	*87*		*25 - 150*	*08/08/19 11:24*	*08/09/19 06:09*	*1*
13C4 PFHpA	*94*		*25 - 150*	*08/08/19 11:24*	*08/09/19 06:09*	*1*
13C4 PFOA	*100*		*25 - 150*	*08/08/19 11:24*	*08/09/19 06:09*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-313407/1-A
Matrix: Water
Analysis Batch: 313692

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 313407

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFNA	99		25 - 150	08/08/19 11:24	08/09/19 06:09	1
13C2 PFDA	100		25 - 150	08/08/19 11:24	08/09/19 06:09	1
13C2 PFHxDA	93		25 - 150	08/08/19 11:24	08/09/19 06:09	1
13C2 PFUnA	93		25 - 150	08/08/19 11:24	08/09/19 06:09	1
13C2 PFDoA	95		25 - 150	08/08/19 11:24	08/09/19 06:09	1
13C2 PFTeDA	94		25 - 150	08/08/19 11:24	08/09/19 06:09	1
13C3 PFBS	88		25 - 150	08/08/19 11:24	08/09/19 06:09	1
18O2 PFHxS	100		25 - 150	08/08/19 11:24	08/09/19 06:09	1
13C4 PFOS	102		25 - 150	08/08/19 11:24	08/09/19 06:09	1
13C8 FOSA	88		25 - 150	08/08/19 11:24	08/09/19 06:09	1
d3-NMeFOSAA	113		25 - 150	08/08/19 11:24	08/09/19 06:09	1
d5-NEtFOSAA	112		25 - 150	08/08/19 11:24	08/09/19 06:09	1
M2-4:2 FTS	119		25 - 150	08/08/19 11:24	08/09/19 06:09	1
M2-6:2 FTS	116		25 - 150	08/08/19 11:24	08/09/19 06:09	1
M2-8:2 FTS	121		25 - 150	08/08/19 11:24	08/09/19 06:09	1
13C3 HFPO-DA	84		25 - 150	08/08/19 11:24	08/09/19 06:09	1

Lab Sample ID: LCS 320-313407/2-A
Matrix: Water
Analysis Batch: 313692

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 313407

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	41.8		ng/L		105	70 - 130
Perfluoropentanoic acid (PFPeA)	40.0	39.4		ng/L		99	66 - 126
Perfluorohexanoic acid (PFHxA)	40.0	38.4		ng/L		96	66 - 126
Perfluoroheptanoic acid (PFHpA)	40.0	43.4		ng/L		109	66 - 126
Perfluorooctanoic acid (PFOA)	40.0	41.5		ng/L		104	64 - 124
Perfluorononanoic acid (PFNA)	40.0	41.5		ng/L		104	68 - 128
Perfluorodecanoic acid (PFDA)	40.0	39.9		ng/L		100	69 - 129
Perfluoroundecanoic acid (PFUnA)	40.0	36.4		ng/L		91	60 - 120
Perfluorododecanoic acid (PFDoA)	40.0	42.2		ng/L		106	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	39.8		ng/L		99	72 - 132
Perfluorotetradecanoic acid (PFTeA)	40.0	40.3		ng/L		101	68 - 128
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	42.4		ng/L		106	72 - 132
Perfluorobutanesulfonic acid (PFBS)	35.4	40.4		ng/L		114	73 - 133
Perfluoro-n-octadecanoic acid (PFODA)	40.0	38.0		ng/L		95	74 - 134
Perfluorohexanesulfonic acid (PFHxS)	36.4	31.5		ng/L		86	63 - 123
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	35.5		ng/L		93	68 - 128
Perfluorooctanesulfonic acid (PFOS)	37.1	34.7		ng/L		93	67 - 127
Perfluorodecanesulfonic acid (PFDS)	38.6	37.6		ng/L		97	68 - 128

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-313407/2-A
Matrix: Water
Analysis Batch: 313692

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 313407

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorooctanesulfonamide (FOSA)	40.0	44.4		ng/L		111	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	37.5	42.7		ng/L		114	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.4	34.6		ng/L		90	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	36.1		ng/L		90	67 - 127
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	38.9		ng/L		97	65 - 125
4:2 FTS	37.4	33.3		ng/L		89	70 - 130
6:2 FTS	37.9	34.5		ng/L		91	66 - 126
8:2 FTS	38.3	37.1		ng/L		97	67 - 127
Perfluorododecanesulfonic acid (PFDoS)	38.7	39.7		ng/L		103	70 - 130
ADONA	39.5	39.7		ng/L		101	70 - 130
F-53B Major	37.3	34.1		ng/L		91	70 - 130
HFPO-DA (GenX)	40.0	38.8		ng/L		97	70 - 130
10:2 FTS	38.6	40.9		ng/L		106	70 - 130
F-53B Minor	37.7	38.4		ng/L		102	70 - 130
NaDONA	40.0	40.2		ng/L		101	70 - 130
DONA	37.7	37.9		ng/L		101	70 - 130
Ammonium Perfluorooctanoate (APFO)	41.6	43.2		ng/L		104	64 - 124

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*90*		*25 - 150*
13C5 PFPeA	*95*		*25 - 150*
13C2 PFHxA	*96*		*25 - 150*
13C4 PFHpA	*91*		*25 - 150*
13C4 PFOA	*100*		*25 - 150*
13C5 PFNA	*99*		*25 - 150*
13C2 PFDA	*101*		*25 - 150*
13C2 PFHxDA	*102*		*25 - 150*
13C2 PFUnA	*103*		*25 - 150*
13C2 PFDoA	*101*		*25 - 150*
13C2 PFTeDA	*103*		*25 - 150*
13C3 PFBS	*89*		*25 - 150*
18O2 PFHxS	*104*		*25 - 150*
13C4 PFOS	*108*		*25 - 150*
13C8 FOSA	*89*		*25 - 150*
d3-NMeFOSAA	*116*		*25 - 150*
d5-NEtFOSAA	*108*		*25 - 150*
M2-4:2 FTS	*132*		*25 - 150*
M2-6:2 FTS	*124*		*25 - 150*
M2-8:2 FTS	*117*		*25 - 150*
13C3 HFPO-DA	*95*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-313407/3-A
Matrix: Water
Analysis Batch: 313692

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 313407

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	40.0	39.2		ng/L		98	70 - 130	6	30
Perfluoropentanoic acid (PFPeA)	40.0	37.3		ng/L		93	66 - 126	5	30
Perfluorohexanoic acid (PFHxA)	40.0	38.1		ng/L		95	66 - 126	1	30
Perfluoroheptanoic acid (PFHpA)	40.0	39.8		ng/L		100	66 - 126	9	30
Perfluorooctanoic acid (PFOA)	40.0	39.2		ng/L		98	64 - 124	6	30
Perfluorononanoic acid (PFNA)	40.0	38.0		ng/L		95	68 - 128	9	30
Perfluorodecanoic acid (PFDA)	40.0	37.0		ng/L		92	69 - 129	8	30
Perfluoroundecanoic acid (PFUnA)	40.0	36.8		ng/L		92	60 - 120	1	30
Perfluorododecanoic acid (PFDoA)	40.0	38.8		ng/L		97	71 - 131	8	30
Perfluorotridecanoic acid (PFTriA)	40.0	40.6		ng/L		101	72 - 132	2	30
Perfluorotetradecanoic acid (PFTeA)	40.0	38.0		ng/L		95	68 - 128	6	30
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	38.4		ng/L		96	72 - 132	10	30
Perfluorobutanesulfonic acid (PFBS)	35.4	36.1		ng/L		102	73 - 133	11	30
Perfluoro-n-octadecanoic acid (PFODA)	40.0	37.0		ng/L		93	74 - 134	3	30
Perfluorohexanesulfonic acid (PFHxS)	36.4	30.9		ng/L		85	63 - 123	2	30
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	34.4		ng/L		90	68 - 128	3	30
Perfluorooctanesulfonic acid (PFOS)	37.1	34.0		ng/L		92	67 - 127	2	30
Perfluorodecanesulfonic acid (PFDS)	38.6	37.1		ng/L		96	68 - 128	1	30
Perfluorooctanesulfonamide (FOSA)	40.0	41.2		ng/L		103	70 - 130	8	30
Perfluoropentanesulfonic acid (PFPeS)	37.5	37.5		ng/L		100	70 - 130	13	30
Perfluorononanesulfonic acid (PFNS)	38.4	34.0		ng/L		89	70 - 130	2	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	34.9		ng/L		87	67 - 127	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	34.1		ng/L		85	65 - 125	13	30
4:2 FTS	37.4	34.5		ng/L		92	70 - 130	4	30
6:2 FTS	37.9	33.6		ng/L		89	66 - 126	2	30
8:2 FTS	38.3	35.4		ng/L		92	67 - 127	5	30
Perfluorododecanesulfonic acid (PFDoS)	38.7	37.1		ng/L		96	70 - 130	7	30
ADONA	39.5	36.9		ng/L		94	70 - 130	7	30
F-53B Major	37.3	33.4		ng/L		90	70 - 130	2	30
HFPO-DA (GenX)	40.0	35.6		ng/L		89	70 - 130	8	30
10:2 FTS	38.6	38.3		ng/L		99	70 - 130	7	30
F-53B Minor	37.7	36.9		ng/L		98	70 - 130	4	30
NaDONA	40.0	37.4		ng/L		94	70 - 130	7	30
DONA	37.7	35.2		ng/L		94	70 - 130	7	30
Ammonium Perfluorooctanoate (APFO)	41.6	40.8		ng/L		98	64 - 124	6	30

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFBA	88		25 - 150
13C5 PFPeA	94		25 - 150
13C2 PFHxA	91		25 - 150
13C4 PFHpA	94		25 - 150
13C4 PFOA	98		25 - 150
13C5 PFNA	99		25 - 150
13C2 PFDA	101		25 - 150
13C2 PFHxDA	99		25 - 150
13C2 PFUnA	98		25 - 150
13C2 PFDoA	98		25 - 150
13C2 PFTeDA	101		25 - 150
13C3 PFBS	93		25 - 150
18O2 PFHxS	101		25 - 150
13C4 PFOS	104		25 - 150
13C8 FOSA	89		25 - 150
d3-NMeFOSAA	115		25 - 150
d5-NEtFOSAA	114		25 - 150
M2-4:2 FTS	117		25 - 150
M2-6:2 FTS	121		25 - 150
M2-8:2 FTS	120		25 - 150
13C3 HFPO-DA	94		25 - 150

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 500-498631/1-A
Matrix: Solid
Analysis Batch: 498801

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498631

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.34		1.0	0.34	mg/Kg		08/07/19 15:58	08/08/19 11:08	1
Barium	<0.11		1.0	0.11	mg/Kg		08/07/19 15:58	08/08/19 11:08	1
Cadmium	0.141	J	0.20	0.036	mg/Kg		08/07/19 15:58	08/08/19 11:08	1
Chromium	<0.50		1.0	0.50	mg/Kg		08/07/19 15:58	08/08/19 11:08	1
Lead	<0.23		0.50	0.23	mg/Kg		08/07/19 15:58	08/08/19 11:08	1
Selenium	0.679	J	1.0	0.59	mg/Kg		08/07/19 15:58	08/08/19 11:08	1
Silver	<0.13		0.50	0.13	mg/Kg		08/07/19 15:58	08/08/19 11:08	1

Lab Sample ID: LCS 500-498631/2-A
Matrix: Solid
Analysis Batch: 498801

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498631

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	10.0	9.50		mg/Kg		95	80 - 120
Barium	200	205		mg/Kg		102	80 - 120
Cadmium	5.00	4.73		mg/Kg		95	80 - 120
Chromium	20.0	19.8		mg/Kg		99	80 - 120
Lead	10.0	8.83		mg/Kg		88	80 - 120
Selenium	10.0	8.88		mg/Kg		89	80 - 120
Silver	5.00	4.44		mg/Kg		89	80 - 120

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 500-498938/2-A
Matrix: Solid
Analysis Batch: 499131

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498938

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0975		mg/L		98	80 - 120
Barium	0.500	0.511		mg/L		102	80 - 120
Cadmium	0.0500	0.0497		mg/L		99	80 - 120
Chromium	0.200	0.198		mg/L		99	80 - 120
Lead	0.100	0.0975		mg/L		97	80 - 120
Selenium	0.100	0.0913		mg/L		91	80 - 120
Silver	0.0500	0.0477		mg/L		95	80 - 120

Lab Sample ID: LB 500-498793/1-B
Matrix: Solid
Analysis Batch: 499131

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 498938

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.010		0.050	0.010	mg/L		08/09/19 08:18	08/09/19 18:18	1
Barium	<0.050		0.50	0.050	mg/L		08/09/19 08:18	08/09/19 18:18	1
Cadmium	<0.0020		0.0050	0.0020	mg/L		08/09/19 08:18	08/09/19 18:18	1
Chromium	<0.010		0.025	0.010	mg/L		08/09/19 08:18	08/09/19 18:18	1
Lead	<0.0075		0.050	0.0075	mg/L		08/09/19 08:18	08/09/19 18:18	1
Selenium	<0.020		0.050	0.020	mg/L		08/09/19 08:18	08/09/19 18:18	1
Silver	<0.010		0.025	0.010	mg/L		08/09/19 08:18	08/09/19 18:18	1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-498679/1-A
Matrix: Water
Analysis Batch: 498960

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 498679

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.23		1.0	0.23	ug/L		08/08/19 07:52	08/08/19 15:44	1
Cadmium	<0.17		0.50	0.17	ug/L		08/08/19 07:52	08/08/19 15:44	1
Chromium	<1.1		5.0	1.1	ug/L		08/08/19 07:52	08/08/19 15:44	1
Lead	<0.19		0.50	0.19	ug/L		08/08/19 07:52	08/08/19 15:44	1
Selenium	<0.98		2.5	0.98	ug/L		08/08/19 07:52	08/08/19 15:44	1
Silver	<0.12		0.50	0.12	ug/L		08/08/19 07:52	08/08/19 15:44	1

Lab Sample ID: MB 500-498679/1-A
Matrix: Water
Analysis Batch: 499204

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 498679

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.73		2.5	0.73	ug/L		08/08/19 07:52	08/09/19 11:57	1
Nickel	<0.63		2.0	0.63	ug/L		08/08/19 07:52	08/09/19 11:57	1
Zinc	7.15	J	20	6.9	ug/L		08/08/19 07:52	08/09/19 11:57	1

Lab Sample ID: MB 500-498679/1-A
Matrix: Water
Analysis Batch: 499398

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 498679

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	1.07	J	2.0	0.50	ug/L		08/08/19 07:52	08/12/19 15:54	1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: LCS 500-498679/2-A
Matrix: Water
Analysis Batch: 498960

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 498679

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	99.1		ug/L		99	80 - 120
Cadmium	50.0	51.7		ug/L		103	80 - 120
Chromium	200	207		ug/L		104	80 - 120
Lead	100	99.4		ug/L		99	80 - 120
Selenium	100	99.4		ug/L		99	80 - 120
Silver	50.0	52.0		ug/L		104	80 - 120

Lab Sample ID: LCS 500-498679/2-A
Matrix: Water
Analysis Batch: 499204

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 498679

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	500	504		ug/L		101	80 - 120
Nickel	500	524		ug/L		105	80 - 120
Zinc	500	514		ug/L		103	80 - 120

Lab Sample ID: LCS 500-498679/2-A
Matrix: Water
Analysis Batch: 499398

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 498679

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	250	254		ug/L		102	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-498752/12-A
Matrix: Water
Analysis Batch: 498989

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498752

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		08/08/19 10:35	08/09/19 08:02	1

Lab Sample ID: LCS 500-498752/13-A
Matrix: Water
Analysis Batch: 498989

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498752

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	2.00	1.94		ug/L		97	80 - 120

Lab Sample ID: MB 500-498963/12-A
Matrix: Solid
Analysis Batch: 499072

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498963

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		08/09/19 10:05	08/09/19 16:00	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 500-498963/13-A
Matrix: Solid
Analysis Batch: 499072

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498963

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00191		mg/L		96	80 - 120

Lab Sample ID: LB 500-498793/1-C
Matrix: Solid
Analysis Batch: 499072

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 498963

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		08/09/19 10:05	08/09/19 16:43	1

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 500-498771/12-A
Matrix: Solid
Analysis Batch: 499016

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498771

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.0056		0.017	0.0056	mg/Kg		08/08/19 13:55	08/09/19 10:00	1

Lab Sample ID: LCS 500-498771/13-A
Matrix: Solid
Analysis Batch: 499016

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498771

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.167	0.159		mg/Kg		95	80 - 120

Method: 1664B - HEM and SGT-HEM

Lab Sample ID: MB 500-498633/17-A
Matrix: Water
Analysis Batch: 498634

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498633

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	<1.3		5.0	1.3	mg/L		08/07/19 18:43	08/07/19 20:10	1

Lab Sample ID: LCS 500-498633/2-A
Matrix: Water
Analysis Batch: 498634

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498633

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM (Oil & Grease)	40.0	38.90		mg/L		97	78 - 114

Method: 420.4 - Phenolics, Total Recoverable

Lab Sample ID: MB 500-498619/15-A
Matrix: Solid
Analysis Batch: 498744

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498619

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenolics, Total Recoverable	<0.41		0.50	0.41	mg/Kg		08/08/19 07:35	08/08/19 09:43	1

Method: 420.4 - Phenolics, Total Recoverable (Continued)

Lab Sample ID: MB 500-498619/1-A
Matrix: Water
Analysis Batch: 498744

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498619

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenolics, Total Recoverable	<0.0041		0.0050	0.0041	mg/L		08/08/19 07:35	08/08/19 09:22	1

Lab Sample ID: LCS 500-498619/16-A
Matrix: Solid
Analysis Batch: 498744

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498619

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenolics, Total Recoverable	10.0	8.96		mg/Kg		90	90 - 110

Lab Sample ID: LCS 500-498619/2-A
Matrix: Water
Analysis Batch: 498744

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498619

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenolics, Total Recoverable	0.100	0.0922		mg/L		92	90 - 110

Lab Sample ID: 500-167874-8 MS
Matrix: Solid
Analysis Batch: 498744

Client Sample ID: WC-4
Prep Type: Total/NA
Prep Batch: 498619

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenolics, Total Recoverable	<0.42		10.3	9.07		mg/Kg	☼	88	75 - 125

Lab Sample ID: 500-167874-8 MSD
Matrix: Solid
Analysis Batch: 498744

Client Sample ID: WC-4
Prep Type: Total/NA
Prep Batch: 498619

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenolics, Total Recoverable	<0.42		10.3	9.11		mg/Kg	☼	88	75 - 125	0	20

Method: 9014 - Cyanide

Lab Sample ID: MB 500-499201/1-A
Matrix: Solid
Analysis Batch: 499401

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499201

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.25		0.50	0.25	mg/Kg		08/12/19 11:30	08/12/19 16:10	1

Lab Sample ID: HLCS 500-499201/2-A
Matrix: Solid
Analysis Batch: 499401

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499201

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	20.0	20.2		mg/Kg		101	90 - 110

Method: 9014 - Cyanide (Continued)

Lab Sample ID: LCS 500-499201/3-A
Matrix: Solid
Analysis Batch: 499401

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499201

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	5.00	4.83		mg/Kg		97	85 - 115

Lab Sample ID: LLCS 500-499201/4-A
Matrix: Solid
Analysis Batch: 499401

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499201

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	2.00	1.71		mg/Kg		86	75 - 125

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 500-498940/1-A
Matrix: Solid
Analysis Batch: 499214

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498940

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<4.7		10	4.7	mg/Kg		08/12/19 08:05	08/12/19 10:37	1

Lab Sample ID: LCS 500-498940/2-A
Matrix: Solid
Analysis Batch: 499214

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498940

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	199	183		mg/Kg		92	80 - 120

Lab Sample ID: 500-167874-6 MS
Matrix: Solid
Analysis Batch: 499214

Client Sample ID: WC-2
Prep Type: Total/NA
Prep Batch: 498940

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	<5.6		226	170		mg/Kg	☼	75	75 - 125

Lab Sample ID: 500-167874-6 MSD
Matrix: Solid
Analysis Batch: 499214

Client Sample ID: WC-2
Prep Type: Total/NA
Prep Batch: 498940

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	<5.6		235	177		mg/Kg	☼	75	75 - 125	4	20

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 500-499086/3
Matrix: Water
Analysis Batch: 499086

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<0.095		0.20	0.095	mg/L			08/10/19 00:48	1

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 500-499086/4
Matrix: Water
Analysis Batch: 499086

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	5.02		mg/L		100	80 - 120

Method: 9066 - Phenolics, Total Recoverable

Lab Sample ID: MB 500-499294/15-A
Matrix: Solid
Analysis Batch: 499406

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499294

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenolics, Total Recoverable	<0.0041		0.0050	0.0041	mg/L		08/12/19 15:00	08/13/19 09:00	1

Lab Sample ID: LCS 500-499294/16-A
Matrix: Solid
Analysis Batch: 499406

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499294

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenolics, Total Recoverable	0.100	0.0907		mg/L		91	90 - 110

Method: SM 4500 CN E - Cyanide, Total

Lab Sample ID: MB 500-498764/1-A
Matrix: Water
Analysis Batch: 498837

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498764

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0030		0.010	0.0030	mg/L		08/08/19 10:40	08/08/19 15:06	1

Lab Sample ID: HLCS 500-498764/2-A
Matrix: Water
Analysis Batch: 498837

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498764

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.400	0.369		mg/L		92	90 - 110

Lab Sample ID: LCS 500-498764/3-A
Matrix: Water
Analysis Batch: 498837

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498764

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.0958		mg/L		96	85 - 115

Lab Sample ID: LLCS 500-498764/4-A
Matrix: Water
Analysis Batch: 498837

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498764

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0400	0.0377		mg/L		94	75 - 125

Method: SM 4500 H+ B - pH

Lab Sample ID: 500-167874-5 DU
Matrix: Water
Analysis Batch: 499682

Client Sample ID: WC-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	7.1	HF		7.1		SU				0.1	

Lab Sample ID: 500-167874-7 DU
Matrix: Water
Analysis Batch: 499682

Client Sample ID: WC-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	6.9	HF		6.9		SU				0.4	

Lab Chronicle

Client: AECOM
Job ID: 500-167874-1
Project/Site: ATC - Madison - 60611431

Client Sample ID: EB08062019
Lab Sample ID: 500-167874-1
Date Collected: 08/06/19 10:00
Matrix: Water
Date Received: 08/07/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			313407	08/08/19 11:24	SK	TAL SAC
Total/NA	Analysis	537 (modified)		1	313692	08/09/19 06:34	S1M	TAL SAC

Client Sample ID: FB08062019
Lab Sample ID: 500-167874-2
Date Collected: 08/06/19 10:01
Matrix: Water
Date Received: 08/07/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			313407	08/08/19 11:24	SK	TAL SAC
Total/NA	Analysis	537 (modified)		1	313692	08/09/19 06:42	S1M	TAL SAC

Client Sample ID: Trip Blank 1
Lab Sample ID: 500-167874-3
Date Collected: 08/06/19 10:02
Matrix: Water
Date Received: 08/07/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	498887	08/09/19 11:08	JLC	TAL CHI

Client Sample ID: Trip Blank 2
Lab Sample ID: 500-167874-4
Date Collected: 08/06/19 10:03
Matrix: Water
Date Received: 08/07/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	498887	08/09/19 11:34	JLC	TAL CHI

Client Sample ID: WC-1
Lab Sample ID: 500-167874-5
Date Collected: 08/06/19 11:00
Matrix: Water
Date Received: 08/07/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	498887	08/09/19 12:00	JLC	TAL CHI
Total/NA	Prep	3510C			498673	08/08/19 07:37	JVD	TAL CHI
Total/NA	Analysis	8270D		50	499351	08/13/19 18:49	STW	TAL CHI
Total/NA	Prep	3510C			499345	08/13/19 07:49	JVD	TAL CHI
Total/NA	Analysis	WI-DRO		1000	499435	08/14/19 12:27	JBJ	TAL CHI
Total Recoverable	Prep	3005A			498679	08/08/19 07:52	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	498960	08/08/19 16:34	FXG	TAL CHI
Total Recoverable	Prep	3005A			498679	08/08/19 07:52	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	499204	08/09/19 12:05	ASF	TAL CHI
Total Recoverable	Prep	3005A			498679	08/08/19 07:52	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	499398	08/12/19 16:02	ASF	TAL CHI
Total/NA	Prep	7470A			498752	08/08/19 10:35	MJG	TAL CHI
Total/NA	Analysis	7470A		1	498989	08/09/19 08:27	MJG	TAL CHI
Total/NA	Analysis	1010A		1	499712		MS	TAL CHI
						(Start) 08/14/19 10:45		
						(End) 08/14/19 12:10		

Lab Chronicle

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Client Sample ID: WC-1

Lab Sample ID: 500-167874-5

Date Collected: 08/06/19 11:00

Matrix: Water

Date Received: 08/07/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1664B			498633	08/07/19 19:11	SA	TAL CHI
Total/NA	Analysis	1664B		1	498634	08/07/19 20:10	SA	TAL CHI
Total/NA	Prep	Distill/Phenol			498619	08/08/19 07:35	MTB	TAL CHI
Total/NA	Analysis	420.4		1	498744	08/08/19 09:36	MTB	TAL CHI
Total/NA	Analysis	9056A		10	499086	08/10/19 06:56	RES	TAL CHI
Total/NA	Prep	Distill/CN			498764	08/08/19 10:40	MS	TAL CHI
Total/NA	Analysis	SM 4500 CN E		1	498837		MS	TAL CHI
					(Start)	08/08/19 15:10		
					(End)	08/08/19 15:10		
Total/NA	Analysis	SM 4500 H+ B		1	499682		SMO	TAL CHI
					(Start)	08/14/19 15:11		
					(End)	08/14/19 15:14		

Client Sample ID: WC-2

Lab Sample ID: 500-167874-6

Date Collected: 08/06/19 11:30

Matrix: Solid

Date Received: 08/07/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			499026	08/09/19 12:45	GCA	TAL CHI
TCLP	Analysis	8260B		20	499147	08/12/19 10:59	PMF	TAL CHI
TCLP	Leach	1311			498793	08/08/19 12:55	GCA	TAL CHI
TCLP	Prep	3510C			499301	08/12/19 21:51	JP1	TAL CHI
TCLP	Analysis	8270D		1	499351	08/13/19 16:38	STW	TAL CHI
TCLP	Leach	1311			498793	08/08/19 12:55	GCA	TAL CHI
TCLP	Prep	3010A			498938	08/09/19 08:18	SAH	TAL CHI
TCLP	Analysis	6010C		1	499131	08/09/19 18:34	JEF	TAL CHI
TCLP	Leach	1311			498793	08/08/19 12:55	GCA	TAL CHI
TCLP	Prep	7470A			498963	08/09/19 10:05	MJG	TAL CHI
TCLP	Analysis	7470A		1	499072	08/09/19 16:45	MJG	TAL CHI
Total/NA	Analysis	1010A		1	499712		MS	TAL CHI
					(Start)	08/14/19 13:35		
					(End)	08/14/19 15:00		
Total/NA	Analysis	9045D		1	499027		SMO	TAL CHI
					(Start)	08/09/19 15:44		
					(End)	08/09/19 15:48		
TCLP	Leach	1311			498793	08/08/19 12:55	GCA	TAL CHI
TCLP	Prep	Distill/Phenol			499294	08/12/19 15:00	AS	TAL CHI
TCLP	Analysis	9066		1	499406	08/13/19 09:15	MTB	TAL CHI
Total/NA	Analysis	9095B		1	499307		SA	TAL CHI
					(Start)	08/13/19 01:42		
					(End)	08/13/19 01:47		
Total/NA	Analysis	Moisture		1	498715	08/08/19 09:36	LWN	TAL CHI

Lab Chronicle

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Client Sample ID: WC-2

Lab Sample ID: 500-167874-6

Date Collected: 08/06/19 11:30
Matrix: Solid
Date Received: 08/07/19 09:15
Percent Solids: 82.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			499430	08/13/19 10:00	PMF	TAL CHI
Total/NA	Analysis	8260B		50	499516	08/14/19 06:44	JLC	TAL CHI
Total/NA	Prep	3541			498637	08/07/19 18:48	ACK	TAL CHI
Total/NA	Analysis	8270D		50	499586	08/14/19 13:44	STW	TAL CHI
Total/NA	Prep	WI DRO PREP			498802	08/08/19 13:34	BSO	TAL CHI
Total/NA	Analysis	WI-DRO		100	498970	08/09/19 20:54	JBJ	TAL CHI
Total/NA	Prep	SHAKE			313396	08/08/19 10:51	MC	TAL SAC
Total/NA	Analysis	537 (modified)		1	314501	08/12/19 04:17	S1M	TAL SAC
Total/NA	Prep	3050B			498631	08/07/19 15:58	BDE	TAL CHI
Total/NA	Analysis	6010C		1	498801	08/08/19 11:37	JEF	TAL CHI
Total/NA	Prep	7471B			498771	08/08/19 13:55	MJG	TAL CHI
Total/NA	Analysis	7471B		1	499016	08/09/19 10:42	MJG	TAL CHI
Total/NA	Prep	Distill/Phenol			498619	08/08/19 07:35	MTB	TAL CHI
Total/NA	Analysis	420.4		1	498744	08/08/19 09:46	MTB	TAL CHI
Total/NA	Prep	9010B			499201	08/12/19 11:30	MS	TAL CHI
Total/NA	Analysis	9014		1	499401		MS	TAL CHI
					(Start)	08/12/19 16:17		
					(End)	08/12/19 16:17		
Total/NA	Prep	9030B			498940	08/12/19 08:05	SJP	TAL CHI
Total/NA	Analysis	9034		1	499214	08/12/19 10:44	SJP	TAL CHI

Client Sample ID: WC-3

Lab Sample ID: 500-167874-7

Date Collected: 08/06/19 12:00
Matrix: Water
Date Received: 08/07/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	498887	08/09/19 12:26	JLC	TAL CHI
Total/NA	Prep	3510C			498673	08/08/19 07:37	JVD	TAL CHI
Total/NA	Analysis	8270D		50	499351	08/13/19 19:15	STW	TAL CHI
Total/NA	Prep	3510C			499345	08/13/19 07:49	JVD	TAL CHI
Total/NA	Analysis	WI-DRO		100	499435	08/14/19 11:51	JBJ	TAL CHI
Total Recoverable	Prep	3005A			498679	08/08/19 07:52	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	498960	08/08/19 16:38	FXG	TAL CHI
Total Recoverable	Prep	3005A			498679	08/08/19 07:52	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	499204	08/09/19 12:09	ASF	TAL CHI
Total Recoverable	Prep	3005A			498679	08/08/19 07:52	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	499398	08/12/19 16:06	ASF	TAL CHI
Total/NA	Prep	7470A			498752	08/08/19 10:35	MJG	TAL CHI
Total/NA	Analysis	7470A		1	498989	08/09/19 08:28	MJG	TAL CHI
Total/NA	Analysis	1010A		1	499712		MS	TAL CHI
					(Start)	08/14/19 12:10		
					(End)	08/14/19 13:35		
Total/NA	Prep	1664B			498633	08/07/19 19:21	SA	TAL CHI
Total/NA	Analysis	1664B		1	498634	08/07/19 20:10	SA	TAL CHI

Lab Chronicle

Client: AECOM
Job ID: 500-167874-1
Project/Site: ATC - Madison - 60611431

Client Sample ID: WC-3
Lab Sample ID: 500-167874-7
Date Collected: 08/06/19 12:00
Matrix: Water
Date Received: 08/07/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 H+ B		1	499682		SMO	TAL CHI

Client Sample ID: WC-4
Lab Sample ID: 500-167874-8
Date Collected: 08/06/19 12:30
Matrix: Solid
Date Received: 08/07/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			499026	08/09/19 12:45	GCA	TAL CHI
TCLP	Analysis	8260B		20	499147	08/12/19 11:42	PMF	TAL CHI
TCLP	Leach	1311			498793	08/08/19 12:55	GCA	TAL CHI
TCLP	Prep	3510C			499301	08/12/19 21:51	JP1	TAL CHI
TCLP	Analysis	8270D		1	499351	08/13/19 17:04	STW	TAL CHI
TCLP	Leach	1311			498793	08/08/19 12:55	GCA	TAL CHI
TCLP	Prep	3010A			498938	08/09/19 08:18	SAH	TAL CHI
TCLP	Analysis	6010C		1	499131	08/09/19 18:38	JEF	TAL CHI
TCLP	Leach	1311			498793	08/08/19 12:55	GCA	TAL CHI
TCLP	Prep	7470A			498963	08/09/19 10:05	MJG	TAL CHI
TCLP	Analysis	7470A		1	499072	08/09/19 16:50	MJG	TAL CHI
Total/NA	Analysis	1010A		1	499712		MS	TAL CHI
					(Start)	08/14/19 15:00		
					(End)	08/14/19 16:25		
Total/NA	Analysis	9045D		1	499027		SMO	TAL CHI
					(Start)	08/09/19 15:48		
					(End)	08/09/19 15:52		
TCLP	Leach	1311			498793	08/08/19 12:55	GCA	TAL CHI
TCLP	Prep	Distill/Phenol			499294	08/12/19 15:00	AS	TAL CHI
TCLP	Analysis	9066		1	499406	08/13/19 09:15	MTB	TAL CHI
Total/NA	Analysis	9095B		1	499307		SA	TAL CHI
					(Start)	08/13/19 01:45		
					(End)	08/13/19 01:50		
Total/NA	Analysis	Moisture		1	498715	08/08/19 09:36	LWN	TAL CHI

Client Sample ID: WC-4
Lab Sample ID: 500-167874-8
Date Collected: 08/06/19 12:30
Matrix: Solid
Date Received: 08/07/19 09:15
Percent Solids: 93.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			499430	08/13/19 10:00	PMF	TAL CHI
Total/NA	Analysis	8260B		50	499516	08/14/19 07:09	JLC	TAL CHI
Total/NA	Prep	3541			498637	08/07/19 18:48	ACK	TAL CHI
Total/NA	Analysis	8270D		50	499358	08/13/19 10:23	STW	TAL CHI
Total/NA	Prep	3050B			498631	08/07/19 15:58	BDE	TAL CHI
Total/NA	Analysis	6010C		1	498801	08/08/19 11:41	JEF	TAL CHI
Total/NA	Prep	7471B			498771	08/08/19 13:55	MJG	TAL CHI
Total/NA	Analysis	7471B		1	499016	08/09/19 10:47	MJG	TAL CHI

Lab Chronicle

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Client Sample ID: WC-4

Date Collected: 08/06/19 12:30
Date Received: 08/07/19 09:15

Lab Sample ID: 500-167874-8

Matrix: Solid
Percent Solids: 93.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Distill/Phenol			498619	08/08/19 07:35	MTB	TAL CHI
Total/NA	Analysis	420.4		1	498744	08/08/19 09:47	MTB	TAL CHI
Total/NA	Prep	9010B			499201	08/12/19 11:30	MS	TAL CHI
Total/NA	Analysis	9014		1	499401		MS	TAL CHI
					(Start)	08/12/19 16:17		
					(End)	08/12/19 16:18		
Total/NA	Prep	9030B			498940	08/12/19 08:05	SJP	TAL CHI
Total/NA	Analysis	9034		1	499214	08/12/19 10:55	SJP	TAL CHI

Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: AECOM
Job ID: 500-167874-1
Project/Site: ATC - Madison - 60611431

Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-19 *

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-020	01-20-21
ANAB	Dept. of Defense ELAP		L2468	01-20-21
ANAB	DoD		L2468	01-20-21
ANAB	DOE		L2468.01	01-20-21
ANAB	ISO/IEC 17025		L2468	08-09-21
Arizona	State		AZ0708	08-11-20
Arkansas DEQ	State Program	6	88-0691	06-17-20
California	State		2897	01-31-20
California	State Program	9	2897	01-31-20
Colorado	State Program	8	CA00044	08-31-19
Connecticut	State		PH-0691	06-30-21
Connecticut	State Program	1	PH-0691	06-30-21
Florida	NELAP	4	E87570	06-30-20
Florida	NELAP		E87570	06-30-20
Hawaii	State		<cert No.>	01-29-20
Hawaii	State Program	9	N/A	01-29-20
Illinois	NELAP	5	200060	03-17-20 *
Illinois	NELAP		200060	03-17-20
Kansas	NELAP	7	E-10375	10-31-19
Louisiana	NELAP	6	30612	06-30-20
Maine	State Program	1	CA0004	04-14-20
Michigan	State		9947	01-29-20
Michigan	State Program	5	9947	01-31-20
New Hampshire	NELAP	1	2997	04-20-20
New York	NELAP	2	11666	04-01-20
Oregon	NELAP	10	4040	01-29-20
Oregon	NELAP		4040	01-29-20
Pennsylvania	NELAP	3	68-01272	03-31-20
Pennsylvania	NELAP		68-01272	03-31-20
Texas	NELAP	6	T104704399	05-31-20
Texas	NELAP		T104704399-19-13	05-31-20
US Fish & Wildlife	Federal		LE148388-0	07-31-20
US Fish & Wildlife	US Federal Programs		58448	07-31-20
USDA	Federal		P330-18-00239	01-17-21
USEPA UCMR	Federal	1	CA00044	12-31-20
Utah	NELAP	8	CA00044	02-29-20
Vermont	State Program	1	VT-4040	04-16-20
Virginia	NELAP	3	460278	03-14-20
Virginia	NELAP		460278	03-14-20
Washington	State		C581	05-05-20
Washington	State Program	10	C581	05-05-20
West Virginia (DW)	State		9930C	12-31-19
West Virginia (DW)	State Program	3	9930C	12-31-19
Wyoming	State Program	8	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler: EMS KEM	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-74343-34636.1
Client Contact: Mr. Leo Linnemanstons, P.G.	Phone:	E-Mail: sandie.fredrick@testamericainc.com		Page: Page 1 of 2
Company: AECOM		Analysis Requested		Job #: 500-167874

Address: 1350 Deming Way Suite 100	Due Date Requested:
City: Middleton	TAT Requested (days): 5days
State, Zip: WI, 53562	
Phone: 608-836-9800(Tel)	PO #: Purchase Order Requested
Email: leo.linnemanstons@aecom.com	WO #:
Project Name: ATC - Madison	Project #: 50016386
Site:	SSOW#:

500-167874 Waybill

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

	Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D - SVOC	1010A - Ignitability	1664B - Oil and Grease HEM	9056A - Sulfate/pH	6020A, 7470A	420.4 - Phenols	WI_DRO - WI DRO	8260B - VOC	4500_CN_E - Cyanide	SM4500_H+ - pH	PFC_IDA - PFAS, Standard List (32 Analytes)	8260B - VOC	6010C, 7470A, 8270D, 9066	Total Number of containers	Special Instructions/Note:
					Preservation Code:			N	N	S	N	D	S	A	A	B	N	N	N	N		
1	EB08062019	8/6/19	1000	G	Water	N	N															
2	FB08062019	↓	1001	↓	Water																	
3	Trip Blank1	↓	1002	↓	Water																	
4	Trip Blank2	↓	1003	↓	Water																	
5	WC-1	↓	1100	↓	Water			X	X	X	X	X	X	X	X	X						No DRO
6	WC-2	↓	1130	↓	Solid			X	X			X	X		X		~~X~~	X		X		SS 8/7/19 ~~Rec DRO~~
7	WC-3	↓	1200	↓	~~Solid~~ Water			X	X	X		X		X	X		X					SS 8/7/19 ~~Rec pH~~
8	WC-4	↓	1230	↓	Solid			X	X			X	X		X					X		
					Solid																	
					Solid																	
					Solid																	

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ________ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature] AECOM	8/6/19 1530	AECOM	[signature]	8-6-19 1530	TA
[signature]	8-6-19 1700	TA	[signature]	8/7/19 0915	TA-CHI

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.1, 3.3

Ver: 01/16/2019

 8/14/2019

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler: EMS KEN	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-74343-34636.2
Client Contact: Mr. Leo Linnemanstons, P.G.	Phone:	E-Mail: sandie.fredrick@testamericainc.com		Page: Page 2 of 2
Company: AECOM				Job #: 500-162824
Address: 1350 Deming Way Suite 100	Due Date Requested:			
City: Middleton	TAT Requested (days): 5days			
State, Zip: WI, 53562	PO #: Purchase Order Requested			
Phone: 608-836-9800(Tel)	WO #:			
Email: leo.linnemanstons@aecom.com	Project #: 50016386			
Project Name: ATC - Madison	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

	Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	WI_DRO - WI DRO	420.4, 6010C, 7471B, 8270D, 9014, 9034_Calc, 9045D, 9095B	Total Number of containers	Special Instructions/Note:
				Preservation Code				N	N		
1	EB 08062019	8/6/2019	1000	G	Water	N	N				
2	FB 08062019		1001		Water						
3	Trip Blank 1		1002		Water						
4	Trip Blank 2		1003		Water						
5	WC-1		1100		Water						
6	WC-2		1130		Solid			X	X		
7	WC-3		1200		~~Solid~~ Water						
8	WC-4		1230		Solid				X		
					Solid						
					Solid						
					Solid						

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	8/6/19 1530	AECOM	[signature]	8-6-19 1530	TA
2	[signature]	8-6-19 1700	TA	[signature]	8/7/19 0915	TA-CHI
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

ORIGIN ID:RRLA (262) 202-5955
SHIPPING
TESTAMERICA
4125 N 124TH ST

BROOKFIELD, WI 53005
UNITED STATES US

SHIP DATE: 06AUG19
ACTWGT: 55.30 LB
CAD: 525155/CAFE3211

BILL RECIPIENT

TO SAMPLE RECEIPT
TESTAMERICA LABS
2417 BOND STREET

UNIVERSITY PARK IL 60484

500-167874 COC

(708) 534-5200 REF:
INV:
PO: DEPT:

FedEx Express

TRK# 0201 7125 4940 6018

WED - 07 AUG 10:30A
PRIORITY OVERNIGHT

79 JOTA

60484
IL-US ORD

ORIGIN ID:RRLA (262) 202-5955
SHIPPING
TESTAMERICA
4125 N 124TH ST

BROOKFIELD, WI 53005
UNITED STATES US

SHIP DATE: 06AUG19
ACTWGT: 51.80 LB
CAD: 525155/CAFE3211

BILL RECIPIENT

TO SAMPLE RECEIPT
TESTAMERICA LABS
2417 BOND STREET

UNIVERSITY PARK IL 60484

(708) 534-5200 REF:
INV:
PO: DEPT:

FedEx Express

2 of 2

MPS# 0283 7125 4940 6007

Mstr# 7125 4940 5998

0201

WED - 07 AUG 10:30A
PRIORITY OVERNIGHT

79 JOTA

60484
IL-US ORD

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-124443.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sandie.fredrick@testamericainc.com	State of Origin: Wisconsin	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Wisconsin		Job #: 500-167874-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 8/13/2019			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: ATC - Madison	Project #: 50016386			
Site:	SSOW#:			

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA/3535_PFC (MOD) PFAS, Standard List (32 Analytes)	PFC_IDA/Shake_Bath_14D (MOD) PFAS, Standard List (32 Analytes)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
EB08062019 (500-167874-1)	8/6/19	10:00 Central		Water			X		1	
FB08062019 (500-167874-2)	8/6/19	10:01 Central		Water			X		1	
WC-2 (500-167874-6)	8/6/19	11:30 Central		Solid				X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	8/7/19 1600	TA		08/08/19 920	ETA-SAC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ▲ Yes △ No	Custody Seal No.: 768422	Cooler Temperature(s) °C and Other Remarks: 0.8 °C

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: AECOM

Job Number: 500-167874-1

Login Number: 167874
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins TestAmerica, Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.1,3.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: AECOM

Job Number: 500-167874-1

Login Number: 167874
List Number: 2
Creator: Thompson, Sarah W

List Source: Eurofins TestAmerica, Sacramento
List Creation: 08/08/19 10:31 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	768422
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.8c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing TestAmerica

Sacramento
Sample Receiving Notes

500-167874 Field Sheet

Tracking # : 4059 7132 2349

Job: _____

SO / (PO) / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Notes: _____

Therm. ID: AK 10 Corr. Factor: _____

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 768422

Sample Custody Seal: —

Cooler ID: —

Temp Observed: 0.8 Corrected: 0.8

From: Temp Blank ☐ Sample ☑

NCM Filed: Yes ☐ No ☐

	Yes	No	NA
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Cooler compromised/tampered with?	☐	☑	☐
Samples compromised/tampered with?	☐	☑	☐
Samples w/o discrepancies?	☑	☐	☐
Sample containers have legible labels?	☑	☐	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided.	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
Sample temp OK?	☑	☐	☐
Sample out of temp?	☐	☑	☐

Initials: PL Date: 08/8/19

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

WSA

Isotope Dilution Summary

Client: AECOM
Project/Site: ATC - Madison - 60611431

Job ID: 500-167874-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid | **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	PFHpA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
500-167874-6	WC-2	72	99	94	93	93	97	104	102
500-167874-6 MS	WC-2	67	92	89	87	90	94	101	99
500-167874-6 MSD	WC-2	70	95	90	91	96	100	104	106
LCS 320-313396/2-A	Lab Control Sample	94	95	94	96	94	99	100	97
MB 320-313396/1-A	Method Blank	92	95	93	94	93	100	98	94

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDoA (25-150)	PFTDA (25-150)	PFHxDA (25-150)	3C3-PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	-NMeFOS (25-150)
500-167874-6	WC-2	109	102	109	101	96	100	91	142
500-167874-6 MS	WC-2	96	101	115	103	90	92	90	140
500-167874-6 MSD	WC-2	113	109	118	104	93	98	99	132
LCS 320-313396/2-A	Lab Control Sample	100	101	111	113	97	101	100	97
MB 320-313396/1-A	Method Blank	97	99	107	112	92	102	92	96

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	-NEtFOSA (25-150)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)	HFPODA (25-150)			
500-167874-6	WC-2	171 *	131	187 *	235 *	94			
500-167874-6 MS	WC-2	159 *	115	168 *	221 *	99			
500-167874-6 MSD	WC-2	175 *	127	191 *	280 *	118			
LCS 320-313396/2-A	Lab Control Sample	97	98	122	101	96			
MB 320-313396/1-A	Method Blank	98	108	128	108	93			

Surrogate Legend

PFOSA = 13C8 FOSA
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
PFHpA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
PFHxDA = 13C2 PFHxDA
13C3-PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
d3-NMeFOSAA = d3-NMeFOSAA
d5-NEtFOSAA = d5-NEtFOSAA
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
HFPODA = 13C3 HFPO-DA

Isotope Dilution Summary

Client: AECOM
Job ID: 500-167874-1
Project/Site: ATC - Madison - 60611431

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFHxDA
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)
500-167874-1	EB08062019	91	92	90	93	103	105	98	95
500-167874-2	FB08062019	91	94	88	95	104	100	101	96
LCS 320-313407/2-A	Lab Control Sample	90	95	96	91	100	99	101	102
LCSD 320-313407/3-A	Lab Control Sample Dup	88	94	91	94	98	99	101	99
MB 320-313407/1-A	Method Blank	90	93	87	94	100	99	100	93

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFUnA	PFDoA	PFTDA	3C3-PFBS	PFHxS	PFOS	PFOSA	-NMeFOSA
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)
500-167874-1	EB08062019	100	93	101	89	99	101	87	113
500-167874-2	FB08062019	99	92	104	90	95	102	89	106
LCS 320-313407/2-A	Lab Control Sample	103	101	103	89	104	108	89	116
LCSD 320-313407/3-A	Lab Control Sample Dup	98	98	101	93	101	104	89	115
MB 320-313407/1-A	Method Blank	93	95	94	88	100	102	88	113

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		-NEtFOSA	M262FTS	M282FTS	M242FTS	HFPODA			
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)			
500-167874-1	EB08062019	110	124	112	118	92			
500-167874-2	FB08062019	108	117	131	105	89			
LCS 320-313407/2-A	Lab Control Sample	108	124	117	132	95			
LCSD 320-313407/3-A	Lab Control Sample Dup	114	121	120	117	94			
MB 320-313407/1-A	Method Blank	112	116	121	119	84			

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
PFHpA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFHxDA = 13C2 PFHxDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
13C3-PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3-NMeFOSAA = d3-NMeFOSAA
d5-NEtFOSAA = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
M242FTS = M2-4:2 FTS
HFPODA = 13C3 HFPO-DA

Attachment C
Wastewater Treatment System Documentation

4990 West First Street
Ludington, MI 49431

Office 231.843.2711
Fax 231.843.4081
Proact-usa.com

September 3, 2019

David Johnson
Vice President of Operations
North Shore Environmental Construction, Inc
N117 W18493 Fulton Drive
Germantown, WI 53022
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AECOM
1555 N RiverCenter Drive
Milwaukee, WI 53212, USA
T +1-414-944-6080
aecom.com

Re: Project Name: Transformer fire remediation – Oil/grease and PFAS Treatment
Project Location: Madison, WI

Dear Mr. Johnson and Mr. Henderson:

This letter and package are prepared for North Shore Environmental and AECOM in a response to treat contaminated water on site in Madison, WI. The contaminants of focus are oil/grease and PFAS. ProAct will team with North Shore Environmental to treat these contaminants to acceptable discharge limits.

To do this North Shore will pump water from existing frac tanks (on site) into their own oil water separator to help remove product from the water. After the water passes the oil water separator it will be pumped into sediment filtration of 10 micron and .5 micron size. From here the water will flow into a media vessel with 1,500 lbs of HS 200 Organoclay, to remove free-phase and mechanically emulsified O&G product. Lastly the water will flow through (3) media vessels with 1,000 lbs of UC 12x40 acid wash carbon each to treat PFAS contamination. The clean water will then pass to a storage tank or discharge depending on phase of project.

In this package I have included a flow diagram, modeling to further demonstrate treatability and expected effluent water quality, and cut sheets of equipment ProAct is providing. North Shore Environmental has received an updated quote for the system described. As always please don't hesitate to reach out with any questions.

Sincerely,

Patrick Driscoll

Patrick Driscoll
Construction Remediation

4990 West First Street
Ludington, MI 49431

Office 231.843.2711
Fax 231.843.4081
Proact-usa.com

Project Number: 1908-020.R4
Customer: North Shore Environmental
Site: Madison, WI
Date: 9/3/2019

Design Basis:

Flow rate:	20	gpm
Volume to be treated:	200,000	gallons
Water temperature:	55	°F (assumed)

Contaminant	Influent Conc. (ug/L)[a]	Effluent Criteria (ug/L)[b]
Organics		
Benzene	3.5	-
Ethylbenzene	0.27	-
Methylene chloride	1.8	-
Naphthalene	2.1	70
Styrene	1.3	-
Toluene	1.5	-
1,2,4-Trimethylbenzene	1.0	-
Xylenes	1.1	-
Acenaphthene	26	-
4-Chlorophenyl phenyl ether	31	-
Dibenzofuran	71	-
2,4-Dinitrotoluene	21	-
2,6-Dinitrotoluene	25	-
Fluorene	24	-
2-Methylnaphthalene	3.2	-
DRO	1,300	-
BTEX	6.37	750
PAHs, TEF	124.2	0.1
Benzo(a)pyrene	TBD	0.1
O&G (ppm)	**383**[c]	15
PFASs		
PFPeA	**0.150**	ND
PFHxA	**0.230**	ND
PFOA	**0.024**	ND
PFOS	**0.031**	ND
6:2 FTS	**4.9**	ND
8:2 FTS	**TBD**	ND
10:2 FTS	**TBD**	ND
Metals		
Arsenic	2.3	-
Barium	100	-

Cadmium	0.43	-
Chromium	3	-
Lead	11	-
Selenium	1.7	-
Nickel	6.9	-
Copper	7.6	-
Zinc	63	-
Others		
Flashpoint (°F)	> 176	-
Sulfate (ppm)	52	-
Cyanide (ppm)	0.032	-
pH (s.u.)	6.9-7.1	6.0-9.0

a) Based on the maximum detected concentrations.
b) Based on Sampling Point (Outfall) 001 – Petroleum Contact Water.
c) Expected to be skimmed off from frac tanks.
TEF = Toxicity Equivalent Factor

Recommendations:

Oil Water Separator **-By Others**

Pre-Filters (to remove suspended solids)

One BF2IL 2-stage bag filter housing (10-micron nominal) followed by another BF2IL 2-stage bag filter housing (0.5-micron nominal)

Zeolite Adsorber (to remove free and mechanically emulsified product)

One LMV 1K vessel filled with 1500 lbs of HS200 quaternary amine impregnated zeolite (54 lbs/cu.ft.)

- O&G is expected to float to the water surface and be skimmed off from frac tanks.
- For the volume of water to be treated, the zeolite is predicted to treat an influent O&G concentration of up to 112 ppm.

Liquid-Phase Carbon Adsorbers (to remove PFAS Compounds)

Three LMV 1K vessels arranged in series, each filled with 1,000 lbs of UC1240AW 12x40 acid-washed coal-based granular activated carbon (24 lbs/cu.ft.)

- PFOA is the design compound
- The media is predicted to last in excess of 5.7 million gallons of water, or 200 days of continuous operation at 20 gpm (see the modeling output below).

Note:

Oil is assumed to be present as free-phase or mechanically emulsified product. If foaming is present or oil is emulsified, additional treatment through defoamer injection or flocculation will be required prior to media vessels.

NOTICE

LIQUID-PHASE CARBON ADSORPTION MODEL CALCULATIONS

CARBONAIR ENVIRONMENTAL SYSTEMS
1480 COUNTY ROAD C WEST
ROSEVILLE, MN 55113
PHONE: 800-526-4999
FAX: 651-202-2985

CARBON ADSORBERS:	PC7
NO OF ADSORBERS IN SERIES:	**2**
TOTAL MASS OF CARBON (LBS):	2000.0
FLOW RATE (GPM):	20.000
HYDRAULIC LOADING (GPM/SQ.FT):	2.8565
EMPTY BED CONTACT TIME (MIN.):	27.261
DESIGN COMPOUND:	PFOA(Valeria)
EXPECTED INFLUENT CONCENTRATION (PPB):	0.24000E-01
MODEL INFLUENT CONCENTRATION (PPB):	5.3000
EFFLUENT CRITERIA (PPB):	0.10000E-02
EFFECTIVE K-VALUE (%):	5.0000

TIME(DAYS)	VOLUME TREATED(GAL)	EFF. CONC.(PPB)
5.0	144000.	0.0000000000E+00
10.0	288000.	0.0000000000E+00
15.0	432000.	0.0000000000E+00
20.0	576000.	0.0000000000E+00
25.0	720000.	0.0000000000E+00
30.0	864000.	0.0000000000E+00
35.0	1008000.	0.0000000000E+00
40.0	1152000.	0.0000000000E+00
45.0	1296000.	0.0000000000E+00
50.0	1440000.	0.0000000000E+00
55.0	1584000.	0.0000000000E+00
60.0	1728000.	0.0000000000E+00
65.0	1872000.	0.0000000000E+00
70.0	2016000.	0.0000000000E+00
75.0	2160000.	0.1771782885E-01**<-breakthrough**
80.0	2304000.	0.7183077697
85.0	2448000.	2.262001719
90.0	2592000.	3.343639117
95.0	2736000.	4.055328596
100.0	2880000.	4.514620547

Note: The model influent concentration results from the impact of the other background compounds, which is determined by using a competitive adsorption model

DISCLAIMER: ACTUAL RESULTS MAY VARY SIGNIFICANTLY FROM THE MODEL. THE MODEL IS BASED ON THE ASSUMPTIONS THAT THE FLOW RATE AND INFLUENT CONCENTRATION ARE CONSTANT, AND ONLY THE CONTAMINANTS PROVIDED TO CARBONAIR ARE PRESENT IN THE WATER. VARYING OPERATING CONDITIONS CAN HAVE ADVERSE EFFECTS ON CARBON ADSORPTIVE CAPACITY. THE PREDICTED BED LIFE IS NOT GUARANTEED.

LIQUID-PHASE CARBON ADSORPTION MODEL CALCULATIONS

CARBONAIR ENVIRONMENTAL SYSTEMS
1480 COUNTY ROAD C WEST
ROSEVILLE, MN 55113
PHONE: 800-526-4999
FAX: 651-202-2985

CARBON ADSORBERS:	PC7
NO OF ADSORBERS IN SERIES:	**3**
TOTAL MASS OF CARBON (LBS):	3000.0
FLOW RATE (GPM):	20.000
HYDRAULIC LOADING (GPM/SQ.FT):	2.8565
EMPTY BED CONTACT TIME (MIN.):	40.891
DESIGN COMPOUND:	PFOA(Valeria)
EXPECTED INFLUENT CONCENTRATION (PPB):	0.24000E-01
MODEL INFLUENT CONCENTRATION (PPB):	5.3000
EFFLUENT CRITERIA (PPB):	0.10000E-02
EFFECTIVE K-VALUE (%):	5.0000

TIME(DAYS)	VOLUME TREATED(GAL)	EFF. CONC.(PPB)
5.0	144000.	0.0000000000E+00
10.0	288000.	0.0000000000E+00
15.0	432000.	0.0000000000E+00
20.0	576000.	0.0000000000E+00
25.0	720000.	0.0000000000E+00
30.0	864000.	0.0000000000E+00
35.0	1008000.	0.0000000000E+00
40.0	1152000.	0.0000000000E+00
45.0	1296000.	0.0000000000E+00
50.0	1440000.	0.0000000000E+00
55.0	1584000.	0.0000000000E+00
60.0	1728000.	0.0000000000E+00
65.0	1872000.	0.0000000000E+00
70.0	2016000.	0.0000000000E+00
75.0	2160000.	0.0000000000E+00
80.0	2304000.	0.0000000000E+00
85.0	2448000.	0.0000000000E+00
90.0	2592000.	0.0000000000E+00
95.0	2736000.	0.0000000000E+00
100.0	2880000.	0.0000000000E+00
100.0	2880000.	0.0000000000E+00

(no breakthrough)

Note: The model influent concentration results from the impact of the other background compounds, which is determined by using a competitive adsorption model

Figure 1
Treatment System Schematic

Notes:

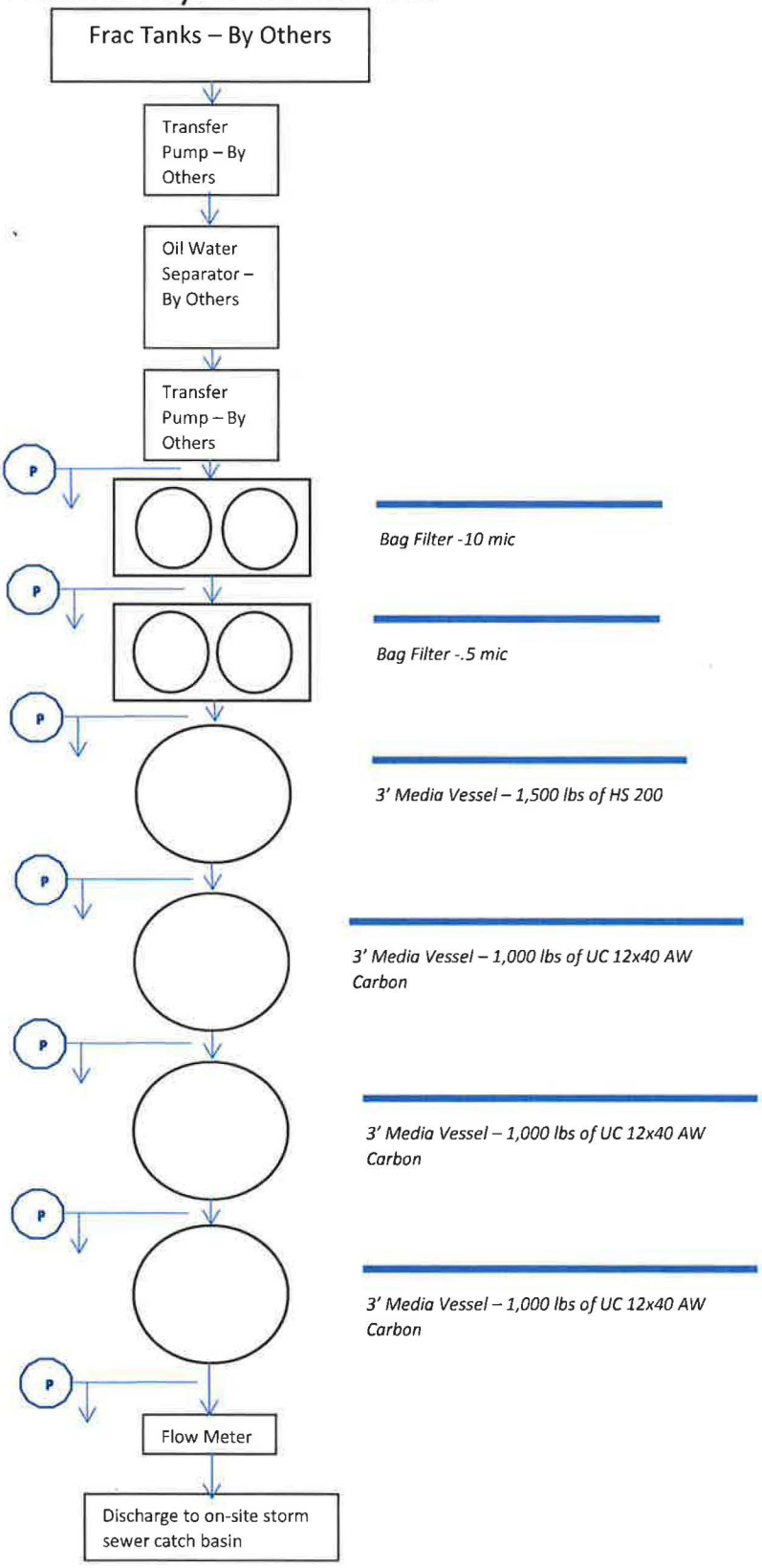
Flow diagram is not to scale. Please see cut sheets for complete sizing of equipment

All pieces (of ProAct system) will be connected by 2" OSD Hose

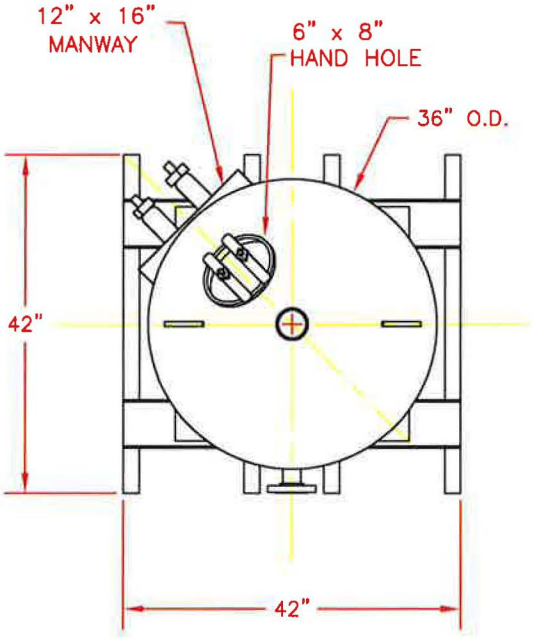
Discharge hose will be in place after flow meter and is 2" Lay Flat Hose

Drawing does not incorporate additional vessel(s)

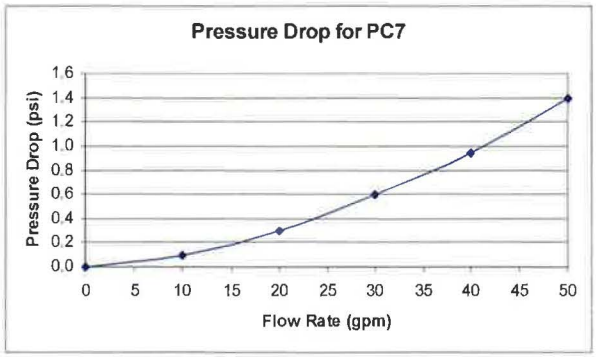
Pressure gauge and sample port

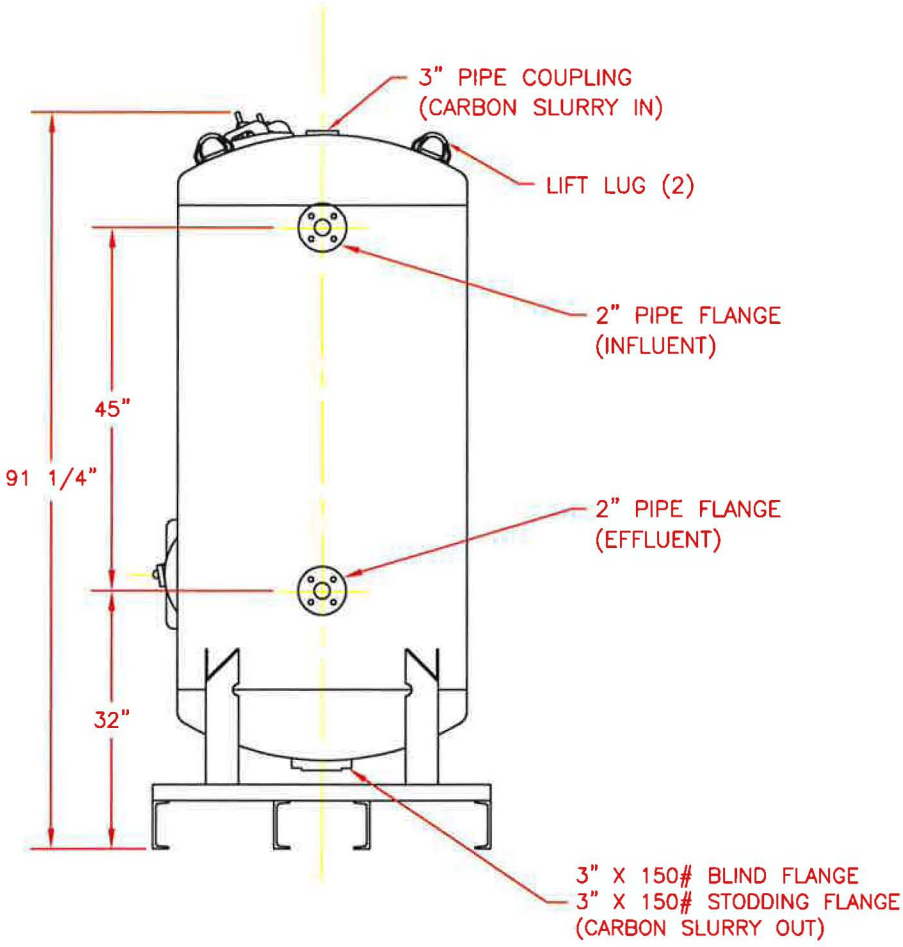


Carbon Adsorber–Liquid Phase
PC 7



TOP VIEW

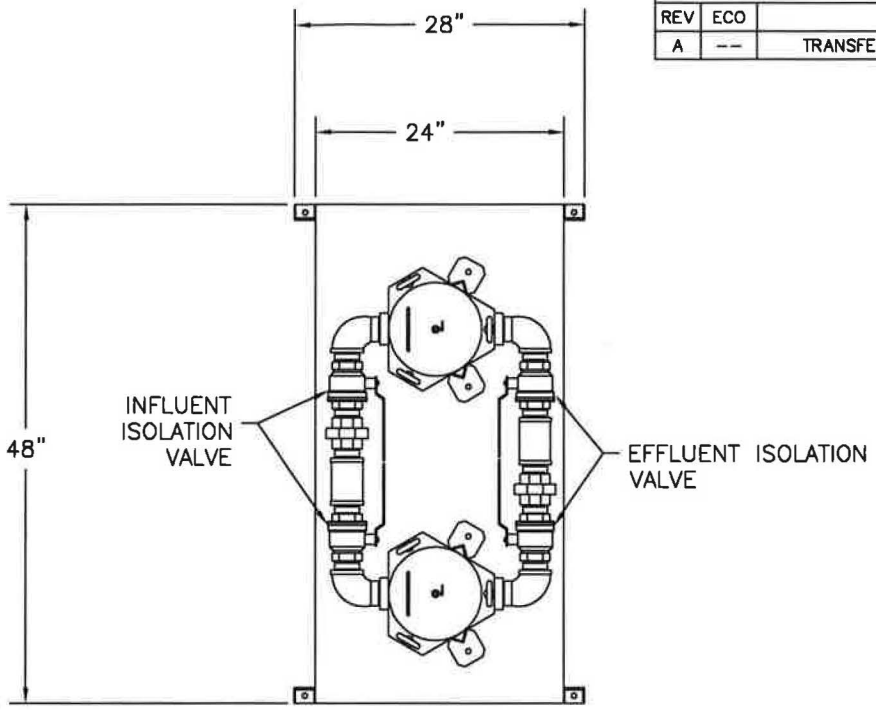




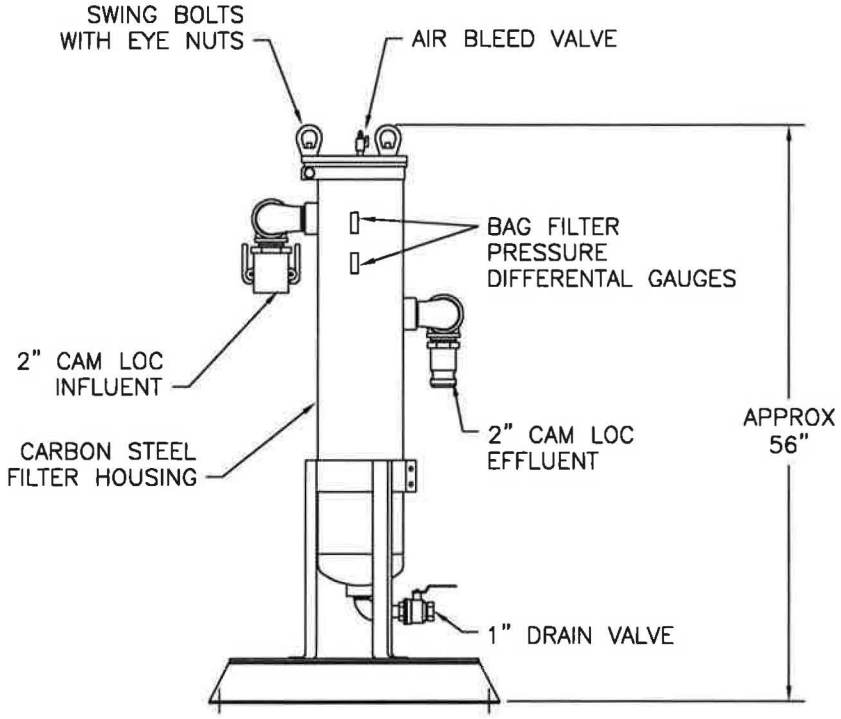
ELEVATION / FRONT VIEW

Sales Drawing #121140
03/22/05

REVISIONS				
REV	ECO	DESCRIPTION	DATE	DRN
A	--	TRANSFER TO A SIZE DRAWING	4/29/14	RGB

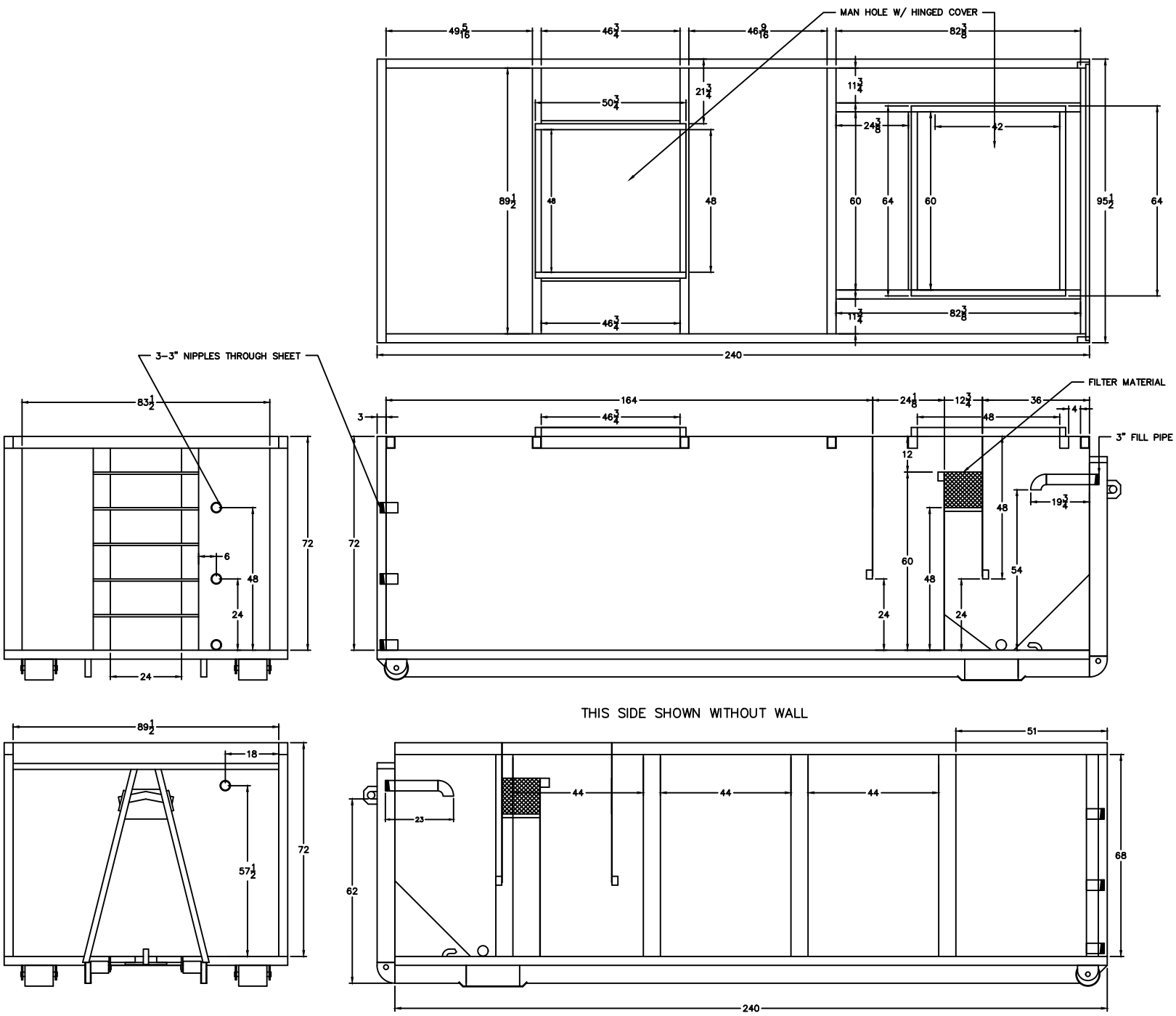


PLAN VIEW



ELEVATION VIEW

MATERIAL: -- --	DRN BY: 2/14/03	PROJECT MGR: --	L:\MECH\CA logo-312.gif
	DATE: --	PROJECT NO.: --	
TOLERANCES UNLESS NOTED OTHERWISE: DECIMAL .03 / FRACTIONAL 1/32" / ANGLES 1°	TITLE: 48" x 24" DUAL BAG FILTER SKID		
THE INFORMATION SHOWN ON THIS PAGE IS CONFIDENTIAL AND IS PROPRIETARY INFORMATION OF CARBONAIR, AND MAY NOT BE USED OR REPRODUCED WITHOUT CONSENT OF CARBONAIR.	SIZE B / DWG. NO. 215646	REV A	
	• DIMENSIONS ARE IN U.S. UNITS • DO NOT SCALE DRAWING	SHEET 1 OF 1	



REVISIONS	
REV. DATE	#

POYNETTE IRON WORKS, INC.

209 E. NORTH STREET, POYNETTE, WI 53955

PH: 800-572-2487 FAX: 608-635-7218

www.poynetteironworks.com

CUSTOMER: NORTH SHORE

TITLE: 6500 GAL TANK ROLLOFF MAIN

SCALE:	DRAWN BY:	MATERIAL:	BLANK SIZE:	BIT #
1:1	CRR	N/A	N/A	N/A

DATE:	SHEET OF SHEETS	DRAWING NO.
08-14-14	1 1	6500GALTANKRO

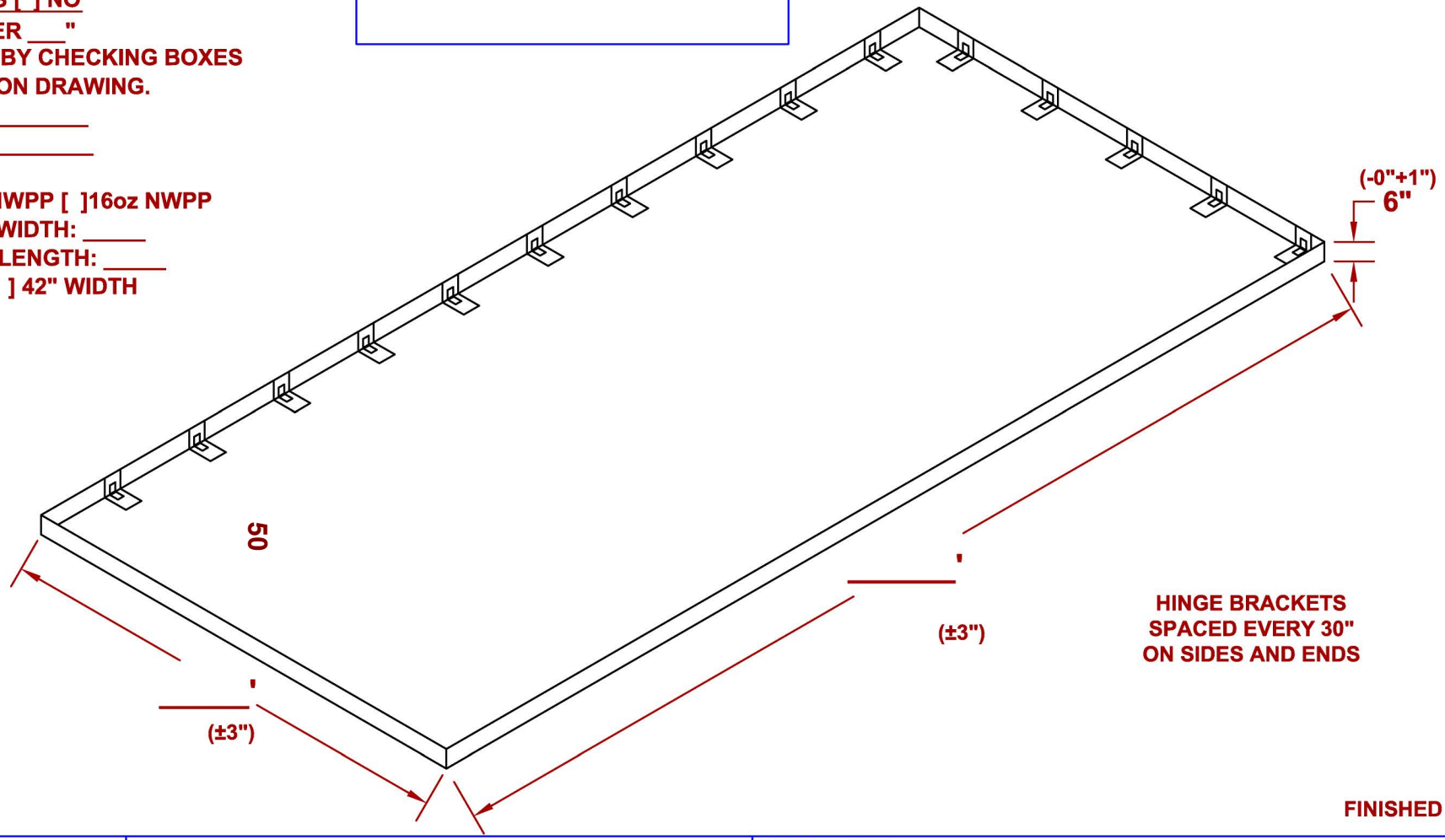
GENERIC HINGE BRACKET BERM

20

MTL'S:

[ ] X-GUARD [ ] X-GUARD PLUS
[ ] 18oz VINYL [ ] RPP
[ ] OTHER _____
DRAIN PLUG(S) [ ] YES [ ] NO
⅝" STANDARD - OTHER ___"
SPECIFY LOCATION S BY CHECKING BOXES BELOW OR INDICATE ON DRAWING.
END CENTER [ ] _____
END CORNER [ ] _____
GROUND COVER
[ ] 8oz NWPP [ ]12oz NWPP [ ]16oz NWPP
LENGTH: ____ WIDTH: _____
[ ] RUBBER MATTING LENGTH: _____
[ ] 30" WIDTH [ ] 42" WIDTH

SIZE OF CONTAINER
_____
QUANTITY ___
DATE REQUIRED ____
CUSTOMER PO #:_____
ADDITIONAL NOTES:



HINGE BRACKETS SPACED EVERY 30" ON SIDES AND ENDS

FINISHED

North Shore Environmental Construction

IBHXP20512

PACTEC

PacTec, Inc.
1-(800)-272-2832

CUSTOMER APPROVAL
SIGNATURE _____ DATE _____
CONTACT INFORMATION
NAME _____ PHONE # _____

Proprietary & Confidential

CUSTOMER NAME			
CUSTOMER ITEM CODE–	---		
PACTEC ITEM CODE–			
DESCRIPTION HINGE BRACKET BERM			
SIZE A	SCALE N/A	DWG NO.	
DRAWN BY MDB	DATE DRAWN	REVISION 0.0	SHEET 1 OF 1

P.O. Box 8069 Clinton, LA 70722 (800) 272-2832 www.pactecinc.com

X-Guard™ Plus

Product Properties	Specification (Metric)	Test Method (ASTM)
Weight	30.61 oz/yd^2 (1040g/m^2)	D751
Thickness	36.5 mils (0.9 mm)	D751
Puncture Resistance	260 lbs (1100 N)	D4833
Ball Burst	841 lbs (3700 N)	D751
Trap Tear	MD – 228 lbs (1000 N) TD – 352 lbs (1600 N)	D4533
Hydrostatic Resistance	800 psi (5.52 Mpa)	D751, Procedure A
Tensile Property - Break Strength	MD – 635 lbs (2800 N) TD – 692 lbs (3100 N)	D751, Procedure A
Tensile Property - Elongation	MD - 44% TD - 42%	D751, Procedure A
Abrasion	20,000 cycles	D3389
Low Working Temp	-25°F (-32°C)	D2136
High Working Temp	180°F (82°C)	