Application for a State Waste Discharge Permit to Discharge Industrial Wastewater to a Publicly-Owned Treatment Works (POTW)

This application is for a state waste discharge permit for a discharge of industrial wastewater to a publicly-owned treatment works (POTW) as required by Chapter 90.48 RCW and Chapter 173-216 WAC. It is designed to provide Ecology with information on pollutants in the waste stream, materials that may enter the waste stream, and the flow characteristics of the discharge.

Ecology may request additional information to clarify the conditions of this discharge. The applicant should reference information previously submitted to Ecology that applies to this application in the appropriate section.

SECTION A. GENERAL INFORMATION

1. Applicant Name: Waste Management of Washington, Inc.

2. Facility Name: Olympic View Sanitary Landfill
(if different from Applicant)

3. Applicant Mail Address: 2615 Davis Street
Street

San Leandro, CA — 94577
City/State — Zip

4. Facility Location Address: 10015 SW Barney White Road
(if different from 3 above) Street

Port Orchard, Washington — 98367
City/State — Zip

5. UBI No. 36-3846342

Sometimes called a registration, tax, "C," or resale number, the Unified Business Identifier (UBI) number is a nine-digit number used to identify persons engaging in business activities. The number is assigned when a person completes a Master Business Application to register with or obtain a license from state agencies. The Departments of Revenue, Licensing, Employment Security, Labor and Industries, and the Corporations Division of the Secretary of State are among the state agencies participating in the UBI program.

6. Latitude/longitude of the facility as decimal degrees (NAD83/WGS84):

47.501111 / 122.789722

FOR OFFICE USE ONLY	**Check One:** New/Renewal ☐ Modification ☐		
Date Application Received _____	Date Fee Paid _____	Application/ Permit No. _____	Date Application Accepted _____

7. Person to contact who is familiar with the information contained in this application:

Patrick Madej	District Manager
Name	Title
510.376.7700	
Telephone number	Fax number

8. Check One:

☒ **Permit Renewal** (including renewal of temporary permits)

Does this application request a greater amount of wastewater discharge, a greater amount of pollutant discharge, or a discharge of different pollutants than specified in the last permit application for this facility? ☐ YES ☒ NO

For permit renewals, the current permit is an attachment, by reference, to this application.

☐ **Permit Modification**

☐ **Existing Unpermitted Discharge**

☐ **Proposed Discharge**

Anticipated date of discharge: _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and/or imprisonment for knowing violations.

Patrick Madej	12/08/2020	District Manager
Signature*	Date	Title

Patrick Madej
Printed Name

*Applications must be signed as follows: corporations, by a principal executive officer of at least the level of vice-president; partnership, by a general partner; sole proprietorship, by the proprietor. If these titles do not apply to your organization, the person who makes budget decisions for this facility must sign the application.

The application signatory may delegate signature authority for submittals required by the permit, such as monthly reports, to a suitable employee. You can delegate this authority to a qualified individual or to a position, which you expect to fill with a qualified individual. If you wish to delegate signature authority, please complete the following:

Signature of delegated employee	Date	Title or function at the facility

Printed name

SECTION B. PRODUCT INFORMATION

1. Briefly describe all manufacturing processes and products, and/or commercial activities, at this facility. Provide the applicable Standard Industrial Category (SIC) and the North American Industry Classification System (NAICS) Code(s) for each activity (see *North American Industrial Classification System*, 2007 ed.). You can find the 1997 NAICS codes and the corresponding 1987 Standard Industry Category (SIC) codes at (http://www.census.gov/epcd/naics/frames3.htm).

Description: Discharge of leachate, and other incidental wastewaters such as well purge water collected from a closed sanitary landfill. The landfill ceased accepting municipal waste in 2002 and closure was certified complete by Kitsap County in 2004

SIC Code: 4953

The leachate and other incidental wasterwater is trucked to and discharged at an off-site manhole located near 217 SW Wilkins Drive, Port OrcliaNod WA 98366 (Long 47 32'13" N, Lat. 122 38'60" W). The sewer line is owned by City of Port Orchard/West Sound Utility District.

2. List raw materials and products used at his facility:

Type	RAW MATERIALS	Quantity
Grapes (Example)		*1,000 tons per year*
None		

Type	PRODUCTS	Quantity
Grape Juice(Example)		*300,000 gallons per year*

SECTION C. PLANT OPERATIONAL CHARACTERISTICS

1. For each process listed in B.1. that generates wastewater, list the process, assign the waste stream a name and an ID # and describe whether it is a batch or continuous flow.

Process	Waste Stream Name	Waste Stream ID#	Batch (B) or Continuous (C) Process
Landfill leachate collection	Landfill leachate collection	1	B
Transfer station leachate	Transfer station leachate	2	B
Groundwater well purge water	Groundwater well purge water	3	B
Incidental water	Incidental water	4	B

2. On a separate sheet, produce a schematic drawing showing production processes, water flow through the facility, wastewater treatment devices and waste streams as named above. The drawing should indicate the source of intake water and show the operations contributing wastewater to the effluent. The treatment units should be labeled. Construct a water balance by showing average flows between intakes, operations, treatment units, and points of discharge to the POTW. (*See the example on page 16 of this application form.)*

3. What is the maximum daily wastewater discharge flow? 200,000 gallons/day

   What is the maximum average monthly wastewater discharge flow (daily flows averaged over a month)? 200,000 gallons/day

4. Describe any planned wastewater treatment improvements or changes in wastewater disposal methods, and the schedule for these improvements. *(Use additional sheets, if necessary and label as attachment C4.)*

   None

5. If production processes are subject to seasonal variations, provide the following information. The combined value for each month should equal the estimated total monthly flow. Please indicate the proper flow unit by checking one of the following boxes:

☐ gallons per day ☒ gallons per month ☐ million gallons per month

Waste Stream ID#	MONTHS											
	J	F	M	A	M	J	J	A	S	O	N	D
1					1.0					1.0		
2					0.1					.1		
3					0.1					.1		
4					0.05					0.05		
Estimated Total Monthly Flow (GPD)												

6. How many hours a day does this facility typically operate? 24

How many days a week does this facility typically operate? 7

How many weeks per year does this facility typically operate? 365

7. List all incidental materials, such as oil, paint, grease, solvents, and cleaners, that are used or stored on site (*list only those with quantities greater than 10 gallons for liquids and 50 pounds for solids)*. For solvents and solvent-based cleaners, include a copy of the material safety data sheet and estimate the quantity used. (*Use additional sheets, if necessary, and label as attachment C.7.)*

Materials/Quantity Stored: None

8. Some types of facilities are required to have spill or waste control plans. Does Yes No

this facility have:

a.	A spill prevention, control, and countermeasure plan (40 CFR 112)?	☒	☐
b.	An Oil Spill Contingency Plan (chapter 173-182 WAC)?	☐	☒
c.	An emergency response plan (per WAC 173-303-350)?	☒	☐
d.	A runoff, spillage, or leak control plan (per WAC 173-216-110(f))?	☒	☐
e.	Any spill or pollution prevention plan required by local, state or federal authorities? If yes specify: _____	☐	☒
f.	A solid waste control plan?	☐	☒
g.	A Slug Discharge Control Plan (40 CFR 403.8(f)(2)(v))?	☒	☐

SECTION D. WATER CONSUMPTION AND WATER LOSS

1. Potable water source(s):

☐ Public System (Specify) _____

☒ Private Well ☐ Surface Water

a. Water Right Permit Number: Unknown

b. Legal Description of Water Source

_____ ¼S, _____ ¼E, _____, Section, _____ TWN, _____ R

2. Potable water use

a. Indicate total water use___

Gallons per day (average) Zero

Gallons per day (maximum) _____

b. Is water metered?

☐ YES ☒ NO

SECTION E. WASTEWATER INFORMATION

1. How are the water intake and effluent flows measured?

   Intake: Totalizer meter

   Effluent Totalizer meter + truck counts

2. Describe the collection method for the samples analyzed below. (*i.e.*, grab, 24-hour composite). Applicants must collect grab samples (not composites) for analysis of pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform (including E. coli), and Enterococci (previously known as fecal streptococcus at § 122.26 (d)(2)(iii)(A)(3)),or volatile organics.

   Grab sample from covered, aerated collection pond

3. Has the effluent been analyzed for any other parameters than those identified in question E.4.? ☒ YES ☐ NO
   If yes, attach results and label as attachment E.4. This data must clearly show the date, method and location of sampling. *(Note: Ecology may require additional testing.)*

4. Provide measurements or range of measurements for treated wastewater prior to discharge to the POTW for the parameters with an "X" in the left column. If you obtain the application from the internet, contact Ecology's regional office to see if testing for a subset of these parameters is permissible. All analyses (except pH) must be conducted by a laboratory registered or accredited by Ecology (WAC 173-216-125). If this is an application for permit renewal, provide data for the last year for those parameters that are routinely measured. For parameters measured only for this application, place the values under "Maximum." Report the values with units as specified in the parameter name or in the detection level.

   The Permittee must use the specified analytical methods, detection limits (DLs) and quantitation levels (QLs) in the following table unless Ecology approves an alternate method or the method used produces measurable results in the sample and EPA has listed it as an EPA approved method in 40 CFR Part 136. If the Permittee uses an alternative method as allowed above, it must report the test method, DL, and QL on the discharge monitoring report or in the required report.

X	Parameter	Measurement Values			Number of Analyses	Analytical Method Std. Methods 19th,20th edition or EPA	Detection Limit/Quantitation Level
		Minimum	Maximum	Average			
	BOD (5 day)					SM 5210 B	/2 mg/l
	COD					SM 5220 D	/10 mg/l
	Total suspended solids					SM 2540 D	/5 mg/l
	Fixed Dissolved Solids					SM 2540 E	
	Total dissolved solids					SM 2540 C	
	Conductivity (micromhos/cm)					SM 2510 B	
	Ammonia-N as N					SM 4500-NH_3 C	/0.3 mg/L
	pH					SM 4500-H	0.1 standard units
	Fecal coliform (organisms/100 mL)					SM 9221 E or 9222 D	
	Total coliform (organisms/100 mL)					SM 9221 B or 9222 B	
	Dissolved oxygen					SM 4500-O C/G	
	Nitrate + nitrite-N as N					SM 4500-NO_3 E	100 µg/L
	Total kjeldahl N as N					SM 4500-N_{org} C/E/FG	300 µg/l
	Ortho-phosphate-P as P					SM 4500-P E/F	10 µg/l
	Total-phosphorous-P as P					SM 4500-P E/P/F	10 µg/l
	Total Oil & grease					EPA 1664A	1.4/5 mg/l
	NWTPH - Dx					Ecology NWTPH Dx	250/250 µg/l
	NWTPH - Gx					Ecology NWTPH Gx	250/250 µg/l
	Calcium					EPA 200.7	10 µg/l
	Chloride					SM 4500-Cl C	0.15 µg/l
	Fluoride					SM 4500-F E	.025/0.1 mg/l
	Magnesium					EPA 200.7	10/50 µg/l
	Potassium					EPA 200.7	700/ µg/l
	Sodium					EPA 200.7	29/ µg/l
	Sulfate					SM 4500-SO_4 C/D	/200 µg/l
	Arsenic(total)					EPA 200.8	0.1/0.5 µg/l

X	Parameter	Measurement Values			Number of Analyses	Analytical Method Std. Methods 19th,20th edition or EPA	Detection Limit/Quantitation Level
		Minimum	Maximum	Average			
	Barium (total)					EPA 200.8	0.5/2 µg/l
	Cadmium (total)					EPA 200.8	.05/.25 µg/l
	Chromium (total)					EPA 200.8	0.2/1 µg/l
	Copper (total)					EPA 200.8	0.4/2 µg/l
	Lead (total)					EPA 200.8	0.1/.5 µg/l
	Mercury (total) pg/L					EPA 1631E	0.2/0.5 pg/l
	Molybdenum(total)					EPA 200.8	0.1/0.5 µg/l
	Nickel(total)					EPA 200.8	0.1/0.5 µg/l
	Selenium (total)					EPA 200.8	1/1 µg/l
	Silver (total)					EPA 200.8	.04/.2 µg/l
	Zinc (total)					EPA 200.8	0.5/2.5 µg/l

6. Does this facility use any of the following chemicals as raw materials or produce them as part of the manufacturing process, or are they present in the wastewater? ☐ YES ☒ NO

(*The number in the column next to the chemical name is the Chemical Abstract Service (CAS) reference number to aid in identifying the compound.*)

If yes, specify how the chemical is used and the quantity used or produced:

METALS, CYANIDE & TOTAL PHENOLS			
Antimony, Total	7440-36-0	Nickel, Total	7440-02-0
Arsenic, Total	7440-38-2	Selenium, Total	7782-49-2
Beryllium, Total	7440-41-7	Silver, Total	7440-22-4
Cadmium, Total	7440-43-9	Thallium, Total	7440-28-0
Chromium (hex) dissolved	18540-29-9	Zinc, Total	7440-66-6
Chromium, Total	7440-47-3		
Copper, Total	7440-50-8	Cyanide, Total	57-12-5
Lead, Total	7439-92-1	Cyanide, Weak Acid Dissociable	
Mercury, Total	7439-97-6)	Phenols, Total	

PESTICIDES			
Aldrin	309-00-2	Endrin	72-20-8
alpha-BHC	319-84-6	Endrin Aldehyde	7421-93-4
beta-BHC	319-85-7	Heptachlor	76-44-8
gamma-BHC	58-89-9	Heptachlor Epoxide	1024-57-3
delta-BHC	319-86-8	PCB-1242	53469-21-9
Chlordane	57-74-9	PCB-1254	11097-69-1
4,4'-DDT	50-29-3	PCB-1221	11104-28-2
4,4'-DDE	72-55-9	PCB-1232	11141-16-5
4,4' DDD	72-54-8	PCB-1248	12672-29-6
Dieldrin	60-57-1	PCB-1260	11096-82-5
alpha-Endosulfan	959-98-8	PCB-1016	12674-11-2
beta-Endosulfan	33213-65-9	Toxaphene	8001-35-2
Endosulfan Sulfate	1031-07-8		

VOLATILE COMPOUNDS			
Acrolein	107-02-8		
Acrylonitrile	107-13-1	1,1-Dichloroethylene	75-35-4
Benzene	71-43-2	1,2-Dichloropropane	78-87-5
Bromoform	75-25-2	1,3-dichloropropene (mixed isomers) (1,2-dichloropropylene)	542-75-6
Carbon tetrachloride	56-23-5	Ethylbenzene	100-41-4
Chlorobenzene	108-90-7	Methyl bromide (Bromomethane)	74-83-9
Chloroethane	75-00-3	Methyl chloride (Chloromethane)	74-87-3
2-Chloroethylvinyl Ether	110-75-8	Methylene chloride)	75-09-2
Chloroform	67-66-3	1,1,2,2-Tetrachloroethane	79-34-5
Dibromochloromethane	124-48-1	Tetrachloroethylene	127-18-4
1,2-Dichlorobenzene	95-50-1	Toluene (108-88-3)	
1,3-Dichlorobenzene	(541-73-1)	1,2-Trans-Dichloroethylene (Ethylene dichloride)	156-60-5
1,4-Dichlorobenzene	106-46-7	1,1,1-Trichloroethane	71-55-6
Dichlorobromomethane	75-27-4	1,1,2-Trichloroethane	79-00-5
1,1-Dichloroethane	75-34-3	Trichloroethylene	79-01-6
1,2-Dichloroethane	107-06-2	Vinyl chloride	75-01-4

ACID COMPOUNDS			
2-Chlorophenol	95-57-8	4-nitrophenol	100-02-7
2,4-Dichlorophenol	120-83-2	Parachlorometa cresol (4-chloro-3-methylphenol)	59-50-7
2,4-Dimethylphenol	105-67-9	Pentachlorophenol	87-86-5
4,6-dinitro-o-cresol (2-methyl-4,6,-dinitrophenol)	534-52-1	Phenol	108-95-2
2,4 dinitrophenol	51-28-5	2,4,6-Trichlorophenol	88-06-2
2-Nitrophenol	88-75-5		

BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)			
Acenaphthene	83-32-9	3,3-Dichlorobenzidine	91-94-1
Acenaphthylene	208-96-8	Diethyl phthalate	84-66-2
Anthracene	120-12-7	Dimethyl phthalate	131-11-3
Benzidine	92-87-5	Di-n-butyl phthalate)	84-74-2
Benzyl butyl phthalate	85-68-7	2,4-dinitrotoluene	121-14-2
Benzo(*a*)anthracene	56-55-3	2,6-dinitrotoluene	606-20-2
Benzo(b)fluoranthene (3,4-benzofluoranthene)	205-99-2	Di-n-octyl phthalate	117-84-0
Benzo(j)fluoranthene	**205-82-3**	1,2-Diphenylhydrazine (*as Azobenzene*)	122-66-7
Benzo(k)fluoranthene (11,12-benzofluoranthene)	207-08-9	Fluoranthene	206-44-0
Benzo(r,s,t)pentaphene	**189-55-9**	Fluorene	86-73-7
Benzo(*a*)pyrene	50-32-8	Hexachlorobenzene	118-74-1
Benzo(*ghi*)Perylene	191-24-2	Hexachlorobutadiene	87-68-3
Bis(*2-chloroethoxy)*methane	111-91-1	Hexachlorocyclopentadiene	77-47-4
Bis(*2-chloroethyl*)ether	111-44-4	Hexachloroethane	67-72-1
Bis(*2-chloroisopropyl*)ether	39638-32-9	Indeno(*1,2,3-cd*)Pyrene	193-39-5
Bis(*2-ethylhexyl*)phthalate	117-81-7	Isophorone	78-59-1
4-Bromophenyl phenyl ether	101-55-3	**3-Methyl cholanthrene**	**56-49-5**
2-Chloronaphthalene	91-58-7	Naphthalene	91-20-3
4-Chlorophenyl phenyl ether	7005-72-3	Nitrobenzene	98-95-3
Chrysene	218-01-9	N-Nitrosodimethylamine	62-75-9
Dibenzo (a,j)acridine	**224-42-0**	N-Nitrosodi-n-propylamine	621-64-7
Dibenzo (a,h)acridine	**226-36-8**	N-Nitrosodiphenylamine	86-30-6
Dibenzo(a-*h*)anthracene (1,2,5,6-dibenzanthracene)	53-70-3	**Perylene**	**198-55-0**
Dibenzo(a,e)pyrene	192-65-4	Phenanthrene	85-01-8
Dibenzo(a,h)pyrene	189-64-0	Pyrene	129-00-0
		1,2,4-Trichlorobenzene	120-82-1

7. Are any other pesticides, herbicides or fungicides used at this facility? ☒ YES ☐ NO

If yes, specify the material and quantity used:

Cross Bow, Domaint Oil @ 2 quarts per acre

8 Are there other pollutants that you know of or believe to be present? ☒ YES ☒ NO

If yes, specify the pollutants and their concentration if known
(attach laboratory analyses if available as Attachment E8):

See Attachment E8 - PFAS LF-Lpond Analytical Report

9. Is the wastewater being discharged, or proposed for discharge, to the POTW designated as a dangerous waste according to the procedures in Chapter 173-303 WAC?

☐ YES ☒ NO ☐ DON'T KNOW

10. If the answer to question 9 above is yes, how did the waste designate as a dangerous waste *(check appropriate box)*?

For Listed and TCLP Characteristic Wastes only, also provide the Dangerous Waste Number(s).

Listed Waste ☐ Dangerous Waste Number(s) _____

Characteristic Wastes Dangerous Waste Number(s) _____

Ignitable ☐
Reactive ☐
Corrosive ☐
TCLP ☐

State Only Dangerous Wastes Dangerous Waste Number(s) _____

Toxicity ☐
Persistent ☐

For questions about waste designation under the *Dangerous Waste Regulations*, Chapter 173-303 WAC, contact Ecology's Hazardous Waste and Toxics Program at:

Northwest Regional Office - Bellevue	(425) 649-7000
Southwest Regional Office - Lacey	(360) 407-6300
Central Regional Office - Yakima	(509) 575-2490
Eastern Regional Office - Spokane	(509) 329-3400

SECTION F. SEWER INFORMATION

1. Is an inspection and sampling manhole or similar structure available on-site? ☒ YES ☐ NO
   If yes, attach a map or hand drawing of the facility that shows the location of these structures (Label as attachment F1 or this may be combined with map in H8, if H8 is applicable to your facility.)

SECTION G. OTHER PERMITS

1. List all environmental control permits or approvals needed for this facility; for example, air emission permits.

Solid Waste Landfill Post Closure Permit, issued by Kitsap County Health District, effective

Puget Sound Clean Air Agency, Approval to Construct, Insall, or Establish a utility flare, May 27, 2010

SECTION H. STORMWATER

1. Do you have coverage under the Washington State Industrial Stormwater NPDES General Permit? ☐ YES ☒ NO
   If yes, please list the permit number here. _____

   If no, have you applied for a Washington State Stormwater Industrial Stormwater General Permit? ☐ YES ☒ NO

   If you answered no to both questions above, complete the following questions 2 through 5.

2. Does your facility discharge stormwater: *(Check all that apply)*

   ☐ To storm sewer system *(provide name of storm sewer system operator:* _____

   ☒ Directly to any surface waters of Washington State *(e.g., river, lake, creek, estuary, ocean).*

   Specify waterbody name(s) Union Creek

   ☐ Indirectly to surface waters of Washington State *(i.e., flows over adjacent properties first).*

   ☐ To a Sanitary Sewer

   ☐ Directly to ground waters of Washington State via:

   ☐ Dry well

   ☐ Drainfield

   ☐ Other

3. Areas with industrial activities at facility: *(check all that apply)*

   ☐ Manufacturing Building

   ☐ Material Handling

   ☐ Material Storage

   ☐ Hazardous Waste Treatment, Storage, or Disposal *(Refers to RCRA, Subtitle C Facilities Only)*

   ☐ Waste Treatment, Storage, or Disposal

   ☐ Application or Disposal of Wastewaters

   ☐ Storage and Maintenance of Material Handling Equipment

   ☐ Vehicle Maintenance

   ☒ Areas Where Significant Materials Remain

   ☒ Access Roads and Rail Lines for Shipping and Receiving

   ☐ Other (please specify): _____

4. Material handling/management practices

a. Types of materials handled and/or stored outdoors: *(check all that apply)*

☐	Solvents	☐	Hazardous Wastes
☐	Scrap Metal	☐	Acids or Alkalies
☐	Petroleum or Petrochemical Products	☐	Paints/Coatings
☐	Plating Products	☐	Woodtreating Products
☐	Pesticides	☐	Other *(please list)*: _____

b. Identify existing management practices employed to reduce pollutants in industrial stormwater discharges: *(check all that apply)*

☐	Oil/Water Separator	☐	Detention Facilities
☐	Containment	☐	Infiltration Basins
☐	Spill Prevention	☒	Operational BMPs
☒	Surface Leachate Collection	☒	Vegetation Management
☐	Overhead Coverage	☐	Other *(please list)*: _____

5. Attach a facility site map showing stormwater drainage/collection areas, disposal areas and discharge points. This may be a hand-drawn map if no other site map is available *(See example on page 16 of this application)*. *Label this as attachment H.5*.

SECTION I. OTHER INFORMATION

1. Describe liquid wastes or sludges being generated by your facility that are not disposed of in the waste stream(s) and how they are being disposed of. For each type of waste, provide type of waste and the name, address, and phone number of the hauler.

   None

2. Describe storage areas for raw materials, products, and wastes.

   None

3. Have you designated the wastes described above according to the applicable procedures of Dangerous Waste Regulations, Chapter 173-303 WAC? ☐ YES ☒ NO

SECTION J. CERTIFICATIONS

1. **Approval by Publicly-Owned Treatment Works [required by WAC 173-216-070(4)(b)]**

I approve of the discharge as described in this application. The applicant is:

(Please check the appropriate box below.)

- [x] A Significant Industrial User (see Definitions at the end of this Section)
- [ ] A Categorical Industrial User
- [ ] Neither of the above

Name and location of sewer system to which this project will be tributary:

Treatment Works Owner: City of Bremerton

Street: 1600 Oyster Bay Ave. S.

City/State: Bremerton, WA Zip: 98312

Signature of Treatment Works Authority | Date: 11-4-2020 | Title: Wastewater Manager

Eric J. Burris

Printed Name

2. **Application review by Intermediate Sewer Owner at point of discharge (if applicable)**

I hereby acknowledge that I have reviewed the application for discharge to this sewer system.

Name and location of sewer system to which this project will be tributary:

Sewer System Owner: _____

Street: _____

City/State: _____ Zip: _____

Signature of Sewer System Authority | Date | Title

Printed Name

SECTION J. CERTIFICATIONS

1. **Approval by Publicly-Owned Treatment Works [required by WAC 173-216-070(4)(b)]**

I approve of the discharge as described in this application. The applicant is:

(Please check the appropriate box below.)

☐ A Significant Industrial User (see Definitions at the end of this Section)

☐ A Categorical Industrial User

☐ Neither of the above

Name and location of sewer system to which this project will be tributary:

Treatment Works Owner: West Sound Utility District & City of Port Orchard

Street: 1165 Beach Drive East

City/State: Port Orchard , WA Zip: 98366

Signature of Treatment Works Authority | Date: 10/27/2020 | Title: Plant Manager

Marty Grabill
Printed Name

2. **Application review by Intermediate Sewer Owner at point of discharge (if applicable)**

I hereby acknowledge that I have reviewed the application for discharge to this sewer system.

Name and location of sewer system to which this project will be tributary:

Sewer System Owner: CITY OF PORT ORCHARD

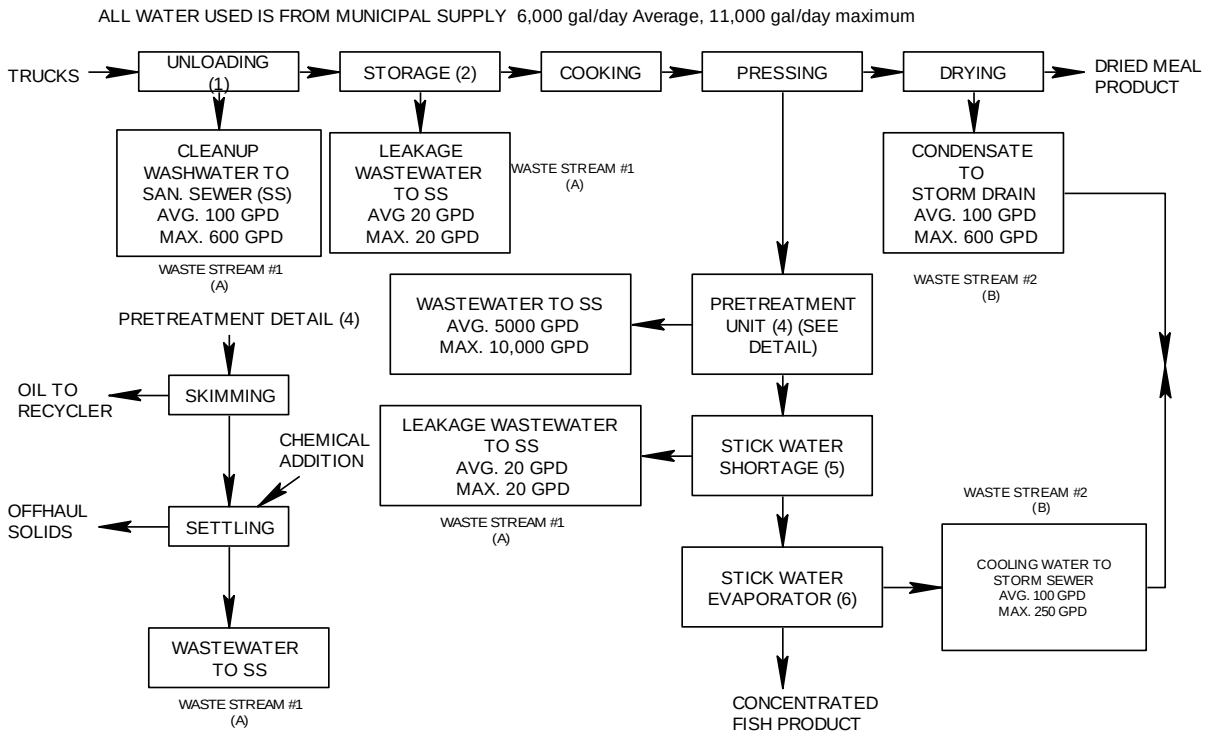
Street: 216 PROSPECT ST.

City/State: PORT ORCHARD, WA Zip: 98366

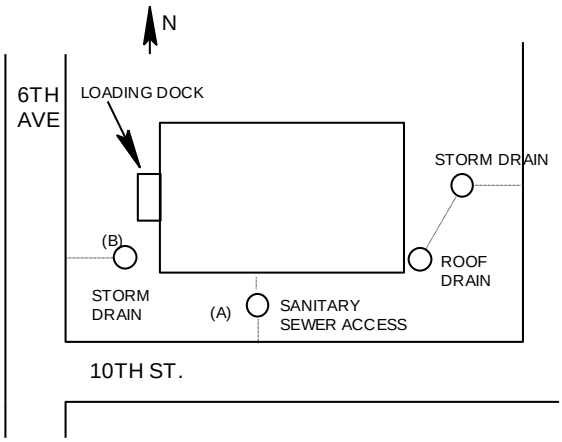
Signature of Sewer System Authority | Date: 10/27/2020 | Title: DIR. PUBLIC WORKS

MARK R. DOPSLEY, P.E.
Printed Name

Example 1 for application section C.2. (SCHEMATIC DIAGRAM)



Example 2 for application section F1 or H8 (FACILITY SITE MAP)



DEFINITIONS

Significant Industrial User (SIU)--

1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; and

2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

   Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

Control Authority - means the Washington State Department of Ecology in the case of non-delegated POTWs or means the POTW in the case of delegated POTWs.

Categoric Industrial User (CIU): An industrial user subject to national categorical pretreatment standards promulgated by EPA (40 CFR 403.6 and40 CFR parts 405-471).

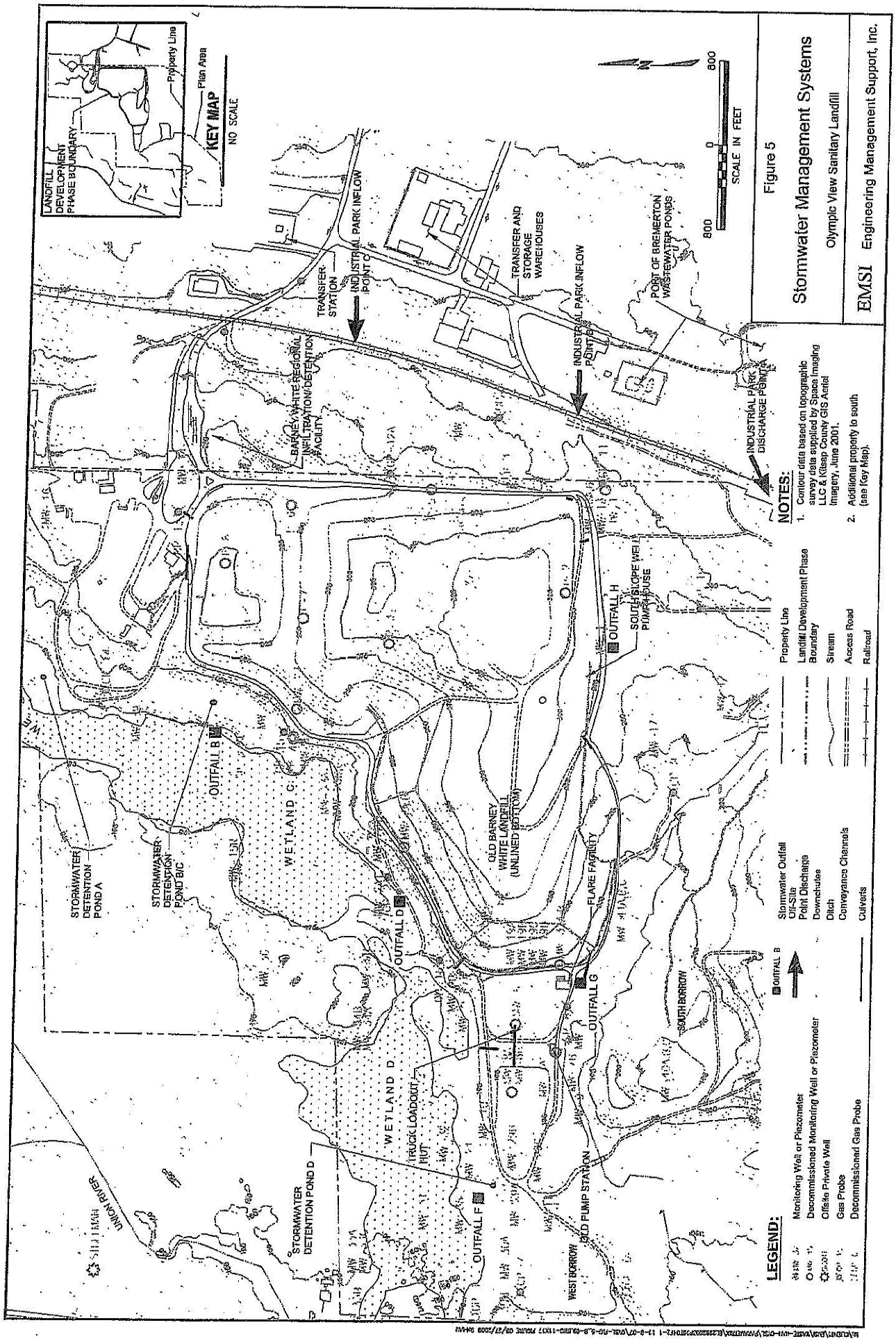
Summary of Attachments That May be Required for This Application:

(Please check those attachments that are included)

- ☐ C.2. Production schematic flow diagram and water balance
- ☐ C.4. Wastewater treatment improvements
- ☐ C.7. Additional incidental materials
- ☐ E.8. Additional results of effluent testing
- ☐ F.1. Facility site map
- ☒ H.5. Stormwater drainage map

If you need this document in a format for the visually impaired, call the Water Quality Program at 360-407-6600. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

Attachment H.5



eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-58764-1
Client Project/Site: WA02|Olympic View Sanitary LF-LPOND PFAS

For:
Waste Management
2615 Davis Street
San Leandro, California 94577

Attn: Mr. Patrick Madej

Betsy Sara

Authorized for release by:
3/4/2020 10:23:51 AM

Betsy Sara, Project Manager II
(303)736-0189
betsy.sara@testamericainc.com

Preliminary Data

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Preliminary Data

Definitions/Glossary

Client: Waste Management
Project/Site: WA02|Olympic View Sanitary LF-LPOND PFAS

Job ID: 320-58764-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*	Isotope Dilution analyte is outside acceptance limits.
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.

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
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)

Preliminary Data

Job ID: 320-58764-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

CASE NARRATIVE

Client: Waste Management

Project: WA02|Olympic View Sanitary LF-LPOND PFAS

Report Number: 320-58764-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Sample Receiving

The samples were received on 02/20/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 4.6C.

Holding Times

All holding times were met.

Method Blanks

Perfluorohexanesulfonic acid (PFHxS) was detected in the Method Blank below the project established reporting limit. No corrective action is taken for any values in Method Blanks that are below the requested reporting limits.

All other Method Blanks were within established control limits.

Laboratory Control Samples (LCS)

All Laboratory Control Samples were within established control limits.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD), however, an LCS/LCSD pair was analyzed to demonstrate method precision and accuracy.

PFAS

The Method 537 Isotope Dilution Analyte (IDA) recoveries are above the method recommended limit for several analytes in the sample L-Pond. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Several Method 537 results for sample L-Pond were reported from the analysis of a diluted extract due to high concentrations of the target analytes in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

The sample L-Pond was observed to be yellow after extraction.

Preliminary Data

Job ID: 320-58764-1 (Continued)

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

General Comments

The analysis was performed at TestAmerica's Sacramento Laboratory.
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600

Preliminary Data

Detection Summary

Client: Waste Management
Project/Site: WA02|Olympic View Sanitary LF-LPOND PFAS

Job ID: 320-58764-1

Client Sample ID: L-Pond — Lab Sample ID: 320-58764-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
10:2 FTS	0.93	J	1.8	0.17	ng/L	1		537 (modified)	Total/NA
4:2 FTS	5.8	J	18	4.8	ng/L	1		537 (modified)	Total/NA
6:2 FTS	180		18	1.8	ng/L	1		537 (modified)	Total/NA
8:2 FTS	33		18	1.8	ng/L	1		537 (modified)	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	220		18	1.7	ng/L	1		537 (modified)	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	150		18	2.8	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	150		1.8	0.28	ng/L	1		537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	9.9		1.8	0.50	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	17		1.8	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	100		1.8	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	90		1.8	0.32	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	160		1.8	0.27	ng/L	1		537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	24		1.8	1.0	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	290		37	3.7	ng/L	20		537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA) - DL	1600		37	6.4	ng/L	20		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	610		37	4.6	ng/L	20		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	560	B	37	3.1	ng/L	20		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA) - DL	1800		37	11	ng/L	20		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	750		37	9.9	ng/L	20		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	1200		37	16	ng/L	20		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	1300		37	9.0	ng/L	20		537 (modified)	Total/NA
Specific Conductivity	4497				umhos/cm	1		Field Sampling	Total/NA
Dissolved Oxygen	7.4				mg/L	1		Field Sampling	Total/NA
eH	177.0				millivolts	1		Field Sampling	Total/NA
Temperature	8.4				Degrees C	1		Field Sampling	Total/NA
pH	7.14				SU	1		Field Sampling	Total/NA

Client Sample ID: EB-1 — Lab Sample ID: 320-58764-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.34	J	1.8	0.32	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.30	J B	1.8	0.15	ng/L	1		537 (modified)	Total/NA
Perfluorotridecanoic acid (PFTriA)	1.3	J	1.8	1.2	ng/L	1		537 (modified)	Total/NA

Client Sample ID: FB-1 — Lab Sample ID: 320-58764-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.39	J	1.9	0.33	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.31	J B	1.9	0.16	ng/L	1		537 (modified)	Total/NA

Preliminary Data

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Waste Management
Project/Site: WA02|Olympic View Sanitary LF-LPOND PFAS

Job ID: 320-58764-1

Client Sample ID: L-Pond

Date Collected: 02/19/20 11:30
Date Received: 02/20/20 09:00

Lab Sample ID: 320-58764-1

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTS	**0.93**	**J**	1.8	0.17	ng/L		02/25/20 04:25	02/25/20 15:37	1
4:2 FTS	**5.8**	**J**	18	4.8	ng/L		02/25/20 04:25	02/25/20 15:37	1
6:2 FTS	**180**		18	1.8	ng/L		02/25/20 04:25	02/25/20 15:37	1
8:2 FTS	**33**		18	1.8	ng/L		02/25/20 04:25	02/25/20 15:37	1
DONA	ND		1.8	0.16	ng/L		02/25/20 04:25	02/25/20 15:37	1
F-53B Major	ND		1.8	0.22	ng/L		02/25/20 04:25	02/25/20 15:37	1
F-53B Minor	ND		1.8	0.29	ng/L		02/25/20 04:25	02/25/20 15:37	1
HFPO-DA (GenX)	ND		3.7	1.4	ng/L		02/25/20 04:25	02/25/20 15:37	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	**220**		18	1.7	ng/L		02/25/20 04:25	02/25/20 15:37	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	**150**		18	2.8	ng/L		02/25/20 04:25	02/25/20 15:37	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		02/25/20 04:25	02/25/20 15:37	1
Perfluorodecanoic acid (PFDA)	**150**		1.8	0.28	ng/L		02/25/20 04:25	02/25/20 15:37	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.41	ng/L		02/25/20 04:25	02/25/20 15:37	1
Perfluorododecanoic acid (PFDoA)	**9.9**		1.8	0.50	ng/L		02/25/20 04:25	02/25/20 15:37	1
Perfluoroheptanesulfonic Acid (PFHpS)	**17**		1.8	0.17	ng/L		02/25/20 04:25	02/25/20 15:37	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		1.8	0.82	ng/L		02/25/20 04:25	02/25/20 15:37	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		1.8	0.42	ng/L		02/25/20 04:25	02/25/20 15:37	1
Perfluorononanesulfonic acid (PFNS)	ND		1.8	0.15	ng/L		02/25/20 04:25	02/25/20 15:37	1
Perfluorononanoic acid (PFNA)	**100**		1.8	0.25	ng/L		02/25/20 04:25	02/25/20 15:37	1
Perfluorooctanesulfonamide (FOSA)	**90**		1.8	0.32	ng/L		02/25/20 04:25	02/25/20 15:37	1
Perfluoropentanesulfonic acid (PFPeS)	**160**		1.8	0.27	ng/L		02/25/20 04:25	02/25/20 15:37	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.27	ng/L		02/25/20 04:25	02/25/20 15:37	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	1.2	ng/L		02/25/20 04:25	02/25/20 15:37	1
Perfluoroundecanoic acid (PFUnA)	**24**		1.8	1.0	ng/L		02/25/20 04:25	02/25/20 15:37	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*123*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:37*	*1*
13C2 PFDoA	*99*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:37*	*1*
13C2 PFHxDA	*71*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:37*	*1*
13C2 PFTeDA	*76*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:37*	*1*
13C2 PFUnA	*125*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:37*	*1*
13C3 HFPO-DA	*92*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:37*	*1*
13C3 PFBS	*74*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:37*	*1*
13C4 PFOS	*112*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:37*	*1*
13C5 PFNA	*102*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:37*	*1*
13C8 FOSA	*102*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:37*	*1*
d3-NMeFOSAA	*98*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:37*	*1*
d5-NEtFOSAA	*112*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:37*	*1*
d7-N-MeFOSE-M	*56*		*10 - 120*	*02/25/20 04:25*	*02/25/20 15:37*	*1*
d9-N-EtFOSE-M	*50*		*10 - 120*	*02/25/20 04:25*	*02/25/20 15:37*	*1*
d-N-EtFOSA-M	*62*		*20 - 150*	*02/25/20 04:25*	*02/25/20 15:37*	*1*
d-N-MeFOSA-M	*73*		*20 - 150*	*02/25/20 04:25*	*02/25/20 15:37*	*1*
M2-4:2 FTS	*163*	*	*25 - 150*	*02/25/20 04:25*	*02/25/20 15:37*	*1*

Preliminary Data

Client Sample ID: L-Pond

Lab Sample ID: 320-58764-1
Matrix: Water

Date Collected: 02/19/20 11:30
Date Received: 02/20/20 09:00

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-6:2 FTS	*167*	*	*25 - 150*	*02/25/20 04:25*	*02/25/20 15:37*	*1*
M2-8:2 FTS	*204*	*	*25 - 150*	*02/25/20 04:25*	*02/25/20 15:37*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	**290**		37	3.7	ng/L		02/25/20 04:25	02/28/20 22:43	20
Perfluorobutanoic acid (PFBA)	**1600**		37	6.4	ng/L		02/25/20 04:25	02/28/20 22:43	20
Perfluoroheptanoic acid (PFHpA)	**610**		37	4.6	ng/L		02/25/20 04:25	02/28/20 22:43	20
Perfluorohexanesulfonic acid (PFHxS)	**560**	**B**	37	3.1	ng/L		02/25/20 04:25	02/28/20 22:43	20
Perfluorohexanoic acid (PFHxA)	**1800**		37	11	ng/L		02/25/20 04:25	02/28/20 22:43	20
Perfluorooctanesulfonic acid (PFOS)	**750**		37	9.9	ng/L		02/25/20 04:25	02/28/20 22:43	20
Perfluorooctanoic acid (PFOA)	**1200**		37	16	ng/L		02/25/20 04:25	02/28/20 22:43	20
Perfluoropentanoic acid (PFPeA)	**1300**		37	9.0	ng/L		02/25/20 04:25	02/28/20 22:43	20

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*86*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:43*	*20*
13C3 PFBS	*76*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:43*	*20*
13C4 PFBA	*53*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:43*	*20*
13C4 PFHpA	*95*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:43*	*20*
13C4 PFOA	*92*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:43*	*20*
13C4 PFOS	*89*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:43*	*20*
13C5 PFPeA	*60*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:43*	*20*
18O2 PFHxS	*86*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:43*	*20*

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductivity	**4497**				umhos/cm			02/19/20 11:30	1
Dissolved Oxygen	**7.4**				mg/L			02/19/20 11:30	1
eH	**177.0**				millivolts			02/19/20 11:30	1
Temperature	**8.4**				Degrees C			02/19/20 11:30	1
pH	**7.14**				SU			02/19/20 11:30	1

Client Sample ID: EB-1

Lab Sample ID: 320-58764-2
Matrix: Water

Date Collected: 02/19/20 11:00
Date Received: 02/20/20 09:00

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTS	ND		1.8	0.17	ng/L		02/25/20 04:25	02/28/20 22:16	1
4:2 FTS	ND		18	4.7	ng/L		02/25/20 04:25	02/28/20 22:16	1
6:2 FTS	ND		18	1.8	ng/L		02/25/20 04:25	02/28/20 22:16	1
8:2 FTS	ND		18	1.8	ng/L		02/25/20 04:25	02/28/20 22:16	1
DONA	ND		1.8	0.16	ng/L		02/25/20 04:25	02/28/20 22:16	1
F-53B Major	ND		1.8	0.22	ng/L		02/25/20 04:25	02/28/20 22:16	1
F-53B Minor	ND		1.8	0.29	ng/L		02/25/20 04:25	02/28/20 22:16	1
HFPO-DA (GenX)	ND		3.6	1.4	ng/L		02/25/20 04:25	02/28/20 22:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		02/25/20 04:25	02/28/20 22:16	1

Preliminary Data

Client Sample Results

Client: Waste Management
Project/Site: WA02|Olympic View Sanitary LF-LPOND PFAS

Job ID: 320-58764-1

Client Sample ID: EB-1

Date Collected: 02/19/20 11:00
Date Received: 02/20/20 09:00

Lab Sample ID: 320-58764-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	2.8	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.18	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluorobutanoic acid (PFBA)	**0.34**	**J**	1.8	0.32	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.41	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.23	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluorohexanesulfonic acid (PFHxS)	**0.30**	**J B**	1.8	0.15	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.52	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		1.8	0.80	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		1.8	0.42	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluorononanesulfonic acid (PFNS)	ND		1.8	0.14	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.24	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.32	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.49	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.77	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.8	0.27	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.44	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.26	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluorotridecanoic acid (PFTriA)	**1.3**	**J**	1.8	1.2	ng/L		02/25/20 04:25	02/28/20 22:16	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.99	ng/L		02/25/20 04:25	02/28/20 22:16	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*89*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:16*	*1*
13C2 PFDoA	*56*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:16*	*1*
13C2 PFHxA	*91*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:16*	*1*
13C2 PFHxDA	*80*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:16*	*1*
13C2 PFTeDA	*68*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:16*	*1*
13C2 PFUnA	*87*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:16*	*1*
13C3 HFPO-DA	*81*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:16*	*1*
13C3 PFBS	*88*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:16*	*1*
13C4 PFBA	*90*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:16*	*1*
13C4 PFHpA	*87*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:16*	*1*
13C4 PFOA	*89*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:16*	*1*
13C4 PFOS	*88*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:16*	*1*
13C5 PFNA	*86*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:16*	*1*
13C5 PFPeA	*87*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:16*	*1*
13C8 FOSA	*90*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:16*	*1*
18O2 PFHxS	*89*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:16*	*1*
d3-NMeFOSAA	*73*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:16*	*1*
d5-NEtFOSAA	*71*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:16*	*1*
d7-N-MeFOSE-M	*30*		*10 - 120*	*02/25/20 04:25*	*02/28/20 22:16*	*1*

Preliminary Data

Client Sample ID: EB-1

Lab Sample ID: 320-58764-2
Matrix: Water

Date Collected: 02/19/20 11:00
Date Received: 02/20/20 09:00

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d9-N-EtFOSE-M	23		10 - 120	02/25/20 04:25	02/28/20 22:16	1
d-N-EtFOSA-M	45		20 - 150	02/25/20 04:25	02/28/20 22:16	1
d-N-MeFOSA-M	62		20 - 150	02/25/20 04:25	02/28/20 22:16	1
M2-4:2 FTS	92		25 - 150	02/25/20 04:25	02/28/20 22:16	1
M2-6:2 FTS	97		25 - 150	02/25/20 04:25	02/28/20 22:16	1
M2-8:2 FTS	99		25 - 150	02/25/20 04:25	02/28/20 22:16	1

Client Sample ID: FB-1

Lab Sample ID: 320-58764-3
Matrix: Water

Date Collected: 02/19/20 10:30
Date Received: 02/20/20 09:00

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTS	ND		1.9	0.18	ng/L		02/25/20 04:25	02/25/20 15:55	1
4:2 FTS	ND		19	4.9	ng/L		02/25/20 04:25	02/25/20 15:55	1
6:2 FTS	ND		19	1.9	ng/L		02/25/20 04:25	02/25/20 15:55	1
8:2 FTS	ND		19	1.9	ng/L		02/25/20 04:25	02/25/20 15:55	1
DONA	ND		1.9	0.17	ng/L		02/25/20 04:25	02/25/20 15:55	1
F-53B Major	ND		1.9	0.23	ng/L		02/25/20 04:25	02/25/20 15:55	1
F-53B Minor	ND		1.9	0.30	ng/L		02/25/20 04:25	02/25/20 15:55	1
HFPO-DA (GenX)	ND		3.8	1.4	ng/L		02/25/20 04:25	02/25/20 15:55	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		19	1.8	ng/L		02/25/20 04:25	02/25/20 15:55	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		19	2.9	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.9	0.19	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluorobutanoic acid (PFBA)	**0.39**	**J**	1.9	0.33	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.9	0.30	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluorodecanoic acid (PFDA)	ND		1.9	0.29	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.9	0.42	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.52	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.9	0.18	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluoroheptanoic acid (PFHpA)	ND		1.9	0.24	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluorohexanesulfonic acid (PFHxS)	**0.31**	**J B**	1.9	0.16	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluorohexanoic acid (PFHxA)	ND		1.9	0.55	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		1.9	0.84	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		1.9	0.43	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluorononanesulfonic acid (PFNS)	ND		1.9	0.15	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluorononanoic acid (PFNA)	ND		1.9	0.25	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluorooctanesulfonamide (FOSA)	ND		1.9	0.33	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.9	0.51	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluorooctanoic acid (PFOA)	ND		1.9	0.80	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.9	0.28	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluoropentanoic acid (PFPeA)	ND		1.9	0.46	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.9	0.27	ng/L		02/25/20 04:25	02/25/20 15:55	1
Perfluorotridecanoic acid (PFTriA)	ND		1.9	1.2	ng/L		02/25/20 04:25	02/25/20 15:55	1

Preliminary Data

Client Sample ID: FB-1

Date Collected: 02/19/20 10:30
Date Received: 02/20/20 09:00

Lab Sample ID: 320-58764-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	ND		1.9	1.0	ng/L		02/25/20 04:25	02/25/20 15:55	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*104*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
13C2 PFDoA	*84*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
13C2 PFHxA	*98*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
13C2 PFHxDA	*90*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
13C2 PFTeDA	*86*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
13C2 PFUnA	*110*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
13C3 HFPO-DA	*90*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
13C3 PFBS	*89*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
13C4 PFBA	*85*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
13C4 PFHpA	*99*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
13C4 PFOA	*97*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
13C4 PFOS	*95*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
13C5 PFNA	*94*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
13C5 PFPeA	*84*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
13C8 FOSA	*89*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
18O2 PFHxS	*96*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
d3-NMeFOSAA	*79*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
d5-NEtFOSAA	*81*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
d7-N-MeFOSE-M	*30*		*10 - 120*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
d9-N-EtFOSE-M	*25*		*10 - 120*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
d-N-EtFOSA-M	*45*		*20 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
d-N-MeFOSA-M	*59*		*20 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
M2-4:2 FTS	*127*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
M2-6:2 FTS	*136*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*
M2-8:2 FTS	*112*		*25 - 150*	*02/25/20 04:25*	*02/25/20 15:55*	*1*

Preliminary Data

Isotope Dilution Summary

Client: Waste Management
Project/Site: WA02|Olympic View Sanitary LF-LPOND PFAS

Job ID: 320-58764-1

Method: 537 (modified) - Fluorinated Alkyl Substances

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDA (25-150)	PFDoA (25-150)	PFHxA (25-150)	PFHxDA (25-150)	PFTDA (25-150)	PFUnA (25-150)	HFPODA (25-150)	3C3-PFBS (25-150)
320-58764-1	L-Pond	123	99		71	76	125	92	74
320-58764-1 - DL	L-Pond			86					76
320-58764-2	EB-1	89	56	91	80	68	87	81	88
320-58764-3	FB-1	104	84	98	90	86	110	90	89
LCS 320-359713/2-A	Lab Control Sample	100	84	94	96	91	101	89	91
LCSD 320-359713/3-A	Lab Control Sample Dup	96	100	89	102	93	98	87	83
MB 320-359713/1-A	Method Blank	89	78	92	85	80	83	89	98

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (25-150)	PFHpA (25-150)	PFOA (25-150)	PFOS (25-150)	PFNA (25-150)	PFPeA (25-150)	PFOSA (25-150)	PFHxS (25-150)
320-58764-1	L-Pond				112	102		102	
320-58764-1 - DL	L-Pond	53	95	92	89		60		86
320-58764-2	EB-1	90	87	89	88	86	87	90	89
320-58764-3	FB-1	85	99	97	95	94	84	89	96
LCS 320-359713/2-A	Lab Control Sample	85	97	98	85	93	85	86	90
LCSD 320-359713/3-A	Lab Control Sample Dup	85	95	92	88	90	84	87	88
MB 320-359713/1-A	Method Blank	99	95	91	97	92	95	90	97

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	-NMeFOS/ (25-150)	-NEtFOS/ (25-150)	NMFM (10-120)	NEFM (10-120)	N-EtFOSA (20-150)	I-MeFOSA (20-150)	M242FTS (25-150)	M262FTS (25-150)
320-58764-1	L-Pond	98	112	56	50	62	73	163 *	167 *
320-58764-1 - DL	L-Pond								
320-58764-2	EB-1	73	71	30	23	45	62	92	97
320-58764-3	FB-1	79	81	30	25	45	59	127	136
LCS 320-359713/2-A	Lab Control Sample	84	88	34	27	47	63	96	98
LCSD 320-359713/3-A	Lab Control Sample Dup	86	91	32	26	45	60	93	105
MB 320-359713/1-A	Method Blank	86	85	47	34	75	77	84	101

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	M282FTS (25-150)
320-58764-1	L-Pond	204 *
320-58764-1 - DL	L-Pond	
320-58764-2	EB-1	99
320-58764-3	FB-1	112
LCS 320-359713/2-A	Lab Control Sample	91
LCSD 320-359713/3-A	Lab Control Sample Dup	94
MB 320-359713/1-A	Method Blank	96

Surrogate Legend

PFDA = 13C2 PFDA
PFDoA = 13C2 PFDoA
PFHxA = 13C2 PFHxA
PFHxDA = 13C2 PFHxDA
PFTDA = 13C2 PFTeDA
PFUnA = 13C2 PFUnA
HFPODA = 13C3 HFPO-DA
13C3-PFBS = 13C3 PFBS
PFBA = 13C4 PFBA
PFHpA = 13C4 PFHpA

Preliminary Data

Isotope Dilution Summary

Client: Waste Management
Job ID: 320-58764-1
Project/Site: WA02|Olympic View Sanitary LF-LPOND PFAS

PFOA = 13C4 PFOA
PFOS = 13C4 PFOS
PFNA = 13C5 PFNA
PFPeA = 13C5 PFPeA
PFOSA = 13C8 FOSA
PFHxS = 18O2 PFHxS
d3-NMeFOSAA = d3-NMeFOSAA
d5-NEtFOSAA = d5-NEtFOSAA
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
d-N-EtFOSA-M = d-N-EtFOSA-M
d-N-MeFOSA-M = d-N-MeFOSA-M
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS

Preliminary Data

QC Sample Results

Client: Waste Management
Project/Site: WA02|Olympic View Sanitary LF-LPOND PFAS

Job ID: 320-58764-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-359713/1-A
Matrix: Water
Analysis Batch: 360915

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 359713

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTS	ND		2.0	0.19	ng/L		02/25/20 04:25	02/28/20 22:07	1
4:2 FTS	ND		20	5.2	ng/L		02/25/20 04:25	02/28/20 22:07	1
6:2 FTS	ND		20	2.0	ng/L		02/25/20 04:25	02/28/20 22:07	1
8:2 FTS	ND		20	2.0	ng/L		02/25/20 04:25	02/28/20 22:07	1
DONA	ND		2.0	0.18	ng/L		02/25/20 04:25	02/28/20 22:07	1
F-53B Major	ND		2.0	0.24	ng/L		02/25/20 04:25	02/28/20 22:07	1
F-53B Minor	ND		2.0	0.32	ng/L		02/25/20 04:25	02/28/20 22:07	1
HFPO-DA (GenX)	ND		4.0	1.5	ng/L		02/25/20 04:25	02/28/20 22:07	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		20	1.9	ng/L		02/25/20 04:25	02/28/20 22:07	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		20	3.1	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluorobutanoic acid (PFBA)	ND		2.0	0.35	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.31	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.45	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.19	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluorohexanesulfonic acid (PFHxS)	0.297	J	2.0	0.17	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		2.0	0.89	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		2.0	0.46	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.16	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.27	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluorooctanesulfonamide (FOSA)	ND		2.0	0.35	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.85	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.30	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.49	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.29	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0	1.3	ng/L		02/25/20 04:25	02/28/20 22:07	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		02/25/20 04:25	02/28/20 22:07	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*89*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
13C2 PFDoA	*78*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
13C2 PFHxA	*92*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
13C2 PFHxDA	*85*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
13C2 PFTeDA	*80*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
13C2 PFUnA	*83*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
13C3 HFPO-DA	*89*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
13C3 PFBS	*98*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
13C4 PFBA	*99*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*

Preliminary Data

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

Lab Sample ID: MB 320-359713/1-A
Matrix: Water
Analysis Batch: 360915

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 359713

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*95*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
13C4 PFOA	*91*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
13C4 PFOS	*97*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
13C5 PFNA	*92*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
13C5 PFPeA	*95*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
13C8 FOSA	*90*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
18O2 PFHxS	*97*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
d3-NMeFOSAA	*86*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
d5-NEtFOSAA	*85*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
d7-N-MeFOSE-M	*47*		*10 - 120*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
d9-N-EtFOSE-M	*34*		*10 - 120*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
d-N-EtFOSA-M	*75*		*20 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
d-N-MeFOSA-M	*77*		*20 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
M2-4:2 FTS	*84*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
M2-6:2 FTS	*101*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*
M2-8:2 FTS	*96*		*25 - 150*	*02/25/20 04:25*	*02/28/20 22:07*	*1*

Lab Sample ID: LCS 320-359713/2-A
Matrix: Water
Analysis Batch: 360660

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 359713

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
10:2 FTS	38.6	38.1		ng/L		99	64 - 142
4:2 FTS	37.4	37.4		ng/L		100	79 - 139
6:2 FTS	37.9	38.0		ng/L		100	59 - 175
8:2 FTS	38.3	38.8		ng/L		101	75 - 135
DONA	37.7	39.9		ng/L		106	79 - 139
F-53B Major	37.3	41.0		ng/L		110	75 - 135
F-53B Minor	37.7	38.4		ng/L		102	54 - 114
HFPO-DA (GenX)	40.0	42.0		ng/L		105	51 - 173
NEtFOSE	40.0	43.1		ng/L		108	71 - 131
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	40.3		ng/L		101	76 - 136
NMeFOSA	40.0	45.2		ng/L		113	67 - 154
NMeFOSE	40.0	40.0		ng/L		100	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	46.7		ng/L		117	76 - 136
Perfluorobutanesulfonic acid (PFBS)	35.4	33.9		ng/L		96	67 - 127
Perfluorobutanoic acid (PFBA)	40.0	40.9		ng/L		102	76 - 136
Perfluorodecanesulfonic acid (PFDS)	38.6	40.0		ng/L		104	71 - 131
Perfluorodecanoic acid (PFDA)	40.0	42.1		ng/L		105	76 - 136
Perfluorododecanesulfonic acid (PFDoS)	38.7	41.4		ng/L		107	67 - 127
Perfluorododecanoic acid (PFDoA)	40.0	43.3		ng/L		108	71 - 131
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	41.7		ng/L		110	76 - 136
Perfluoroheptanoic acid (PFHpA)	40.0	40.1		ng/L		100	72 - 132

Preliminary Data

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

Lab Sample ID: LCS 320-359713/2-A
Matrix: Water
Analysis Batch: 360660

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 359713

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanesulfonic acid (PFHxS)	36.4	34.6		ng/L		95	59 - 119
Perfluorohexanoic acid (PFHxA)	40.0	39.4		ng/L		99	73 - 133
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	46.1		ng/L		115	76 - 136
Perfluoro-n-octadecanoic acid (PFODA)	40.0	41.2		ng/L		103	58 - 145
Perfluorononanesulfonic acid (PFNS)	38.4	45.0		ng/L		117	75 - 135
Perfluorononanoic acid (PFNA)	40.0	43.2		ng/L		108	75 - 135
Perfluorooctanesulfonamide (FOSA)	40.0	41.5		ng/L		104	73 - 133
Perfluorooctanesulfonic acid (PFOS)	37.1	39.0		ng/L		105	70 - 130
Perfluorooctanoic acid (PFOA)	40.0	39.8		ng/L		100	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	37.5	38.1		ng/L		102	66 - 126
Perfluoropentanoic acid (PFPeA)	40.0	41.7		ng/L		104	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	42.1		ng/L		105	70 - 130
Perfluorotridecanoic acid (PFTriA)	40.0	46.9		ng/L		117	71 - 131
Perfluoroundecanoic acid (PFUnA)	40.0	35.7		ng/L		89	68 - 128

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C2 PFDA	*100*		*25 - 150*
13C2 PFDoA	*84*		*25 - 150*
13C2 PFHxA	*94*		*25 - 150*
13C2 PFHxDA	*96*		*25 - 150*
13C2 PFTeDA	*91*		*25 - 150*
13C2 PFUnA	*101*		*25 - 150*
13C3 HFPO-DA	*89*		*25 - 150*
13C3 PFBS	*91*		*25 - 150*
13C4 PFBA	*85*		*25 - 150*
13C4 PFHpA	*97*		*25 - 150*
13C4 PFOA	*98*		*25 - 150*
13C4 PFOS	*85*		*25 - 150*
13C5 PFNA	*93*		*25 - 150*
13C5 PFPeA	*85*		*25 - 150*
13C8 FOSA	*86*		*25 - 150*
18O2 PFHxS	*90*		*25 - 150*
d3-NMeFOSAA	*84*		*25 - 150*
d5-NEtFOSAA	*88*		*25 - 150*
d7-N-MeFOSE-M	*34*		*10 - 120*
d9-N-EtFOSE-M	*27*		*10 - 120*
d-N-EtFOSA-M	*47*		*20 - 150*
d-N-MeFOSA-M	*63*		*20 - 150*
M2-4:2 FTS	*96*		*25 - 150*
M2-6:2 FTS	*98*		*25 - 150*
M2-8:2 FTS	*91*		*25 - 150*

Preliminary Data

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

Lab Sample ID: LCSD 320-359713/3-A
Matrix: Water
Analysis Batch: 360660

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 359713

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
10:2 FTS	38.6	35.6		ng/L		92	64 - 142	7	30
4:2 FTS	37.4	37.7		ng/L		101	79 - 139	1	30
6:2 FTS	37.9	37.2		ng/L		98	59 - 175	2	30
8:2 FTS	38.3	36.8		ng/L		96	75 - 135	5	30
DONA	37.7	37.5		ng/L		100	79 - 139	6	30
F-53B Major	37.3	37.9		ng/L		102	75 - 135	8	30
F-53B Minor	37.7	39.4		ng/L		104	54 - 114	2	30
HFPO-DA (GenX)	40.0	41.4		ng/L		103	51 - 173	2	30
NEtFOSE	40.0	47.1		ng/L		118	71 - 131	9	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	38.8		ng/L		97	76 - 136	4	30
NMeFOSA	40.0	46.0		ng/L		115	67 - 154	2	30
NMeFOSE	40.0	42.0		ng/L		105	70 - 130	5	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	46.2		ng/L		115	76 - 136	1	30
Perfluorobutanesulfonic acid (PFBS)	35.4	34.9		ng/L		99	67 - 127	3	30
Perfluorobutanoic acid (PFBA)	40.0	40.3		ng/L		101	76 - 136	2	30
Perfluorodecanesulfonic acid (PFDS)	38.6	41.4		ng/L		107	71 - 131	3	30
Perfluorodecanoic acid (PFDA)	40.0	41.7		ng/L		104	76 - 136	1	30
Perfluorododecanesulfonic acid (PFDoS)	38.7	38.1		ng/L		99	67 - 127	8	30
Perfluorododecanoic acid (PFDoA)	40.0	34.4		ng/L		86	71 - 131	23	30
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	42.0		ng/L		110	76 - 136	1	30
Perfluoroheptanoic acid (PFHpA)	40.0	40.5		ng/L		101	72 - 132	1	30
Perfluorohexanesulfonic acid (PFHxS)	36.4	35.1		ng/L		96	59 - 119	1	30
Perfluorohexanoic acid (PFHxA)	40.0	40.2		ng/L		101	73 - 133	2	30
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	42.3		ng/L		106	76 - 136	8	30
Perfluoro-n-octadecanoic acid (PFODA)	40.0	38.6		ng/L		96	58 - 145	7	30
Perfluorononanesulfonic acid (PFNS)	38.4	42.4		ng/L		110	75 - 135	6	30
Perfluorononanoic acid (PFNA)	40.0	44.8		ng/L		112	75 - 135	4	30
Perfluorooctanesulfonamide (FOSA)	40.0	41.8		ng/L		105	73 - 133	1	30
Perfluorooctanesulfonic acid (PFOS)	37.1	37.1		ng/L		100	70 - 130	5	30
Perfluorooctanoic acid (PFOA)	40.0	42.5		ng/L		106	70 - 130	6	30
Perfluoropentanesulfonic acid (PFPeS)	37.5	42.4		ng/L		113	66 - 126	11	30
Perfluoropentanoic acid (PFPeA)	40.0	43.1		ng/L		108	71 - 131	3	30
Perfluorotetradecanoic acid (PFTeA)	40.0	42.0		ng/L		105	70 - 130	0	30
Perfluorotridecanoic acid (PFTriA)	40.0	38.3		ng/L		96	71 - 131	20	30
Perfluoroundecanoic acid (PFUnA)	40.0	37.6		ng/L		94	68 - 128	5	30

Preliminary Data

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

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C2 PFDA	96		25 - 150
13C2 PFDoA	100		25 - 150
13C2 PFHxA	89		25 - 150
13C2 PFHxDA	102		25 - 150
13C2 PFTeDA	93		25 - 150
13C2 PFUnA	98		25 - 150
13C3 HFPO-DA	87		25 - 150
13C3 PFBS	83		25 - 150
13C4 PFBA	85		25 - 150
13C4 PFHpA	95		25 - 150
13C4 PFOA	92		25 - 150
13C4 PFOS	88		25 - 150
13C5 PFNA	90		25 - 150
13C5 PFPeA	84		25 - 150
13C8 FOSA	87		25 - 150
18O2 PFHxS	88		25 - 150
d3-NMeFOSAA	86		25 - 150
d5-NEtFOSAA	91		25 - 150
d7-N-MeFOSE-M	32		10 - 120
d9-N-EtFOSE-M	26		10 - 120
d-N-EtFOSA-M	45		20 - 150
d-N-MeFOSA-M	60		20 - 150
M2-4:2 FTS	93		25 - 150
M2-6:2 FTS	105		25 - 150
M2-8:2 FTS	94		25 - 150

Preliminary Data

QC Association Summary

Client: Waste Management
Project/Site: WA02|Olympic View Sanitary LF-LPOND PFAS

Job ID: 320-58764-1

LCMS

Prep Batch: 359713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-58764-1	L-Pond	Total/NA	Water	3535	
320-58764-1 - DL	L-Pond	Total/NA	Water	3535	
320-58764-2	EB-1	Total/NA	Water	3535	
320-58764-3	FB-1	Total/NA	Water	3535	
MB 320-359713/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-359713/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-359713/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 360660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-58764-1	L-Pond	Total/NA	Water	537 (modified)	359713
320-58764-3	FB-1	Total/NA	Water	537 (modified)	359713
LCS 320-359713/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	359713
LCSD 320-359713/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	359713

Analysis Batch: 360915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-58764-1 - DL	L-Pond	Total/NA	Water	537 (modified)	359713
320-58764-2	EB-1	Total/NA	Water	537 (modified)	359713
MB 320-359713/1-A	Method Blank	Total/NA	Water	537 (modified)	359713

Field Service / Mobile Lab

Analysis Batch: 486834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-58764-1	L-Pond	Total/NA	Water	Field Sampling	

Preliminary Data

Lab Chronicle

Client: Waste Management
Project/Site: WA02|Olympic View Sanitary LF-LPOND PFAS

Job ID: 320-58764-1

Client Sample ID: L-Pond
Date Collected: 02/19/20 11:30
Date Received: 02/20/20 09:00

Lab Sample ID: 320-58764-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			273 mL	10 mL	359713	02/25/20 04:25	MBB	TAL SAC
Total/NA	Analysis	537 (modified)		1			360660	02/25/20 15:37	D1R	TAL SAC
Total/NA	Prep	3535	DL		273 mL	10 mL	359713	02/25/20 04:25	MBB	TAL SAC
Total/NA	Analysis	537 (modified)	DL	20			360915	02/28/20 22:43	S1M	TAL SAC
Total/NA	Analysis	Field Sampling		1			486834	02/19/20 11:30	P1P	TAL DEN

Client Sample ID: EB-1
Date Collected: 02/19/20 11:00
Date Received: 02/20/20 09:00

Lab Sample ID: 320-58764-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			276.4 mL	10 mL	359713	02/25/20 04:25	MBB	TAL SAC
Total/NA	Analysis	537 (modified)		1			360915	02/28/20 22:16	S1M	TAL SAC

Client Sample ID: FB-1
Date Collected: 02/19/20 10:30
Date Received: 02/20/20 09:00

Lab Sample ID: 320-58764-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			265.2 mL	10 mL	359713	02/25/20 04:25	MBB	TAL SAC
Total/NA	Analysis	537 (modified)		1			360660	02/25/20 15:55	D1R	TAL SAC

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Preliminary Data

Accreditation/Certification Summary

Client: Waste Management
Project/Site: WA02|Olympic View Sanitary LF-LPOND PFAS

Job ID: 320-58764-1

Laboratory: Eurofins TestAmerica, Sacramento

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-22
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-30-21
Hawaii	State	<cert No.>	01-29-21
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-20
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20 *
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-21
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-29-20
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-20
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-20
Wyoming	State Program	8TMS-L	01-28-19 *

Preliminary Data

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4025-011	01-08-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Field Sampling		Water	Dissolved Oxygen
Field Sampling		Water	eH
Field Sampling		Water	pH
Field Sampling		Water	Specific Conductivity
Field Sampling		Water	Temperature

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

Method Summary

Client: Waste Management
Project/Site: WA02|Olympic View Sanitary LF-LPOND PFAS

Job ID: 320-58764-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
Field Sampling	Field Sampling	EPA	TAL DEN
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Preliminary Data

Sample Summary

Client: Waste Management
Project/Site: WA02|Olympic View Sanitary LF-LPOND PFAS

Job ID: 320-58764-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
320-58764-1	L-Pond	Water	02/19/20 11:30	02/20/20 09:00	
320-58764-2	EB-1	Water	02/19/20 11:00	02/20/20 09:00	
320-58764-3	FB-1	Water	02/19/20 10:30	02/20/20 09:00	

Preliminary Data

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone (916) 373-5600 Fax (916) 372-1059

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler: Sam Graber	Lab PM: Sara, Betsy A	Carrier Tracking No(s): 4727-9465-3492	COC No: 280-96534-29305.1
Client Contact: Mr. Patrick Madej	Phone: 425-766-3362	E-Mail: betsy.sara@testamericainc.com		Page: Page 1 of 1
Company: Waste Management	sgraber@scsengineers.com			Job #: 04204027.23
Address: 2615 Davis Street	Due Date Requested:			
City: San Leandro	TAT Requested (days): Standard			
State, Zip: CA, 94577				
Phone:	PO #: Purchase Order Requested			
Email: pmadej@wm.com	WO #:			
Project Name: WA02|Olympic View Sanitary LF	Project #: skip sites/events 28002692 "Water - PFAS"			
Site: Washington	SSOW#:			

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)	PFAS, Extended List (32 Analytes) - TA Sacramento	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
L-Pond	2/19/20	11:30 AM	G	water	N	N	X	2	WM Standard
EB-1	"	11:40 AM	G	"	N	N	X	2	PFAS scan.
FB-1	"	10:30 AM	G	"	N	N	X	2	

320-58764 Chain of Custody

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: 2/19/20	Company: SCS	Received by:	Date/Time: 02/20/20 900	Company: 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: Δ Yes Δ No
Custody Seal No.: # 1032016
Cooler Temperature(s) °C and Other Remarks: 4.6

Ver: 01/16/2019

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: OUSL

Site No.:

Sample Point: L-POND (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
02/19/20					

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment . . . Dedicated: Y or N

Purging Device: F — A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: F

X-Other: Stainless-Steel Dipper

Filter Device: Y or N — 0.45 µ or ____ µ (circle or fill in)

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other ____

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other: ____

WELL DATA

Well Elevation (at TOC) ____ (ft/msl)

Depth to Water (DTW) (from TOC) ____ (ft)

Groundwater Elevation (site datum, from TOC) ____ (ft/msl)

Total Well Depth (from TOC) ____ (ft)

Stick Up (from ground elevation) ____ (ft)

Casing ID ____ (in)

Casing Material ____

Note: Total Well Depth, Stick Up, Casing Id. etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
11:05	1st	7.14	4497	8.4		7.4	170	
	2nd							
	3rd							
	4th							
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site.* ***If more fields above are needed, use separate sheet or form.***

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
02/19/20	7.14	4497	8.4		7.4	170	

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: Stained — Odor: NA — Color: Tan — Other: —

Weather Conditions (required daily, or as conditions change): Direction/Speed: NA — Outlook: Dry — Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
02/19/20	Sam Graber	[signature]	SCS
___/___/___			

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client. PINK - Field Copy

Preliminary Data

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: OUSL

Site No.:

Sample Point: EB-1 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
02/19/20					

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment . . . Dedicated: Y or (N)

Purging Device: F — A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: F

X-Other: Stainless-Steel Dipper

Filter Device: Y or (N) 0.45 µ or ____ µ (circle or fill in)

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other ____

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other: ____

WELL DATA

Well Elevation (at TOC) ____ (ft/msl)

Depth to Water (DTW) (from TOC) ____ (ft)

Groundwater Elevation (site datum, from TOC) ____ (ft/msl)

Total Well Depth (from TOC) ____ (ft)

Stick Up (from ground elevation) ____ (ft)

Casing ID ____ (in)

Casing Material ____

Note: Total Well Depth, Stick Up, Casing Id. etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st	1st					
	2nd	2nd	2nd					
	3rd	3rd	3rd					
	4th	4th	4th					
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site.* ***If more fields above are needed, use separate sheet or form.***

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
02/19/20							

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

Sample Appearance: Clear Odor: NA Color: N/A Other: ____

Weather Conditions (required daily, or as conditions change): Direction/Speed: ____ Outlook: ____ Precipitation: Y or (N)

Specific Comments (including purge/well volume calculations if required):

FIELD COMMENTS

Sample used PFOS free water from TA Lab.

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
02/19/20	Sam Grabar	[signature]	SCS

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

Preliminary Data

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: OUSL

Site No.:

Sample Point: FB-1 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
02/19/20					

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment . . . Dedicated: Y or (N)

Purging Device: F — A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: F

X-Other: Stainless-Steel Dipper

Filter Device: Y or (N) — 0.45 µ or ____ µ (circle or fill in)

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other ____

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other: ____

WELL DATA

Well Elevation (at TOC) ____ (ft/msl)

Depth to Water (DTW) (from TOC) ____ (ft)

Groundwater Elevation (site datum, from TOC) ____ (ft/msl)

Total Well Depth (from TOC) ____ (ft)

Stick Up (from ground elevation) ____ (ft)

Casing ID ____ (in)

Casing Material ____

Note: Total Well Depth, Stick Up, Casing Id. etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
		1st	1st					
		2nd	2nd					
		3rd	3rd					
		4th	4th					
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site.* ***If more fields above are needed, use separate sheet or form.***

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
02/19/20							

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: Clear Odor: NA Color: NA Other: ____

Weather Conditions (required daily, or as conditions change): Direction/Speed: ____ Outlook: Dry Precipitation: Y or (N)

Specific Comments (including purge/well volume calculations if required):

Field blank - used PFOS Free water from TA-lab.

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
02/19/20	Sam Graber	[signature]	SCS

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client. PINK - Field Copy

Preliminary Data

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 320-58764-1

Login Number: 58764
List Number: 1
Creator: Nuval, Mark-Anthony M

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	1032016
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	
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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Preliminary Data