



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: Weyerhaeuser NR Company
2. Facility Name: Weyerhaeuser Raymond Lumbermill
(if different from Applicant)
3. Applicant Mail Address: 51 Ellis Street
Street
Raymond, Washington City/State 98577 Zip
4. Facility Location Address: _____
(if different from 3 above) Street

City/State Zip
5. UBI No. 602 865
829
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):
46.688661 / -123.736952

RECEIVED

DEC 02 2020

WA State Department
of Ecology (SWRO)

Certified 7017 0190 0001 1150 2982

FOR OFFICE USE ONLY		Check One: New/Renewal <input type="checkbox"/> Modification <input type="checkbox"/>	
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:

Nancy Wood Siglin
Name

Environmental Manager
Title

360-942-6305
Telephone number

360-942-6314
Fax number

8. Check One:

☒ Permit Renewal (including renewal of temporary permit):

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.

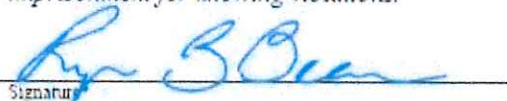
☐ Permit Modification

☐ 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.


Signature

11/30/20
Date

Vice President
Western Lumber
Title

Ryan B. Beaver
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:
SIC 2421

The facility produces dimensional lumber from regionally sourced logs, dries the sawn lumber in lumber kilns, surface planes the dried lumber and prepares packed lumber products for shipment to customers.

By-products and residuals from the sawmilling production are green chips, sawdust, shavings and hog fuel bark.

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

Type	RAW MATERIALS	Quantity
<i>Grapes (Example)</i>		<i>1,000 tons per year</i>
Hemlock and Douglas Fir logs		502,701 Tons per year
Type	PRODUCTS	Quantity
<i>Grape Juice(Example)</i>		<i>300,000 gallons per year</i>
Kiln dried lumber		165,674 MBF per year
Wood Chips		93,387 bone dry tons per year
Hog fuel sold and used for steam generation		32,390 bone dry tons per year
Sawdust		19,550 bone dry tons per year
Dry shavings		12,553 bone dry tons 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
Dry kilns	Kiln free water condensate	1	C
Boiler, powerhouse	Boiler blow down water, feed water (sand filter and softener backwash)	2	C
Support systems	Vehicle wash, saw cooling water, A/C, etc.	3	B
Mill operation [delete - population]	Sanitary waste water	4	C
Misc. water infiltration	Stormwater infiltration	5	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? 40,000 gallons/day
- What is the maximum average monthly wastewater discharge flow (daily flows averaged over a month)? 16,987 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.*)
- No planned waste water improvements at this time. Mill is considering installation of kiln systems that would replace the current kilns. The replacement kilns could increase volume of condensate generated. However, this would be offset by reductions in boiler blowdown.

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-Kiln [condensate]	15500	15500	17000	17000	14000	14000	11000	11000	11000	11000	13000	15500
2-Boiler/powerhouse	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
3-Support systems	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
4-Mill Population	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600
5-Misc. water infiltration (can't measure)												
days per month	31	28	31	30	31	30	31	31	30	31	30	31
gpd (daily average)	22800	2280	24300	24300	21300	21300	18300	18300	18300	18300	20300	22800
Estimated Total Monthly Flow (GPD)	706800	638400	753300	729000	660300	639000	567300	567300	549000	567300	609000	629000

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? 52

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: Please see Attachment C.7. documentation for water treatment chemicals used at the facility and second Attachment C.7 for other materials stored.

- | | | | | |
|----|---|------|-------------------------------------|-------------------------------------|
| 8. | Some types of facilities are required to have spill or waste control plans. Does this facility have: | Does | Yes | No |
| a. | A spill prevention, control, and countermeasure plan (40 CFR 112)? | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. | An Oil Spill Contingency Plan (chapter 173-182 WAC)? | | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c. | An emergency response plan (per WAC 173-303-350)? | | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d. | A runoff, spillage, or leak control plan (per WAC 173-216-110(f))? | | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e. | Any spill or pollution prevention plan required by local, state or federal authorities? If yes specify: <u>Stormwater Pollution Prevention Plan as per Industrial Stormwater General Permit</u> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f. | A solid waste control plan? | | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g. | A Slug Discharge Control Plan (40 CFR 403.8(f)(2)(v))? | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

SECTION D. WATER CONSUMPTION AND WATER LOSS

1. Potable water source(s):

☒ ☐ Public System (Specify) City of Raymond, WA

☐ ☐ Private Well

☒ Surface Water

a. Water Right Permit Number: 1372, 1319

b. Legal Description of Water Source

NE $\frac{1}{4}$ S, SW $\frac{1}{4}$ E, 13, Section, 14 TWN, 9 R

2. Potable water use

a. Indicate total water use _____

Gallons per day (average) 67885

Gallons per day (maximum) not metered on daily basis

b. Is water metered?

☒ YES ☒ NO

SECTION E. WASTEWATER INFORMATION

1.	How are the water intake and effluent flows measured?		
	Intake:	<u>Metered and data collected monthly by City of Raymond. Frog Pond water is not metered</u>	
	Effluent	<u>Toshiba inline flow meter</u>	
2.	Describe the collection method for the samples analyzed below. (<i>i.e.</i> , 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 <i>E. coli</i>), and Enterococci (previously known as fecal streptococcus at § 122.26 (d)(2)(iii)(A)(3)), or volatile organics. Grab and composite		
3.	Has the effluent been analyzed for any other parameters than those identified in question E.4.? <input checked="" type="checkbox"/> YES <input type="checkbox"/> 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 19 th , 20 th edition or EPA	Detection Limit/Quantitation Level
		Minimum	Maximum	Average			
	BOD (5 day)	3	520	123	95	SM 5210 B	/2 mg/l
	COD		130		1	SM 5220 D	/10 mg/l
	Total suspended solids	31	3100	145	96	SM 2540 D	/5 mg/l
	Fixed Dissolved Solids		706 mg/L		1	SM 2540 E	
	Total dissolved solids		934 mg/L		1	SM 2540 C	
	Conductivity (micromhos/cm)		1615		1	SM 2510 B	
	Ammonia-N as N	1.9	28.5	8.4	97	SM 4500-NH ₃ C	/0.3 mg/L
	pH	5.1	11.6		Continuous metered	SM 4500-H	0.1 standard units
	Fecal coliform (organisms/100 mL)		>1600		1	SM 9221 E or 9222 D	
	Total coliform (organisms/100 mL)		3,000,000		1	SM 9221 B or 9222 B	
	Dissolved oxygen		2.16 mg/L		1	SM 4500-O C/G	
	Nitrate + nitrite-N as N		660		1	SM 4500-NO ₃ E	100 µg/L
	Total kjeldahl N as N		18,000		1	SM 4500-N _{org} C/E/FG	300 µg/l
	Ortho-phosphate-P as P		1040		1	SM 4500-P E/F	10 µg/l
	Total-phosphorous-P as P		3350		1	SM 4500-P E/P/F	10 µg/l
	Total Oil & grease	5	67	9	47	EPA 1664A	1.4/5 mg/l
	NWTPH - Dx		1070		1	Ecology NWTPH Dx	250/250 µg/l
	NWTPH - Gx		<100		1	Ecology NWTPH Gx	250/250 µg/l
	Calcium		950		1	EPA 200.7	10 µg/l
	Chloride		273000		1	SM 4500-Cl C	0.15 µg/l
	Fluoride		0.32 mg/L		1	SM 4500-F E	.025/0.1 mg/l
	Magnesium		958		1	EPA 200.7	10/50 µg/l
	Potassium		8550		1	EPA 200.7	700/ µg/l
	Sodium		1210		1	EPA 200.7	29/ µg/l
	Sulfate		42,100		1	SM 4500-SO ₄ C/D	/200 µg/l
	Arsenic(total)		0.7		1	EPA 200.8	0.1/0.5 µg/l

X	Parameter	Measurement Values			Number of Analyses	Analytical Method Std. Methods 19 th , 20 th edition or EPA	Detection Limit/Quantitation Level
		Minimum	Maximum	Average			
	Barium (total)		38		1	EPA 200.8	0.5/2 µg/l
	Cadmium (total)		0.5		1	EPA 200.8	0.05/ 25 µg/l
	Chromium (total)		1.8		1	EPA 200.8	0.2/1 µg/l
	Copper (total)		262		1	EPA 200.8	0.4/2 µg/l
	Lead (total)		7		1	EPA 200.8	0.1/5 µg/l
	Mercury (total) pg/L		2700		1	EPA 1631E	0.2/0.5 pg/l
	Molybdenum (total)		4.3		1	EPA 200.8	0.1/0.5 µg/l
	Nickel (total)		7.7		1	EPA 200.8	0.1/0.5 µg/l
	Selenium (total)		<0.3		1	EPA 200.8	1/1 µg/l
	Silver (total)		0.6		1	EPA 200.8	0.04/ 2 µg/l
	Zinc (total)		681		1	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 <i>Azobenzene</i>)	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:

Routine pest control services are contracted for insect control office structures. Annual herbicide application has taken place but is currently not in practice.

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):

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.

Olympic Region Clean Air Agency 12 Air Operating Permit 915

Washington State Industrial Stormwater Permit SO3000-370D

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. SO3000-370D

- 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) Willapa River

- ☐ 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)*

- | | |
|--|--|
| <input checked="" type="checkbox"/> <input type="checkbox"/> Solvents | <input checked="" type="checkbox"/> <input type="checkbox"/> Hazardous Wastes |
| <input checked="" type="checkbox"/> <input type="checkbox"/> Scrap Metal | <input checked="" type="checkbox"/> <input type="checkbox"/> Acids or Alkalies |
| <input checked="" type="checkbox"/> <input type="checkbox"/> Petroleum or Petrochemical Products | <input checked="" type="checkbox"/> <input type="checkbox"/> Paints/Coatings |
| <input type="checkbox"/> <input type="checkbox"/> Plating Products | <input type="checkbox"/> <input type="checkbox"/> Woodtreating Products |
| <input type="checkbox"/> <input type="checkbox"/> Pesticides | <input checked="" type="checkbox"/> <input type="checkbox"/> Other <i>(please list)</i> : <u>Raw materials (logs), finished products, wood residuals and production byproducts</u> |

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

- | | |
|--|--|
| <input checked="" type="checkbox"/> <input type="checkbox"/> Oil/Water Separator | <input type="checkbox"/> <input type="checkbox"/> Detention Facilities |
| <input checked="" type="checkbox"/> <input type="checkbox"/> Containment | <input type="checkbox"/> <input type="checkbox"/> Infiltration Basins |
| <input checked="" type="checkbox"/> <input type="checkbox"/> Spill Prevention | <input checked="" type="checkbox"/> <input type="checkbox"/> Operational BMPs |
| <input type="checkbox"/> <input type="checkbox"/> Surface Leachate Collection | <input checked="" type="checkbox"/> <input type="checkbox"/> Vegetation Management |
| <input checked="" type="checkbox"/> <input type="checkbox"/> Overhead Coverage | <input checked="" type="checkbox"/> <input type="checkbox"/> Other <i>(please list)</i> : <u>Stormwater biofiltration facility</u> |

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.

Paint and ink waste are stored in a locked storage building and shipped to a hazardous waste facility.

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

Logs and lumber are stored outside on asphalt or gravel surfaced storage yards. Most residual byproducts (planer shavings, chips, sawdust) are stored in bins for loading into trucks. Bark, soil, rock is stored on graveled surfaces. Trash, cardboard, ash and scrap metal are stored in covered dumpsters until disposal.

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

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:

Willapa Regional Wastewater Treatment Plant
151 State Route 105
Raymond, WA 98577

Treatment Works Owner:

Street:

City of Raymond
230 Second Street

City/State:

Raymond, WA 98577


Signature of Treatment Works Authority

11/30/20
Date

Title

Eric Weiberg, Director of Public Works

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:

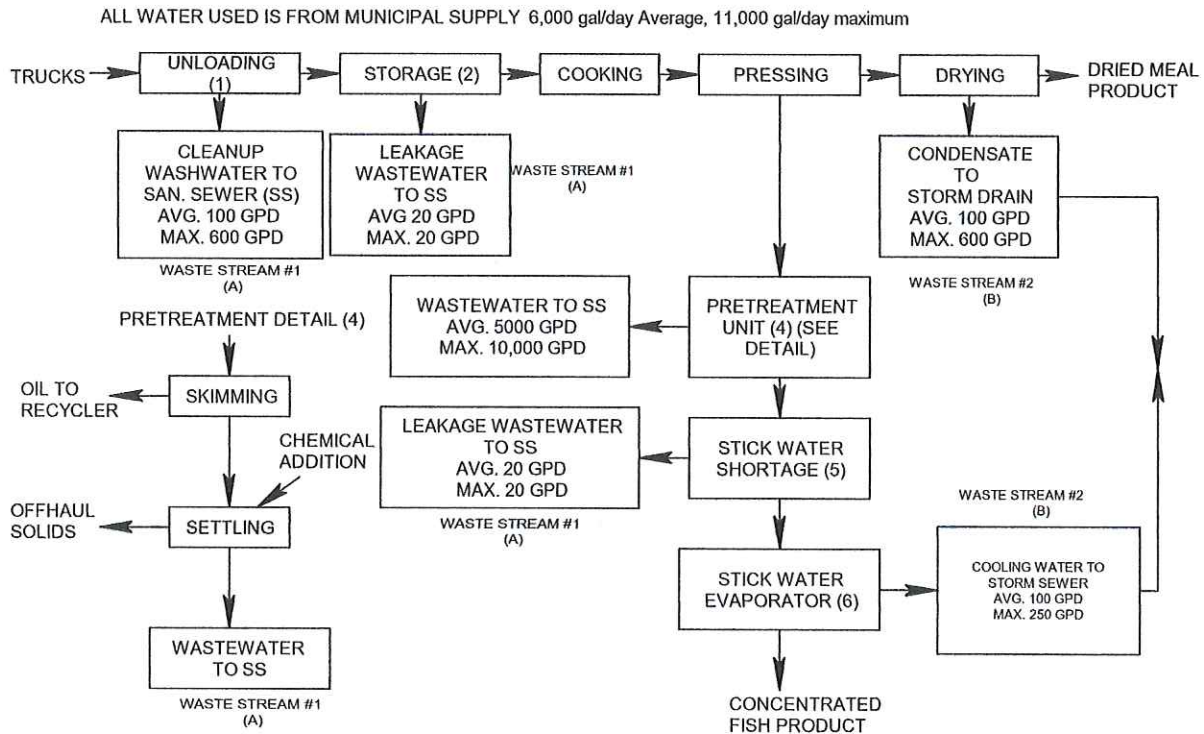
Signature of Sewer System Authority

Date

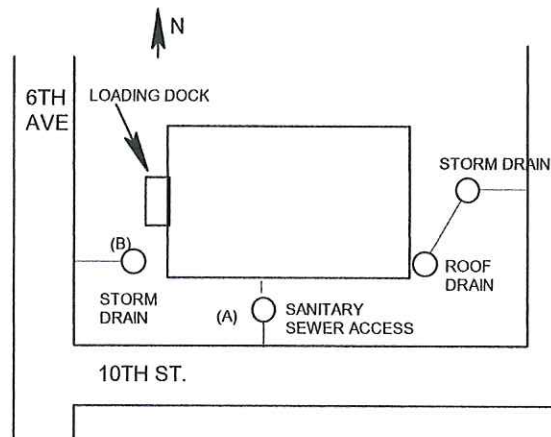
Title

Printed Name

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.

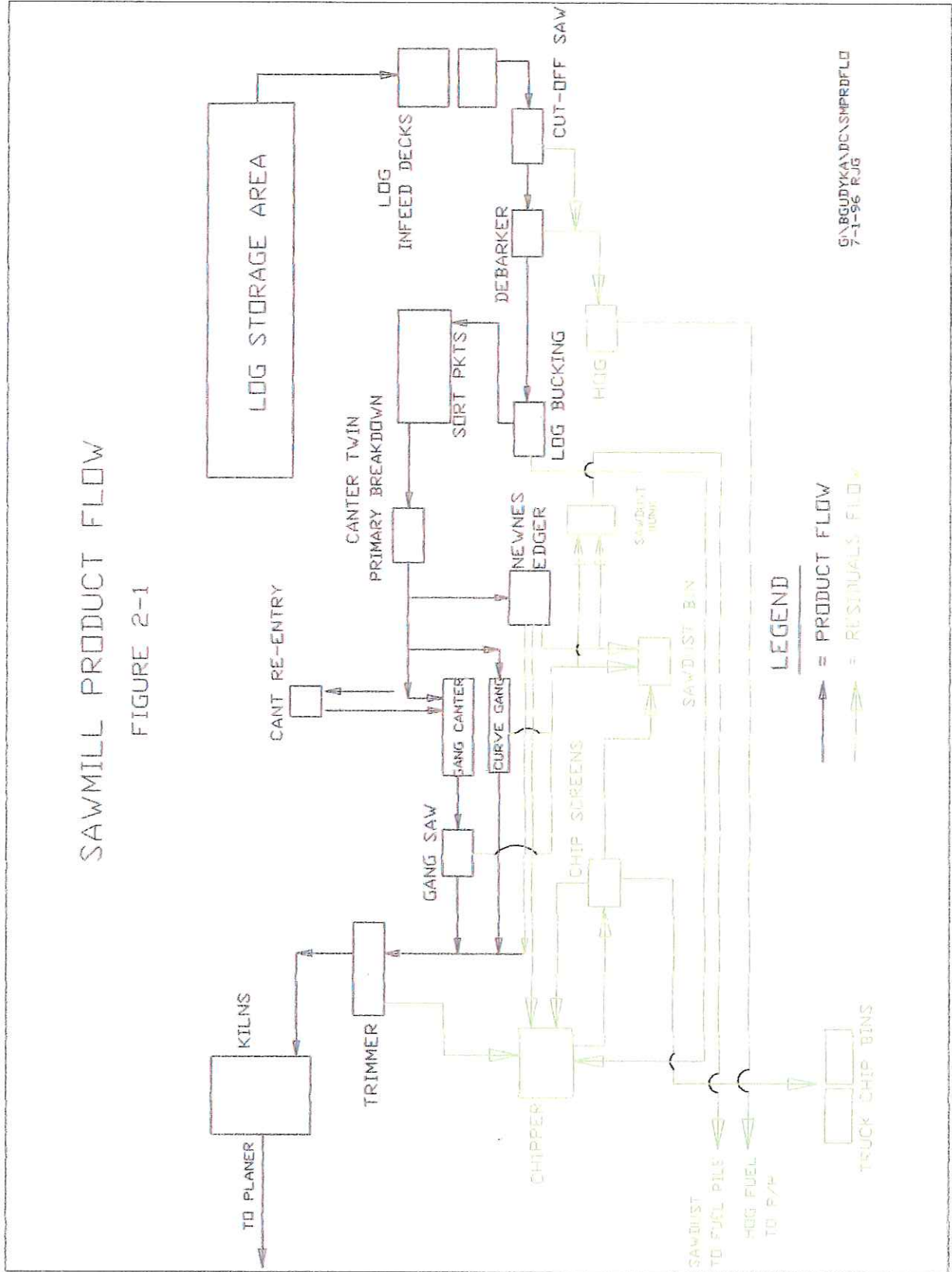
Categoric Industrial User (CIU): An industrial user subject to national categorical pretreatment standards promulgated by EPA (40 CFR 403.6 and 40 CFR parts 405-471).

Summary of Attachments That May be Required for This Application:

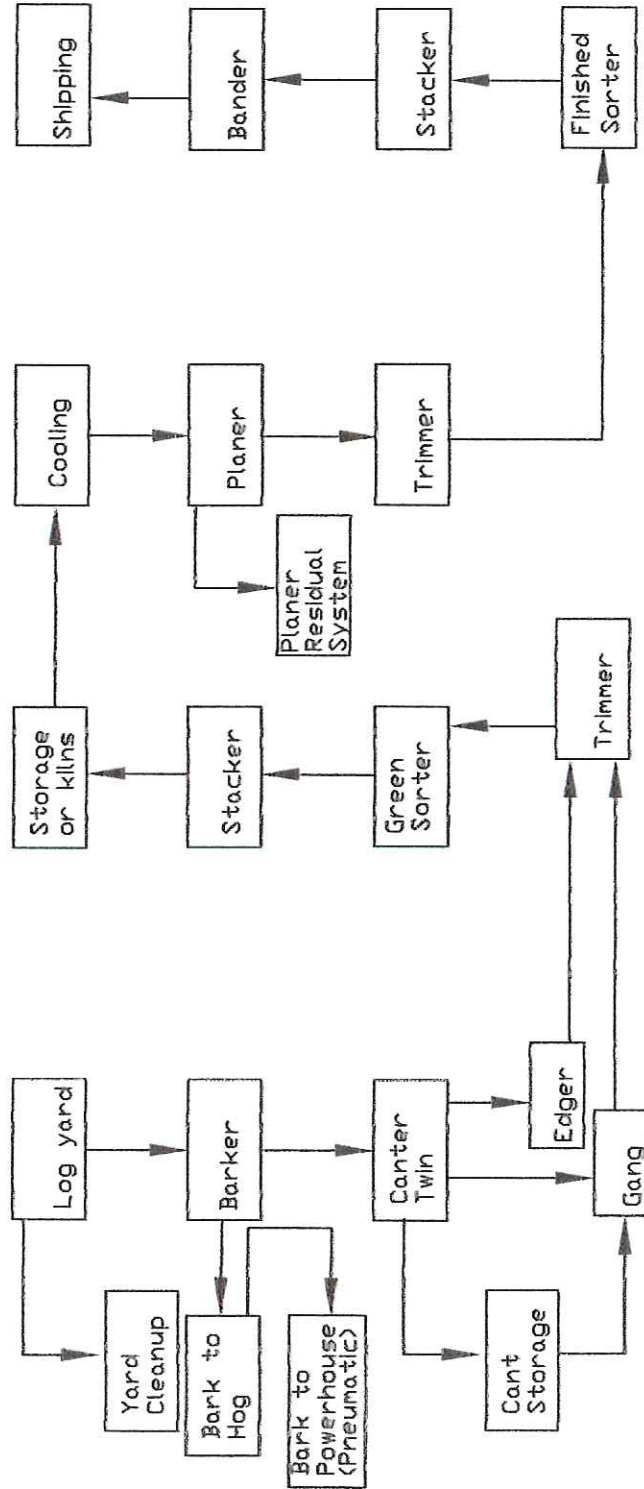
(Please check those attachments that are included)

- | | | | |
|-------------------------------------|--------------------------|------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | C.2. | Production schematic flow diagram and water balance |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | C.4. | Wastewater treatment improvements |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | C.7. | Additional incidental materials |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | E.8. | Additional results of effluent testing |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | F.1. | Facility site map |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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.



Weyerhaeuser Company Raymond Lumbermill Lumber manufacturing process flow chart



Ancillary activities

Maint & engineering	Chemical waste holding	Housekeeping	Office/stores/purchasing
-Parts cleaning -Used oil/Rags/Lub's	-Waste ink /containers -Aerosols	-Dumpsters -Site sweeping	-Recyclable materials
Powerhouse	Residual Systems	Klin Operations	
-Boiler opacity (Permitted) -Boiler blowdown/backwash discharge (Permitted)	-Planing Mill -Sawmill -Powerhouse (ash)	-Klin free water discharge to POTW (Permitted)	

LEGEND
→ = Wood in process

Attachment C.7.
Weyerhaeuser Raymond Lumbermill
Wastewater Discharge Permit ST6167
Water treatment chemicals

Product	Manufacturer	Volume (gallons / pounds)	Intended use
Neutralizing Amines (6375)	CH2O Incorporated	300 gals.	Return steam condensate treatment
Sodium Hydroxide (6148)	CH2O Incorporated	300 gals.	Boiler water dispersant
Sodium Hydroxide Sodium Phosphate (6658)	CH2O Incorporated	300 gals.	POSCA boiler water treatment
Sodium Sulfite (6262)	CH2O Incorporated	165 gals.	Oxygen scavenger-boiler water
Sure Soft 100% cubes Plus	Compass Minerals	100-50-pound bags	Water softener treatment
Caustic 6213	CH2O Incorporated	200	Sewer discharge pH adjustment
Sulfuric acid 889	CH2O Incorporated	200	Sewer discharge pH adjustment

Attachment C.7.
Weyerhaeuser Raymond Lumbermill
Wastewater Discharge Permit ST6167

(Note this is current monthly inspection checklist utilized at the facility)

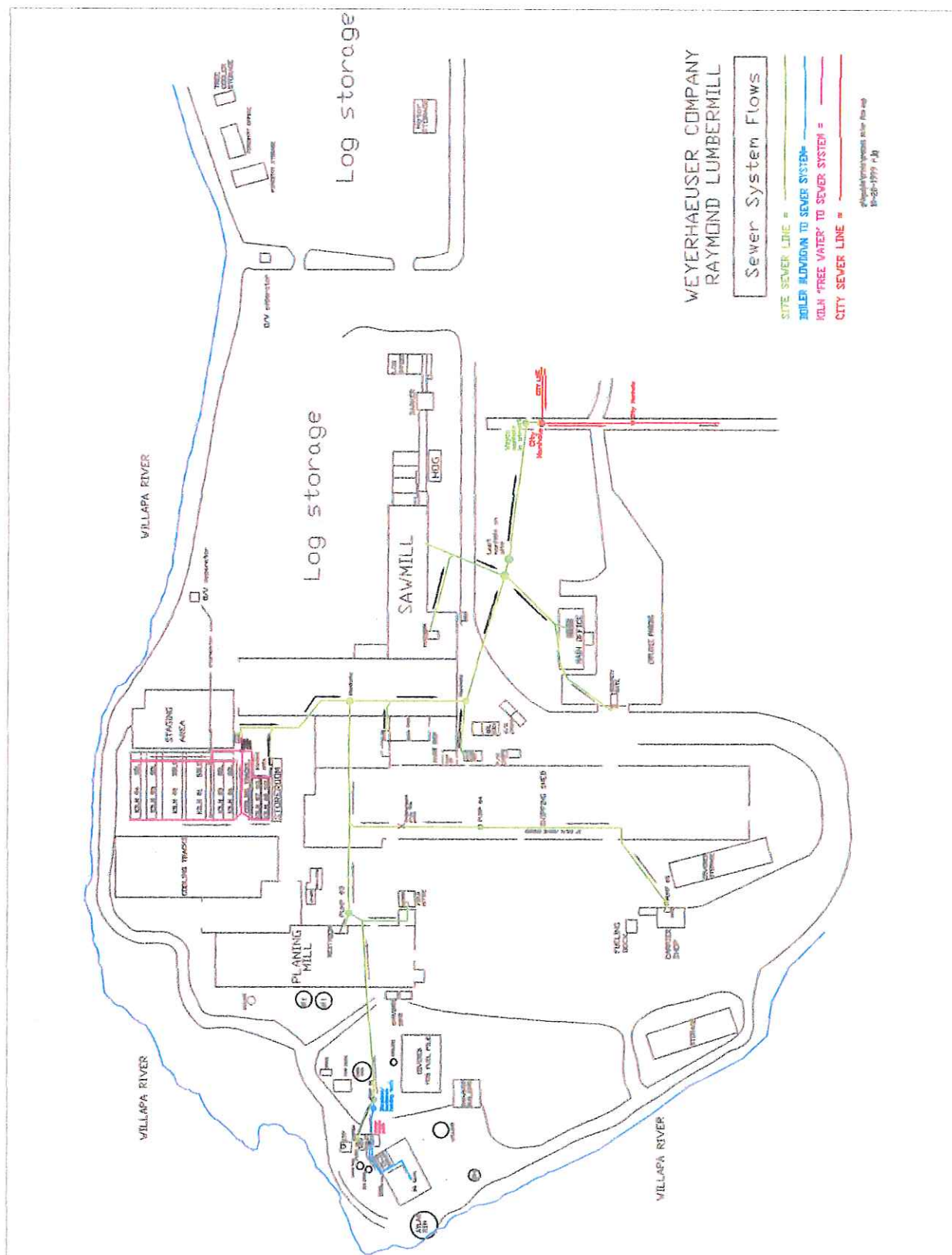
Carrier Shop:		Gal./Vessel	Containment Capacity: Gal.	Status:
56	1 tank Delvac MX 15W-40	275	7,800	
55	1 tank ATF Oil	275	7,800	
54	1 tank Tractor Hyd. Mobil Fluid 424	275	7,800	
53	1 tank "used oil"	700	7,800	Inv.
52	1 tank Antifreeze Mix	475	7,800	
51	1 tank Vehicle Fuel (gasoline)	275	7,800	
50	1 tank Diesel Storage	1,100	7,800	
	3 drums "spent antifreeze" -2 empty	55 each	7,800	
	4 drums of varying oil/lube (2 used in shop)	55 each	7,800	
57	1 tank "used oil" collection	175	Pit	Inv.
Package Saw Building				
58	1 tank hydraulic 32 oil for package saw	29	(self)	
Planer Mill:				
32	1 tank for P/M Strapper Power Unit	100	135	
33	1 tank for P/M Stacker Hyd. Power Unit	400	720	
35	1 tank in Sorter Hyd. Room for COE even end fence	160	950	Offline
34	1 tank in Sorter Hyd. Room for J-Bar Sorter	660	950	
37	1 tank in Main Hyd. Room for Planer Power Unit (68)	195	1,665	
36	1 tank in Main Hyd. Room for Tilt Hoist Power Unit	150	1,665	
38	1 tank in Main Hyd. Rm. Board Turner (out of service)	140	1,665	Offline
39	1 tank in Main Hyd. Room make up oil for Planer	275	1,665	
40	1 tank in P/M storage room 732 Turbin Oil	40	330	
41	1 tank "used oil" outside North of Main Hyd. Room	175	200	Inv.
	Currently using 7 drums at P/M storage room, may vary	55 each	330	
Powerhouse:				
42	1 tank at Shavings Bin Power Unit	100	140	
43	1 tank Truck Dump	175	(self)	
44	1 tank Grate Hyd. "used oil"	60	100	Inv.
46	1 tank Neutralizing Amines (6375)	300	340	
47	1 tank Sodium Hydroxide (6148)	300	340	
48	1 tank Sodium Hydroxide Sodium Phosphate (6658)	300	340	
49	1 DBL Wall Tote Sodium Sulfite (6262)	165	(self)	
Hazardous Waste Building and Outside covered storage area:				
30	1 tank "used oil" storage	275	6,440	Inv.
31	1 tank Kerosene Storage	500	6,440	
	7 drum "spent filing coolant"	55	6,440	
	1 drum paint waste (60 4117)	30	6,440	
Chemical Shed at Sewer Outfall 003				
45	Caustic 6213	200	200	Self
59	Sulfuric acid 889	200	200	Self

Attachment C.7.
Weyerhaeuser Raymond Lumbermill
Wastewater Discharge Permit ST6167

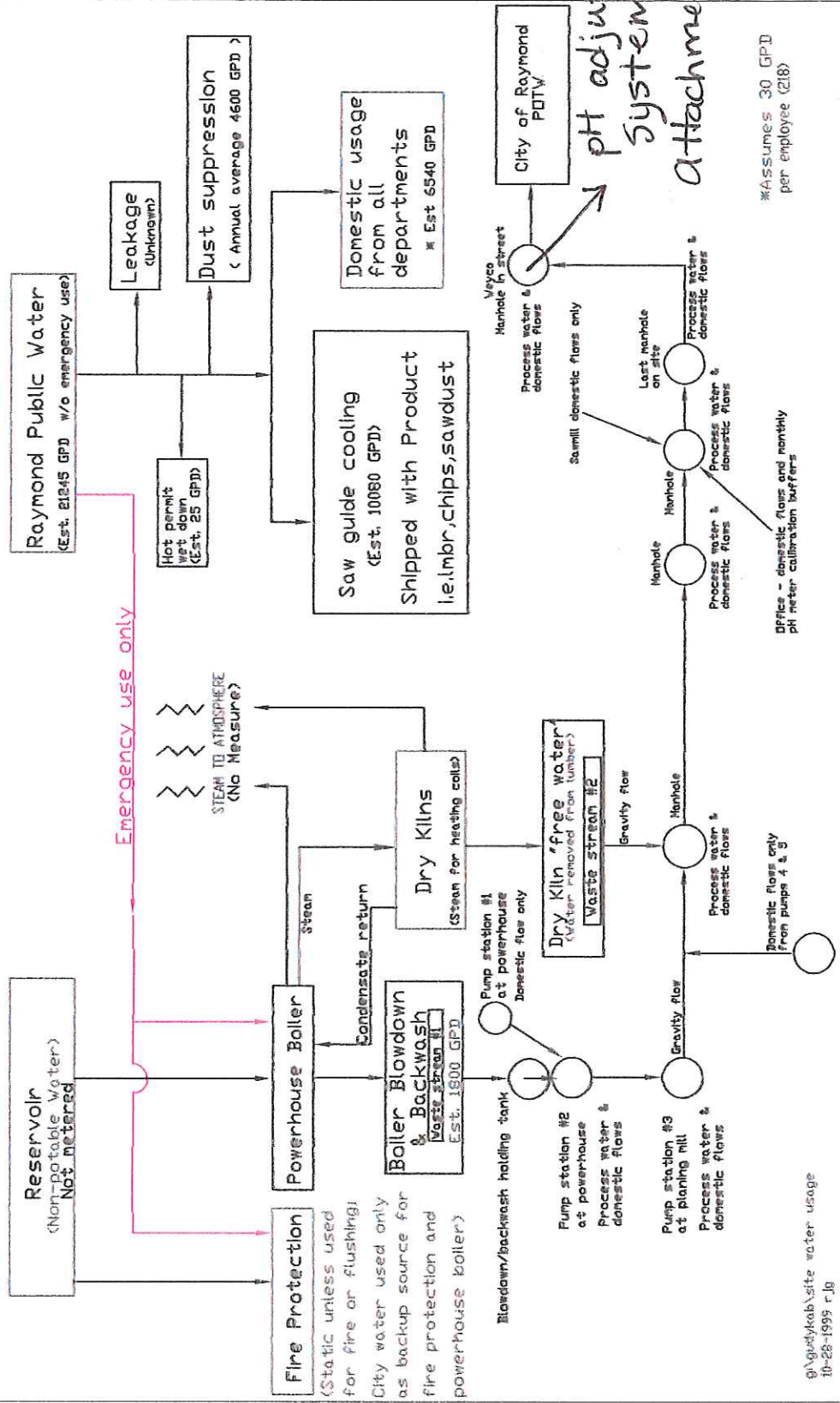
(Note this is current monthly inspection checklist utilized at the facility)

Tank #	S/M Oil and Lube Main Hyd. Room:	Gal./Vessel	Containment capacity: Gal	Status:
5	1 tank Power Unit for C/T	500	2,660	
11	1 tank Velocite # 8 oil (outside main hyd. rm.)	175	168	
12	1 tank Nuto 46 hydraulic oil (outside main hyd. rm.)	750	800	
13	1 tank Clarity 100 Saw Guide oil (outside hyd. rm.)	220	520	
14	1 tank Clarity 46 Saw Guide oil by Band Saw filing rm.	275	250	
10	1 tank Exxon Saw guide oil (corner hydraulic room)	100	565	
9	1 tank Nuto 46 oil for McGehee Gang Lube (corner rm.)	175	565	
6	1 tank Newnes Edger Power Unit (down steps-main)	200	565	
7	1 tank Newnes Edger Power Unit (down steps-main)	330	565	
8	1 tank McGehee Gang Power Unit (down steps-main)	745	800	
	1 drum for "used oil" clean up in Edger Hyd. Room	55	565	Inv.
	5 drums (maximum) "used oil" by air compressor room	55 each	Basement	Inv.
60	Trimmer hydraulic Nuto 46	90	100	
S/M other areas:				
19	1 tank Log Truck Wrapper Hydraulic Power Unit	44	40	
20	1 tank S/M Grapple make up oil (ground level)	275	120	
22	1 tank S/M Grapple Power Unit	200	1,380	
23	1 tank S/M Barker Power Unit	27	15	
21	1 DBL tank under Barker (80W-90 & 150 oil-ground)	175 & 175	200	
18	1 tank Aux. Hyd. Power Unit for Autobuck	350	467	
17	1 tank make up oil for Autobuck (basement)	275	250	
16	1 tank ATF in Compressor Room	275	250	
15	1 tank 600 XP 150 Oil by Compressor Room	500	477	
24	1 tank 600 XP 150 Oil for Edger by Door # 4	275	261	
25	1 tank 600 XP 150 Oil (sm. Yellow) by Door # 4	85	Basement	
26	1 tank S/M J-bar Sorter Power Unit	300	200	
	2 drum Velocite at J-bar Sorter	55	Basement	
27	1 tank S/M Stacker Hyd. Power Unit	210	225	
4	1 tank for S/M Sawdust Bin Power Unit (2E 660)	23	33	
3	1 tank for S/M Chip Bin Power Unit (722-02)	29	39	
2	1 tank for P/M Chip Bin Power Unit (south of M/W shop)	23	44	Offline
	3 55-gal drums various lube oils in old round saw room	165	200	
Oil House:				
	72 drums (max) capacity, currently	55 each	14,683	
	12 drums for dispensing	55 each	14,683	
	New & Used oil totes (7-100 gallons)	700 total	14,683	
	QT drums & 5 gallon pails various grease	5 gal. to 30 Gal.	14,683	
1	1 tank for used oil & draining filters	84	14,683	Inv.
Kiln:				
29	1 tank Hydraulic 32 Transfer Power Unit	100	140,325	

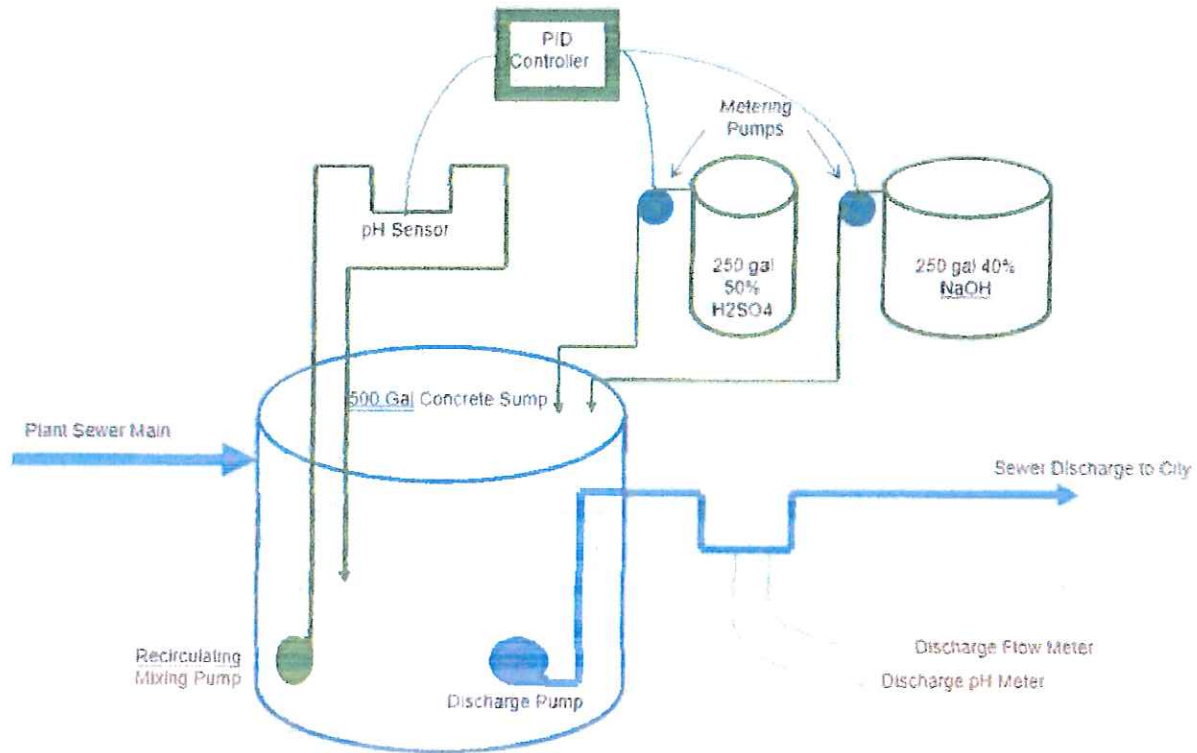
Attachment Fi-1



WEYERHAEUSER COMPANY RAYMOND, WASHINGTON SITE WATER USAGE



Experimental Plant Sewer Discharge Schematic



Attachment H.5.

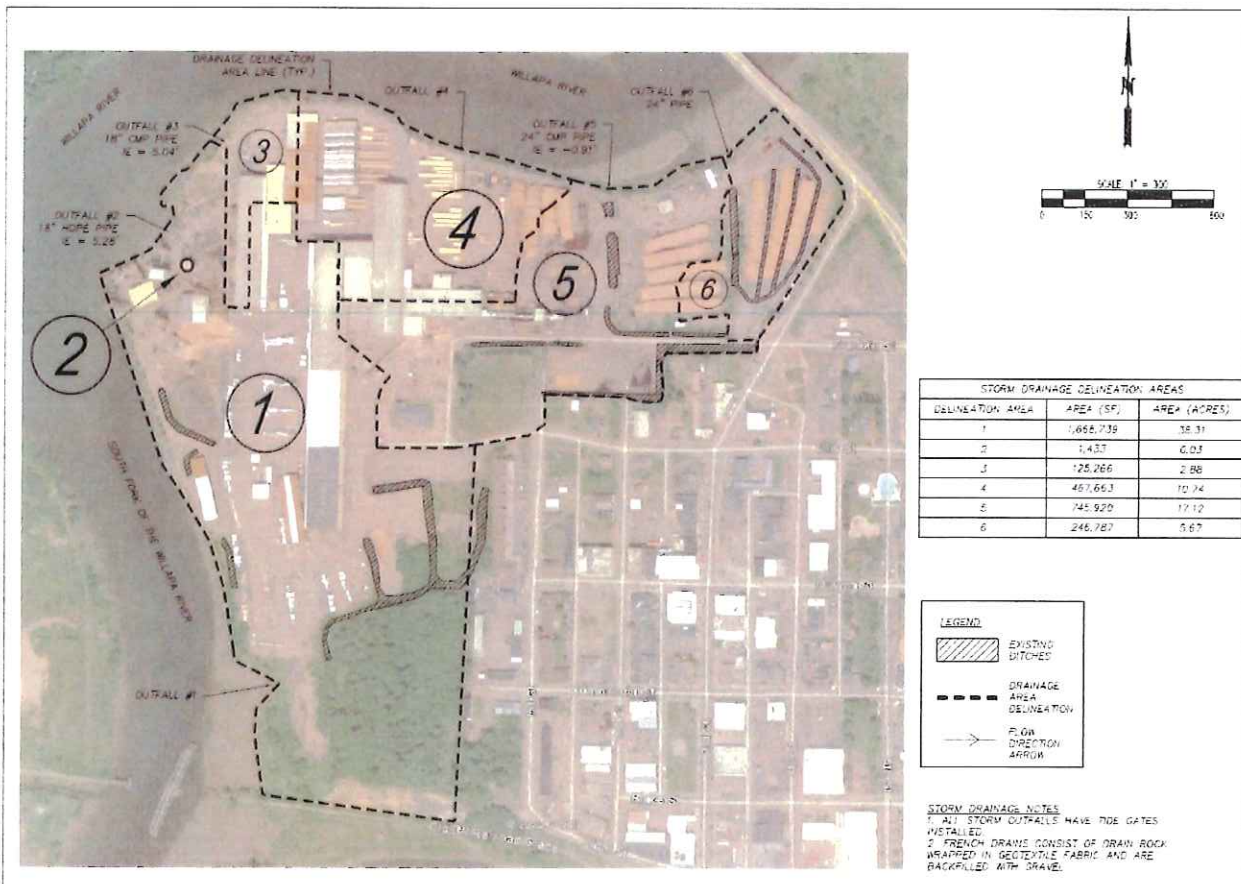
Weyerhaeuser Raymond Lumbermill

Wastewater Discharge Permit ST6167

Stormwater System page 1 of 2

(Note the facility has recently completed commissioning of a forebay and biofiltration basin to treat stormwater discharges. A new as-built survey and stormwater drawing are currently under development.)

Drainage basins 5 and 6 have been combined and runoff is captured in a wet well and pumped to the new forebay and biofiltration pond for treatment. After treatment stormwater runoff gravity flows and discharges out outfall 5. Outfall 6 is no longer a discharge point for the facility.



Attachment H.5.

Weyerhaeuser Raymond Lumbermill

Wastewater Discharge Permit ST6167

Stormwater System page 2 of 2

The construction drawing below is the modified drainage and new treatment forebay/biofiltration basin treating stormwater for drainage basin 5 and 6 the new survey of "as-built" and stormwater drawing are currently under development.



November 16, 2020

Weyerhaeuser Raymond Lumber

51 Ellis Street

Raymond, WA 98577

Attn: Nancy Wood Siglin

CASE NARRATIVE

Client Project ID: Priority Pollutant Scan

Number of Samples: 2

Spectra Project #: 2020090963

Received Date: 9/30/2020

Sample Identification Summary:

Client IdentificationSpectra Laboratory Number

PP-Comp

1

PP-Grab

2

Sample Receipt:

Samples were received from the field staff within the recommended temperature limits of 0°C to 6°C at 4.3°C. Except for metals, samples were stored at the laboratory at 0°C to 6°C. All samples were received intact, within specified holding times, and collected in the correct sampling containers with the proper preservatives.

Sample Analysis:

Samples were prepared and analyzed using the following EPA, or Standard Methods, or State of Washington methods:

Total Metals by ICP	EPA 200.7
Total Metals by ICP-MS	EPA 200.8
Total Suspended Solids	SM 2540 D
Ammonia	SM 4500-NH ₃ D
Biochemical Oxygen Demand	SM 5210 B
Chemical Oxygen Demand	SM 5220 D
Conductivity	120.1
HEM/Oil & Grease	1664B
Total Cyanide	SM 4500-CN ⁻ E
Fluoride	SM4500-F ⁻ C
pH	SM4500-H ⁺ B
Total Kjeldahl Nitrogen	SM 4500-Norg C
Sulfate	SM 4500-SO ₄ ⁻ E
Hexavalent Chromium	SM 3500-Cr B

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838 • www.spectra-lab.com

The following analyses were subcontracted to Edge Analytical, 1620 Walnut Street, Burlington, WA 98233:

Volatile Organic Compounds	EPA 624.1
Semivolatile Organic Compounds	EPA 625
Gasoline Range Organics	NWTPH-Gx
Weak Acid Dissociable Cyanide	SM 4500-CN ⁻ I
Fixed Dissolved Solids	SM2540 E

The following analyses were subcontracted to Fremont Analytical, 3600 Fremont Avenue N, Seattle, WA 98103:

Mercury	EPA 1631E
Organochlorine Pesticides	EPA 608
Polychlorinated Biphenyls	EPA 608.

The following analyses were subcontracted to Spectra Laboratories – Kitsap, 26276 Twelve Trees Lane NW, Poulsbo, WA 98370:

Nitrate+Nitrite and Chloride	EPA 300.0
Ortho-phosphate	SM 4500 P E
Total Phosphorus	SM 4500 P F
Dissolved Oxygen	SM2510 B

The following analysis was subcontracted to Lab/Cor, Inc., 7916 6th Avenue NW, Seattle, WA 98117:

Asbestos	EPA 100.1.
----------	------------

The following analysis was subcontracted to ALS Group USA, Corp. 10450 Stancliff Rd., Suite 210, Houston, TX 77099:

Dioxins	EPA 1613B.
---------	------------

The following analysis was subcontracted to Water Management Laboratories Inc., 1515 80th Street E, Tacoma, WA 98404:

Total Coliform by Multiple Tube Fermentation	SM 9221 B.
--	------------

The reports from all subcontracted laboratories are appended to this report in their entirety.

Analytical Comments for methods NWTPH-Gx and 300.0:

Gasoline and chloride were analyzed beyond the method holding times for these analytes due to miscommunication between Spectra Laboratories Tacoma and the subcontract laboratories.

Additional analytical comments associated with subcontracted results are included in the reports from the individual laboratories appended to this report.

Results reported by the subcontract laboratories are denoted with an asterisk (*) next to the result or in the result field.

SPECTRA LABORATORIES

Christina Frans

Christina Frans, QA Manager

This report is issued solely for the use of the person or company to whom it is addressed. Any use, copying or disclosure other than by the intended recipient is unauthorized. If you have received this report in error, please notify the sender immediately at 253-272-4850 and destroy this report promptly.

These results relate only to the items tested and the sample(s) as received by the laboratory. This report shall not be reproduced except in full, without prior express written approval by Spectra Laboratories.

11/16/2020

Weyerhaeuser Raymond Lumber
51 Ellis Street
Raymond, WA 98577
Attn: Nancy Wood Siglin

P.O.#: 4502765194
Project: Priority Pollutant Scan
Client ID: PP-Comp
Sample Matrix: Water
Date Sampled: 09/29/2020
Date Received: 09/30/2020
Spectra Project: 2020090963
Spectra Number: 1

Analyte	Result	Units	Method
Asbestos	<0.866*	MFL>1	EPA 100.1
Calcium	0.950	mg/L	EPA 200.7
Magnesium	0.958	mg/L	EPA 200.7
Potassium	8.55	mg/L	EPA 200.7
Sodium	1.21	mg/L	EPA 200.7
Antimony	0.0062	mg/L	EPA 200.8
Arsenic	0.0007	mg/L	EPA 200.8
Barium	0.038	mg/L	EPA 200.8
Beryllium	< 0.0003	mg/L	EPA 200.8
Cadmium	0.0005	mg/L	EPA 200.8
Chromium	0.0018	mg/L	EPA 200.8
Copper	0.262	mg/L	EPA 200.8
Lead	0.007	mg/L	EPA 200.8
Molybdenum	0.0043	mg/L	EPA 200.8
Nickel	0.0077	mg/L	EPA 200.8
Selenium	< 0.0003	mg/L	EPA 200.8
Silver	0.0006	mg/L	EPA 200.8
Thallium	< 0.0005	mg/L	EPA 200.8
Zinc	0.681	mg/L	EPA 200.8
Total Dissolved Solids	934	mg/L	SM 2540 C
Total Suspended Solids	93.8	mg/L	SM 2540 D
Fixed Dissolved Solids	706*	mg/L	SM 2540 E

Analyte	Result	Units	Method
Ammonia	10.2	mg/L-N	SM 4500-NH3 D
BOD	47.1	mg/L	SM 5210 B
COD	130	mg/L	SM 5220 D

SPECTRA LABORATORIES

CMF 11.17.2020
Christina Frans, QA Manager

SPECTRA Laboratories

...Where experience matters

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11/16/2020

Weyerhaeuser Raymond Lumber
51 Ellis Street
Raymond, WA 98577
Attn: Nancy Wood Siglin

P.O.#: 4502765194
Project: Priority Pollutant Scan
Client ID: PP-Grab
Sample Matrix: Water
Date Sampled: 09/29/2020
Date Received: 09/30/2020
Spectra Project: 2020090963
Spectra Number: 2

Analyte	Result	Units	Method
Conductivity	1615	umhos/c	EPA 120.1
2,3,7,8-TCDD	*		EPA 1613B
Total Mercury	0.0027*		EPA 1631E
HEM/ Oil & Grease	<5.0	mg/L	EPA 1664-B
Chloride	273* P	mg/L	EPA 300.0
Nitrate/Nitrite	0.66*	mg/L-N	EPA 300.0
Total Phenolics	0.104	mg/L	EPA 420.1
Sub Pest/PCB	*		EPA 608
Sub PP VOA	*		EPA 624.1
Sub PP SVOA	*		EPA 625
Diesel	1.07	mg/L	NWTPH-Dx
Oil	0.76	mg/L	NWTPH-Dx
Gasoline	<100*	µg/L	NWTPH-G
Dissolved Oxygen	2.16*	mg/L	SM 2510 B
Orthophosphate, as P	1.04*	mg/L	SM 4500 P E
Total Cyanide	<0.01	mg/L	SM 4500-CN ⁻ E
Weak Acid Dissociable	0.011*	mg/L	SM 4500-CN ⁻ I
Fluoride	0.32	mg/L	SM 4500-F ⁻ C
pH	7.57	pH	SM 4500-H ⁺ B
TKN	18.0	mg/L-N	SM 4500-Norg C
Total Phosphorus	3.35*	mg/L	SM 4500-P F
Sulfate	42.1	mg/L	SM 4500-SO ₄ ⁻ E

Analyte	Result	Units	Method
Total Coliform by MPN	3000000*	MPN/1	SM 9221 B
Fecal Coliform by MPN	>1600	MPN/1	SM 9221 E
Hexavalent Chromium	0.01	mg/L	SM3500-CR B

Surrogate	Recovery	Method
p-Terphenyl	101	NWTPH-Dx
Toluene-d8	99	NWTPH-G
4-Bromofluorobenzene	101	NWTPH-G

SPECTRA LABORATORIES

CMF 11.17.2020
Christina Frans, QA Manager

October 10, 2020

Weyerhaeuser Raymond Lumber
51 Ellis St
Raymond, WA 98577

Units: ug/L.
Spectra Project: 2020090963
Applies to Spectra #'s 1
Analyst: SCJ

QUALITY CONTROL RESULTS

ICP-MS Metals - EPA Method 200.8 - Water

Laboratory Reagent Blank (LRB)		
Date Digested:	10/10/2020	Date Analyzed: 10/10/2020
Element	CAS #	Result
Antimony	7440-36-0	< 0.2
Arsenic	7440-38-2	< 0.3
Barium	7440-39-3	< 0.5
Beryllium	7440-41-7	< 0.3
Cadmium	7440-43-9	< 0.2
Chromium	7440-47-3	< 0.5
Copper	7440-50-8	< 0.3
Lead	7439-92-1	< 0.5
Molybdenum	7439-98-7	< 0.5
Nickel	7439-98-7	< 0.5
Selenium	7780-49-2	< 0.3
Silver	7440-22-4	< 0.2
Thallium	7440-28-0	< 0.5
Zinc	7440-66-6	< 0.3

Laboratory Fortified Blank (LFB)			
Date Digested:	10/10/2020	Date Analyzed:	10/10/2020
Element	Spike Added	LCS Conc.	LCS %Rec
Antimony	100.0	107.28	107.3
Arsenic	100.0	106.78	106.8
Barium	100.0	95.85	95.8
Beryllium	100.0	101.06	101.1
Cadmium	100.0	97.37	97.4
Chromium	100.0	96.69	96.7
Copper	100.0	98.70	98.7
Lead	100.0	95.78	95.8
Molybdenum	100.0	87.08	87.1
Nickel	100.0	102.84	102.8
Selenium	100.0	96.06	96.1
Silver	100.0	107.66	107.7
Thallium	100.0	103.42	103.4
Zinc	100.0	98.01	98.0

LCS Recovery limits 85-115%

Date Digested: 8/27/2020
Date Analyzed: 8/27/2020

Sample Spiked: 2020090925-1

Element	Sample Conc.	Spike Conc.	MS Conc.	MS %Rec	MSD Conc.	MSD %Rec	RPD
Antimony	0.00	100.0	109.47	109.5	115.43	115.4	5.3
Arsenic	0.00	100.0	101.12	101.1	107.06	107.1	5.7
Barium	6.22	100.0	106.75	100.5	110.86	104.6	4.0
Beryllium	0.00	100.0	98.52	98.5	101.43	101.4	2.9
Cadmium	0.00	100.0	109.58	109.6	117.58	117.6	7.0
Chromium	0.00	100.0	99.02	99.0	105.57	105.6	6.4
Copper	6.98	100.0	107.62	100.6	113.62	106.6	5.8
Lead	0.71	100.0	103.35	102.6	107.77	107.1	4.2
Molybdenum	20.73	100.0	121.36	100.6	129.26	108.5	7.6
Nickel	1.37	100.0	102.45	101.1	107.93	106.6	5.3
Selenium	0.00	100.0	99.29	99.3	105.80	105.8	6.3
Silver	0.00	100.0	104.85	104.9	115.61	115.6	9.8
Thallium	0.00	100.0	106.93	106.9	111.30	111.3	4.0
Zinc	35.36	100.0	141.22	105.9	148.09	112.7	6.3

Comment:
Recovery Limits 70-130%
RPD Limit 20

October 9, 2020

Weyerhaeuser Raymond Lumber
51 Ellis St
Raymond, WA 98577

Units: mg/L
Spectra Project: 2020100963
Applies to Spectra #'s 1
Analyst: SCJ

QUALITY CONTROL RESULTS
ICP Metals - EPA Method 200.7 - Water

Laboratory Reagent Blank (LRB)			
Date Digested:	10/9/2020	Date Analyzed:	10/9/2020
Element	Result		
Calcium	< 0.025		
Magnesium	< 0.015		
Potassium	< 0.045		
Sodium	< 0.045		

Laboratory Fortified Blank (LFB)				
Date Digested:	10/9/2020	Date Analyzed:	10/9/2020	
Element	Spike Added	LCS Conc.	LCS %Rec	
Calcium	1.0	0.950	95.0	
Magnesium	1.0	0.958	95.8	
Potassium	1.0	1.014	101.4	
Sodium	1.0	1.055	105.5	

LCS Recovery limits 85-115%

Matrix Spike/Matrix Spike Duplicate (MS/MSD)							
Date Digested:	10/9/2020			Date Analyzed:	10/9/2020		
Sample Spiked:	2020090925-1						
Element	Sample Conc.	Spike Conc.	MS Conc.	MS %Rec	MSD Conc	MSD %Rec	RPD
Calcium	2.196	1.0	2.956	76.0	3.010	81.4	6.9
Magnesium	0.345	1.0	1.179	83.4	1.204	85.9	3.0
Potassium	0.516	1.0	1.318	80.2	1.332	81.6	1.7
Sodium	10.798	1.0	12.021	122.3	12.077	127.9	4.5

Comment:

Recovery Limits 70-130%
RPD Limit 20

Spectra Laboratories

November 17, 2020

Weyerhaeuser Raymond Lumber
51 Ellis Street
Raymond, WA 98577
Attn: Nancy Wood-Siglin

Sample Matrix: Water
Spectra Project # 2020090963
Applies to Sample # 1-2

WATER
QUALITY CONTROL RESULTS
CONVENTIONALS

<u>Analyte</u>	<u>Method</u>	<u>Date</u>	<u>Analyst</u>	<u>Method</u> <u>Blank</u> <u>Result</u>	<u>LCS</u> <u>%</u> <u>Rec.</u>	<u>Control</u> <u>Limits</u>	<u>Batch</u> <u>Duplicate</u> <u>RPD</u>	<u>Control</u> <u>Limits</u>
BOD	SM 5210 B	09/30/20	HE	<2 mg/L	99.4	85-115	8.44	≤20
COD	SM 5220 D	10/05/20	PT	<2 mg/L	95.8	85-115	9.01	≤20
Conductivity	EPA 120.1	10/05/20	PT	<2 uS/cm	103	90-110	0.24	≤20
Cyanide	SM 4500-CN- E	10/01/20	HE	<0.01 mg/L	105	80-120	6.18	≤20
Fluoride	SM 4500F- C	10/02/20	PT	<0.2 mg/L	105	90-110	0.38	≤20
Hexavalent Chromium	SM 3500 Cr-D	09/30/20	HE	<0.01 mg/L	96.0	75-115	1.27	≤20
pH	SM 4500-H+ B	09/30/20	HE	N/A	99.4	± 0.05 pH	NA	≤5
TDS	SM 2540 C	10/05/20	HE	<10.0 mg/L	99.6	94-113	8.38	≤20
TSS	SM 2540 D	10/01/20	SH	<0.5 mg/L	110	86-116	2.25	≤20
Phenolics	EPA 420.1	10/14/20	SH	<0.01 mg/L	98.0	80-120	NA	≤20
Sulfate	SM 4500-S04 E/EPA 375.4	10/09/20	HE	<2.0 mg/L	93.9	85-114	9.44	≤20
Ammonia	SM 4500 NH3 D	10/10/20	SJ	<0.2 mg/L	100	80-120	1.80	≤20
TKN	SM 4500 Norg C	10/10/20	SJ	<0.5 mg/L	98.8	70-130	15.3	≤20

EPA 100.1 - Asbestos in Water (all sizes) Final Report

Job Number: 201170

Client: Spectra Laboratories

Address: 2221 Ross Way
Tacoma, WA 98421

Project Name:

Project No.: 2020090963

PO Number:

PWS ID:

Reference No.:

Report Number: 201170R01

Report Date: 10/12/2020

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
201170 - S1	090963-1 - , WA Water ID#: 11923717	EPA 100.1 - Asbestos in Water (all sizes)		10/2/2020

EPA 100.1 - Preparation and analysis of the above samples was conducted in accordance with the EPA method #100.1. In this method, Asbestos in Water samples are taken from an affected water supply to measure the amount of asbestos contamination in the system. Samples (all sizes) with known organic interferences are treated with ozone/UV treatment to oxidize any suspended material in the water.

Each sample was shaken, then sonicated briefly in a Health Sonics Ultrasonic Cleaner to distribute particulate evenly. Several aliquots were filtered onto 0.1 µm, 25 mm mixed cellulose ester filters. Briefly, the samples were collapsed with a solution of N,N-dimethylformamide and acetic acid and if no ozone/UV treatment was applied, they were etched in a low temperature plasma etcher to remove the top surface of the filter and other organics. Then the samples were coated at high vacuum with a thin layer of carbon. This coated sample was then placed on 200 mesh copper grids and allowed to dissolve in N,N-Dimethylformamide / Acetone baths until cleared of filter debris.

Each aliquot was examined at low magnification to determine the best particulate loading for analysis. Analysis was performed using a transmission electron microscope equipped with an EDS X ray analyzer. The samples were analyzed at an approximate screen magnification of 20,000x, with an accelerating voltage of 100 KV, scanning for fibers > 0.5µm in length. At least twenty grid openings were analyzed (or 100 structures) over three grid preparations. The sizing of grid openings was performed using a calibrated digital imaging system at low magnification.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,

x 

Kate March
Quality Control Officer

EPA 100.1 - Asbestos in Water (all sizes) Summary Data - Final Report

Job Number: 201170 SEA

Client: Spectra Laboratories

Report Number: 201170R01

Project Name:

Date Received: 10/2/2020

Lab/Cor Sample No.: S1

Sample Area/Mass/Volume (ml) : 800

Client Sample No.: 090963-1

Lab Filter Area (mm²) : 201

Description: , WA Water ID#: 11923717

Grid Openings Analyzed : 20

Filter Fraction: 1

Aliquot Dilution: 1

Average Grid Opening Area : 0.0116

Begin Volume: 1 ml

Final Dilution: 1

Area Analyzed (mm²) : 0.232

Volume Taken: 1 ml

Analytical Sens. (struc/MFL>10-um) : 0.866

Analyst(s)	Analysis Date	Microscope	Magnification
KM	10/12/2020	JEOL 1200 EX	10000

Structure Type	Concentration MFL>10-um	95% Confidence Interval MFL>10-um	Structure Count' Prim/Total
TEM Water Amphibole - 100.1 Rules	< 0.866	0 - 3.196 - Poisson	0
TEM Water Chrysotile - 100.1 Rules	< 0.866	0 - 3.196 - Poisson	0
TEM Water Total - 100.1 Rules	< 0.866	0 - 3.196 - Poisson	0
TEM Water >10µm Asbestos Length	< 0.866	0 - 3.196 - Poisson	0

Reviewed by:

x 

Kate March
Quality Control Officer

**EPA 100.1 - Asbestos in Water (all sizes) Raw Data -
Final Report**

Job Number: 201170 SEA

EPA 100.1 Non Potable

Client: Spectra Laboratories

Report Number: 201170R01

Project Name:

Date Received: 10/2/2020

Project No.: 2020090963

Lab/Cor Sample No: S1

Client Sample No: 090963-1

Description: , WA Water ID#: 11923717

Gr	No.	Loc.	ID	Prim Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G10	1	B24			NSD							
G10	2	C23			NSD							
G10	3	C32			NSD							
G10	4	E31			NSD							
G10	5	E34			NSD							
G10	6	F41			NSD							
G10	7	E44			NSD							
G10	8	C44			NSD							
G11	9	C34			NSD							
G11	10	E33			NSD							
G11	11	E42			NSD							
G11	12	F41			NSD							
G11	13	F44			NSD							
G11	14	G52			NSD							
G11	15	H52			NSD							
G12	16	C34			NSD							
G12	17	E33			NSD							
G12	18	E42			NSD							
G12	19	F41			NSD							
G12	20	F44			NSD							

Count Categories

100_1Amph	TEM Water Amphibole - 100.1 Rules	100_1Chry	TEM Water Chrysotile - 100.1 Rules	100_1Tot	TEM Water Total - 100.1 Rules
Asb>10	TEM Water >10µm Asbestos Length				

Reviewed by:

x 

Kate March
Quality Control Officer

CHAIN of CUSTODY

SPECTRA PROJECT #

SPECIAL INSTRUCTIONS/COMMENTS:

SPECTRA Laboratories

2221 Ross Way, Tacoma, WA 98421
 (253) 272-4850 Fax (253) 572-9838
 www.spectra-lab.com info@spectra-lab.com

Return Samples Y N X Page 1 of 1

STANDARD X RUSH

ADDRESS CHANGE ☐

ADDRESS: 2221 Ross Way Tacoma, WA 98421

CLIENT: Spectra Labs
 PROJECT: 2020090963
 CONTACT: Marie Holt
 SUBBED TO: LabCorp
 PHONE: (253) 272-4850 FAX: (253) 572-9838
 e-MAIL: marieh@spectra-lab.com
 PURCHASE ORDER #:

SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS																			
1 090963-1	09/29/20	1200	water	2																			
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
0																							

LAB USE ONLY			SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	
US Mail	UPS	Client	<i>Jen Draven</i>	Jen Draven	Spectra	10/01/20	3:00 PM	
		RECEIVED BY					10/2/20	0935
		RELINQUISHED BY						
		RECEIVED BY						

Tracking # _____

Custody Seals: ☒ N ☐ Intact ☒ N

Cooler Temp. _____ Sample Temp. 9.4°C

Payment Terms: Net 30 days. Past due accounts subject to 1 1/2 % per month interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other costs of collection regardless of whether suit is filed in Pierce Co., WA venue. Spectra Analytical, LLC



Burlington, WA Corporate Laboratory (a)
1620 S Walnut St. Burlington WA 98233 • 800.755.9295 • 360.757.1400

Bellingham, WA Microbiology (b)
805 Orchard Dr Ste 4 • Bellingham WA 98225 • 360.715.1212

Portland, OR Microbiology/Chemistry (c)
9150 SW Pioneer Ct Ste W • Wilsonville OR 97170 • 503.682.7302

Corvallis, OR Microbiology/Chemistry (d)
1100 NE Circle Blvd Ste 130 • Corvallis OR 97330 • 541.753.4946

Bend, OR Microbiology (e)
20332 Empire Blvd Ste 4 • Bend OR 97701 • 541.639.8425

November 11, 2020

Page 1 of 1

Marie Holt
Spectra Laboratories
2221 Ross Way
Tacoma, WA 98421

RE: 20-34784 - 2020090963

Dear Marie Holt,

Your project: 2020090963, was received on Friday October 02, 2020.

All samples were analyzed within the accepted holding times and were appropriately preserved and analyzed according to approved analytical protocols, unless noted in the data or QC reports. The quality control data was within laboratory acceptance limits, unless specified in the data or QC reports.

If you have questions phone us at 800 755-9295.

Respectfully

A handwritten signature in black ink, appearing to read "Lawrence J Henderson", with a long, sweeping underline.

Lawrence J Henderson, PhD
Director of Laboratories, Vice President

Enclosures: Data Report
QC Reports
Chain of Custody

compounds

CHAIN of CUSTODY

SPECTRA PROJECT #

20-34784

65988 - 65989

SPECTRA Laboratories

2221 Ross Way, Tacoma, WA 98421


(253) 272-4850 Fax (253) 572-9838

www.spectra-lab.com info@spectra-lab.com

Return Samples Y	N	X	Page 1 of 1	STANDARD	X	RUSH
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CLIENT: Spectra Labs ADDRESS: 2221 Ross Way Tacoma, WA 98421 ADDRESS ☐ CHANGE ☐

[illegible][illegible]

LAB USE ONLY				PRINTED NAME				COMPANY	DATE	TIME
US Mail	UPS	Fed Ex	Courier	Client	Signature 	Jen Draven		Spectra	10/01/20	3:00 PM
				Relinquished by						
				Received by						
				Relinquished by						
				Received by						
Tracking #				UPS 10/2/20 1011						
Custody Seals: Y N				Interact: Y N						
Cooler Temp.				Sermole Temp.						

Shipped Via: Shipped Via

Cooler: Box Envelope: None

Shipped Container: Shipped Container

Payment Terms: Net 30 days. Past due accounts subject to 1 1/2 % per month interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other costs of collection regardless of whether suit is filed in Pierce Co. WA venue. Spectra Analytical LLC

Payment Terms: Net 30 days. Past due accounts subject to 1 1/2 % per month interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other costs of collection regardless of whether suit is filed in Pierce Co. WA venue. *Spectra Analytical, LLC*

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-dibenzoanthracene)	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



Burlington, WA Corporate Laboratory (a)
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Bend, OR Microbiology (e)
20332 Empire Blvd Ste 4 - Bend, OR 97701 - 541.639.8425

Page 1 of 1

Data Report

Client Name: Spectra Laboratories
2221 Ross Way
Tacoma, WA 98421

Reference Number: **20-34784**
Project: 2020090963

Report Date: 11/11/20

Date Received: 10/2/20

Approved by: bj

Authorized by:

Lawrence J Henderson, PhD
Director of Laboratories, Vice President

Sample Description: 090963-1								Matrix W		Sample Date: 9/29/20 12:00 pm			
Lab Number: 65988		Sample Comment:						Collected By:					
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	
	FIXED DISSOLVED SOLIDS	706	1		mg/L	1.0	SM2540 E	a	11/11/20	SRS	FDS_201107		

Sample Description: 090963-2								Matrix W	Sample Date: 9/29/20 12:00 pm			
Lab Number: 65989		Sample Comment:						Collected By:				
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
57-12-5	CYANIDE (WAD)	0.011	0.005	0.00164	mg/L	1.0	SM4500-CN I	a	10/9/20	BSP	WAD_201009	

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.

PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.

D.F. = Dilution Factor

If you have any questions concerning this report contact us at the above phone number.

Form: cRslt_2.rpt



ANALYTICAL

Burlington, WA Corporate Laboratory (a)
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Bend, OR Microbiology (e)
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WSDOE Lab C567

DATA REPORT

Page 1 of 1

Client Name: Spectra Laboratories
2221 Ross Way
Tacoma, WA 98421

Reference Number: **20-34784**
Project: 2020090963

Lab Number: 65989
Field ID: 090963-2
Sample Description:
Matrix: Water
Sample Date: 9/29/20
Extraction Date: 10/6/20
Extraction Method: 5030B

Report Date: 11/11/20
Date Analyzed: 10/6/20
Analyst: HY
Analytical Method: 624(pH4)
Batch: 624_201006
Approved By: hy,nml

Authorized by:

Lawrence J Henderson, PhD
Director of Laboratories, Vice President

CAS	Compound	RESULT	Flag	UNITS	Lab QL	Permit QL	MDL	D.F.	Lab	COMMENT
107-02-8	ACROLEIN	ND	PA	ug/L	2.0	2.0	1.66	1.00	a	
107-13-1	ACRYLONITRILE	ND	PA	ug/L	2.0	2.0	0.56	1.00	a	

Notes:

Flags are data qualifiers. If there are data qualifiers on your report definitions can be found on an accompanying sheet.

ND - indicates the compound was not detected above the PQL or MDL.

Lab QL = Laboratory Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.

Permit QL = Quantitation Limit required by permit (listed in Appendix A) or other regulatory requirement.

D.F. = Dilution Factor.

If you have any questions concerning this report contact us at the above phone number.

Form: c608.rpt



ANALYTICAL

Burlington, WA Corporate Laboratory (a)
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Bellingham, WA Microbiology (b)
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Portland, OR Microbiology/Chemistry (c)
9150 SW Pioneer Ct Ste W - Wilsonville OR 97070 • 503.682.7802

Corvallis, OR Microbiology/Chemistry (d)
1100 NE Delta Blvd Ste 100 Corvallis OR 97330 • 541.763.4046

Bend, OR Microbiology (e)
20332 Empire Blvd Ste 4 - Bend OR 97701 • 541.639.8425

WSDOE Lab C567

DATA REPORT

Page 1 of 2

Client Name: Spectra Laboratories
2221 Ross Way
Tacoma, WA 98421

Reference Number: **20-34784**
Project: 2020090963

Lab Number: 65989
Field ID: 090963-2

Report Date: 11/11/20
Date Analyzed: 10/6/20

Sample Description:

Analyst: HY
Analytical Method: 624.1
Batch: 624_201006
Approved By: hy,nml

Matrix: Water
Sample Date: 9/29/20
Extraction Date: 10/6/20
Extraction Method: 5030B

Authorized by:

Lawrence J Henderson, PhD
Director of Laboratories, Vice President

CAS	Compound	RESULT	Flag	UNITS	Lab QL	Permit QL	MDL	D.F.	Lab	COMMENT
71-43-2	BENZENE	ND		ug/L	0.4	0.4	0.23	1.00	a	
75-27-4	BROMODICHLOROMETHANE	ND		ug/L	0.4	0.4	0.28	1.00	a	
75-25-2	BROMOFORM	ND		ug/L	0.4	0.4	0.26	1.00	a	
74-83-9	BROMOMETHANE	ND		ug/L	0.4	0.4	0.37	1.00	a	
56-23-5	CARBON TETRACHLORIDE	ND		ug/L	0.4	0.4	0.24	1.00	a	
108-90-7	CHLOROBENZENE	ND		ug/L	0.4	0.4	0.28	1.00	a	
75-00-3	CHLOROETHANE	ND		ug/L	0.4	0.4	0.34	1.00	a	
110-75-8	2-CHLOROETHYL VINYL ETHER	ND		ug/L	2.0	2.0	0.46	1.00	a	
67-66-3	CHLOROFORM	1.0		ug/L	0.4	0.4	0.25	1.00	a	
74-87-3	CHLOROMETHANE	ND		ug/L	0.4	0.4	0.28	1.00	a	
124-48-1	CHLORODIBROMOMETHANE	ND		ug/L	0.4	0.4	0.28	1.00	a	
95-50-1	1,2-DICHLOROBENZENE	ND		ug/L	0.4	0.4	0.31	1.00	a	
541-73-1	1,3-DICHLOROBENZENE	ND		ug/L	0.4	0.4	0.29	1.00	a	
106-46-7	1,4-DICHLOROBENZENE	0.5		ug/L	0.4	0.4	0.29	1.00	a	
75-34-3	1,1 - DICHLOROETHANE	ND		ug/L	0.4	0.4	0.32	1.00	a	
107-06-2	1,2 - DICHLOROETHANE	ND		ug/L	0.4	0.4	0.38	1.00	a	
75-35-4	1,1 - DICHLOROETHYLENE	ND		ug/L	0.4	0.4	0.25	1.00	a	
156-60-5	T - 1,2 - DICHLOROETHYLENE	ND		ug/L	0.4	0.4	0.34	1.00	a	
78-87-5	1,2 - DICHLOROPROPANE	ND		ug/L	0.4	0.4	0.22	1.00	a	
10061-01-5	CIS - 1,3 - DICHLOROPROPENE	ND		ug/L	0.4	0.4	0.31	1.00	a	
10061-02-6	TRANS- 1,3 - DICHLOROPROPENE	ND		ug/L	0.4	0.4	0.24	1.00	a	
100-41-4	ETHYLBENZENE	ND		ug/L	0.4	0.4	0.29	1.00	a	
75-09-2	METHYLENE CHLORIDE	ND		ug/L	0.4	0.5	0.28	1.00	a	
79-34-5	1,1,2,2 - TETRACHLOROETHANE	ND		ug/L	0.4	0.4	0.37	1.00	a	
127-18-4	TETRACHLOROETHYLENE	ND		ug/L	0.4	0.4	0.24	1.00	a	
108-88-3	TOLUENE	ND		ug/L	0.4	0.4	0.24	1.00	a	
71-55-6	1,1,1 - TRICHLOROETHANE	ND		ug/L	0.4	0.4	0.26	1.00	a	
79-00-5	1,1,2 - TRICHLOROETHANE	ND		ug/L	0.4	0.4	0.28	1.00	a	

Notes:

Flags are data qualifiers. If there are data qualifiers on your report definitions can be found on an accompanying sheet.

ND - indicates the compound was not detected above the PQL or MDL.

Lab QL = Laboratory Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.

Permit QL = Quantitation Limit required by permit (listed in Appendix A) or other regulatory requirement.

D.F. - Dilution Factor.

If you have any questions concerning this report contact us at the above phone number.

Form: c608.rpt

CAS	Compound	RESULT	Flag	UNITS	Lab QL	Permit QL	MDL	D.F.	Lab	COMMENT
79-01-6	TRICHLOROETHYLENE	ND		ug/L	0.4	0.4	0.29	1.00	a	
75-01-4	VINYL CHLORIDE	ND		ug/L	0.4	0.4	0.28	1.00	a	

Notes:

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D.F. - Dilution Factor.



ANALYTICAL

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Portland, OR Microbiology/Chemistry (c)
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Corvallis, OR Microbiology/Chemistry (d)
1100 NE Circle Blvd Ste 130 - Corvallis, OR 97330 - 541.753.4946

Bend, OR Microbiology (e)
20332 Empire Blvd Ste 4 - Bend OR 97701 - 541.639.6425

WSDOE Lab C567

DATA REPORT

Page 1 of 2

Client Name: Spectra Laboratories
2221 Ross Way
Tacoma, WA 98421

Reference Number: **20-34784**
Project: 2020090963

Lab Number: 65989
Field ID: 090963-2

Report Date: 11/11/20
Date Analyzed: 10/14/20

Sample Description:

Analyst: NML
Analytical Method: 625
Batch: 625_201006
Approved By: hy,nml

Matrix: Water

Sample Date: 9/29/20

Extraction Date: 10/6/20

Extraction Method: 3510C

Authorized by:

Lawrence J Henderson, PhD
Director of Laboratories, Vice President

CAS	Compound	RESULT	Flag	UNITS	Lab QL	Permit QL	MDL	D.F.	Lab	COMMENT
Acid Extractables										
88-06-2	2,4,6-TRICHLOROPHENOL	ND		ug/L	1	4	0.1	1.00	a	
120-83-2	2,4-DICHLOROPHENOL	ND		ug/L	1	1	0.2	1.00	a	
105-67-9	2,4-DIMETHYLPHENOL	ND		ug/L	1	1	0.4	1.00	a	
51-28-5	2,4-DINITROPHENOL	ND		ug/L	1	2	0.5	1.00	a	
95-57-8	2-CHLOROPHENOL	ND		ug/L	1	2	0.1	1.00	a	
88-75-5	2-NITROPHENOL	ND		ug/L	1	1	0.2	1.00	a	
534-52-1	4,6-DINITRO-2-METHYLPHENOL	ND		ug/L	1	2	0.3	1.00	a	
59-50-7	4-CHLORO-3-METHYLPHENOL	ND		ug/L	1	2	0.2	1.00	a	
100-02-7	4-NITROPHENOL	ND		ug/L	1	1	0.3	1.00	a	
87-86-5	PENTACHLOROPHENOL	ND		ug/L	1	1	0.2	1.00	a	
108-95-2	PHENOL	ND		ug/L	1	4	0.1	1.00	a	
Base/Neutral Extractables										
120-82-1	1,2,4-TRICHLOROBENZENE	ND		ug/L	0.4	0.6	0.05	1.00	a	
122-66-7	1,2-DIPHENYLHYDRAZINE	ND		ug/L	0.4	20	0.06	1.00	a	as Azobenzene
90-12-0	1-METHYLNAPHTHALENE	ND		ug/L	0.4	1		1.00	a	
121-14-2	2,4-DINITROTOLUENE	ND		ug/L	0.4	0.4	0.07	1.00	a	
606-20-2	2,6-DINITROTOLUENE	ND		ug/L	0.4	0.4	0.09	1.00	a	
91-58-7	2-CHLORONAPHTHALENE	ND		ug/L	0.4	0.6	0.05	1.00	a	
91-57-6	2-METHYLNAPHTHALENE	ND		ug/L	0.4	1		1.00	a	
91-94-1	3,3-DICHLOROBENZIDINE	ND		ug/L	0.2	1	0.2	1.00	a	
101-55-3	4-BROMOPHENYL PHENYL ETHER	ND		ug/L	0.4	0.4	0.04	1.00	a	
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	ND		ug/L	0.4	0.5	0.04	1.00	a	
83-32-9	ACENAPHTHENE	ND		ug/L	0.4	0.4	0.04	1.00	a	
208-96-8	ACENAPHTHYLENE	ND		ug/L	0.4	0.6	0.07	1.00	a	
120-12-7	ANTHRACENE	ND		ug/L	0.4	0.6	0.05	1.00	a	
56-55-3	BENZ[A]ANTHRACENE	ND		ug/L	0.4	0.6	0.05	1.00	a	
92-87-5	BENZIDINE	ND		ug/L	10	24	9.	1.00	a	screening method
50-32-8	BENZO[A]PYRENE	ND		ug/L	0.4	1	0.05	1.00	a	

Notes:

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Permit QL = Quantitation Limit required by permit (listed in Appendix A) or other regulatory requirement.

D.F. - Dilution Factor.

If you have any questions concerning this report contact us at the above phone number.

Form: c608.rpt

CAS	Compound	RESULT	Flag	UNITS	Lab QL	Permit QL	MDL	D.F.	Lab	COMMENT
205-99-2	BENZO[B]FLUORANTHENE	ND		ug/L	0.4	1.6	0.08	1.00	a	unresolved w/ Benzo(J)Fluoranthene
191-24-2	BENZO[G,H,I]PERYLENE	ND		ug/L	0.4	1	0.05	1.00	a	
207-08-9	BENZO[K]FLUORANTHENE	ND		ug/L	0.4	1.6	0.08	1.00	a	
85-68-7	BENZYL BUTYL PHTHALATE	ND		ug/L	0.4	0.6	0.03	1.00	a	
108-60-1	BIS(2-CHLORO-1-METHYLETHYL)ETHE R	ND		ug/L	0.4	0.6	0.06	1.00	a	
111-91-1	Bis(2-CHLOROETHOXY)METHANE	ND		ug/L	0.4	21	0.06	1.00	a	
111-44-4	BIS(2-CHLOROETHYL)ETHER	ND		ug/L	0.4	1	0.06	1.00	a	
218-01-9	CHRYSENE	ND		ug/L	0.4	0.6	0.06	1.00	a	
117-81-7	DI(2-ETHYLHEXYL)PHTHALATE	ND		ug/L	0.4	0.5	0.1	1.00	a	
53-70-3	DIBENZO[A,H]ANTHRACENE	ND		ug/L	0.4	1.6	0.05	1.00	a	
84-66-2	DIETHYL PHTHALATE	ND		ug/L	0.4	7.6	0.06	1.00	a	
131-11-3	DIMETHYL PHTHALATE	ND		ug/L	0.4	6.4	0.05	1.00	a	
84-74-2	DI-N-BUTYL PHTHALATE	ND		ug/L	0.4	1	0.07	1.00	a	
117-84-0	DI-N-OCTYL PHTHALATE	ND		ug/L	0.4	0.6	0.02	1.00	a	
206-44-0	FLUORANTHENE	ND		ug/L	0.4	0.6	0.05	1.00	a	
86-73-7	FLUORENE	ND		ug/L	0.4	0.6	0.05	1.00	a	
118-74-1	HEXACHLOROBENZENE	ND		ug/L	0.4	0.6	0.06	1.00	a	
87-68-3	HEXACHLOROBUTADIENE	ND		ug/L	0.4	1	0.09	1.00	a	
77-47-4	HEXACHLOROCYCLOPENTADIENE	ND		ug/L	0.4	1	0.2	1.00	a	
67-72-1	HEXACHLOROETHANE	ND		ug/L	0.4	1	0.09	1.00	a	
193-39-5	INDENO[1,2,3,C,D]PYRENE	ND		ug/L	0.4	1	0.09	1.00	a	
78-59-1	ISOPHORONE	ND		ug/L	0.4	1	0.07	1.00	a	
91-20-3	NAPHTHALENE	ND		ug/L	0.4	0.6	0.06	1.00	a	
98-95-3	NITROBENZENE	ND		ug/L	0.4	1	0.05	1.00	a	
62-75-9	N-NITROSODIMETHYLAMINE	ND		ug/L	0.4	4	0.3	1.00	a	
621-64-7	N-NITROSODI-N-PROPYLAMINE	ND		ug/L	0.4	1	0.1	1.00	a	
86-30-6	N-NITROSODIPHENYLAMINE	ND		ug/L	0.4	1	0.05	1.00	a	as Diphenylamine
85-01-8	PHENANTHRENE	ND		ug/L	0.4	0.6	0.06	1.00	a	
129-00-0	PYRENE	ND		ug/L	0.4	0.6	0.05	1.00	a	
Ecology Priority Toxic Chemicals										
56-49-5	3-METHYL CHOLANTHRENE	ND		ug/L	1	8	0.4	1.00	a	unresolved w/ Benzo(B)Fluoranthene
205-82-3	BENZO(J)FLUORANTHENE	ND		ug/L	1	1	0.4	1.00	a	
189-55-9	BENZO(R,S,T)PENTAPHENE	ND		ug/L	1	1	0.3	1.00	a	
192-65-4	DIBENZO(A,E)PYRENE	ND		ug/L	1	10	0.5	1.00	a	
226-36-8	DIBENZO(A,H)ACRIDINE	ND		ug/L	1	10	0.4	1.00	a	
189-64-0	DIBENZO(A,H)PYRENE	ND		ug/L	1	10	0.3	1.00	a	
224-42-0	DIBENZO(A,J)ACRIDINE	ND		ug/L	1	10	0.4	1.00	a	
198-55-0	PERYLENE	ND		ug/L	1	7.6	0.6	1.00	a	

Notes:

Flags are data qualifiers. If there are data qualifiers on your report definitions can be found on an accompanying sheet.

ND - indicates the compound was not detected above the PQL or MDL.

Lab QL = Laboratory Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.

Permit QL = Quantitation Limit required by permit (listed in Appendix A) or other regulatory requirement.

D.F. - Dilution Factor.



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Page 1 of 1

Hydrocarbon Data Report

Client Name: Spectra Laboratories
2221 Ross Way
Tacoma, WA 98421

Reference Number: **20-34784**
Project: 2020090963
Report Date: 11/11/20
Date Received: 10/2/20
Approved By: hy
Authorized by:

Lawrence J Henderson, PhD
Director of Laboratories, Vice President

Sample Description: 090963-2 -
Lab Number: 65989
Date Analyzed: 10/14/20

Sample Date: 9/29/20 12:00
Collected By:
Analyzed By: GSL

Parameter	Result	Flag	DF	Cleanup Level	PQL	MDL	Units	Method	Lab	Batch	Comment
NWTPH-Gx											
BENZENE	ND		1	0.005	0.0004	0.00014	mg/L	8260C/5030B	a	GXW_201014	
TOLUENE	ND		1	1.00	0.0004	7.00E-05	mg/L	8260C/5030B	a	GXW_201014	
ETHYLBENZENE	ND		1	0.70	0.0004	9.00E-05	mg/L	8260C/5030B	a	GXW_201014	
TOTAL XYLENES	ND		1	1.00	0.0008		mg/L	8260C/5030B	a	GXW_201014	
GASOLINE (C8 - C12)	ND		1	1	0.10		mg/L	8260C/5030B	a	GXW_201014	

Notation:

ND - A result of "ND" indicates that the compound was not detected above the Lab's Method Reporting Limit - MRL.

PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.

D.F. - Dilution Factor

Cleanup Level - The regulatory limit for Method A Cleanup Levels (MTCA, Chapter 173-340 WAC) contaminants in the specified matrix. Amended Feb 12, 2001

The Cleanup level for Gasoline Range Organics (GRO) is 100 mg/Kg for gas mixtures without benzene and when the total ethylbenzene, toluene and xylenes are less than 1% of the gasoline concentration. The Cleanup level for GRO is 30 mg/Kg for all other mixtures.

If you have any questions concerning this report contact us at the above phone number.

Form: cHCID.rpt



SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Calibration Check

Reference Number: **20-34784**

Report Date: 11/11/20

Batch	Analyte	Result	True		Method	% Recovery	Limits*	QC		Comment
			Value	Units				Qualifier	Type	
WAD_201009	0 CYANIDE (WAD)	0.101	0.100	mg/L	SM4500-CN I	101	90-110	CAL		

***Notation:**

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Laboratory Fortified Blank

Reference Number: **20-34784**

Report Date: 11/11/20

Batch	Analyte	Result	True		Method	%	Recovery	Limits*	QC		Comment
			Value	Units					Qualifier	Type	
624_201006	0 1,1 - DICHLOROETHANE	4.1	4	ug/L	624.1	103	59-155		LFB		
	0 1,1 - DICHLOROETHYLENE	4.0	4	ug/L	624.1	100	1-234		LFB		
	0 1,1,1 - TRICHLOROETHANE	3.9	4	ug/L	624.1	98	52-162		LFB		
	0 1,1,2 - TRICHLOROETHANE	4.4	4	ug/L	624.1	110	52-150		LFB		
	0 1,1,2,2 - TETRACHLOROETHANE	3.8	4	ug/L	624.1	95	46-157		LFB		
	0 1,2 - DICHLOROETHANE	4.3	4	ug/L	624.1	108	49-155		LFB		
	0 1,2 - DICHLOROPROPANE	4.1	4	ug/L	624.1	103	1-210		LFB		
	0 1,2-DICHLOROBENZENE	3.7	4	ug/L	624.1	93	18-190		LFB		
	0 1,3-DICHLOROBENZENE	3.8	4	ug/L	624.1	95	59-156		LFB		
	0 1,4-DICHLOROBENZENE	3.9	4	ug/L	624.1	98	18-190		LFB		
	0 2-CHLOROETHYL VINYL ETHER	9.0	10	ug/L	624.1	90	2-305		LFB		
	0 BENZENE	4.1	4	ug/L	624.1	103	37-151		LFB		
	0 BROMODICHLOROMETHANE	3.9	4	ug/L	624.1	98	35-155		LFB		
	0 BROMOFORM	3.1	4	ug/L	624.1	78	45-169		LFB		
	0 BROMOMETHANE	4.2	4	ug/L	624.1	105	1-242		LFB		
	0 CARBON TETRACHLORIDE	4.0	4	ug/L	624.1	100	70-140		LFB		
	0 CHLOROBENZENE	3.9	4	ug/L	624.1	98	37-160		LFB		
	0 CHLORODIBROMOMETHANE	3.8	4	ug/L	624.1	95	53-149		LFB		
	0 CHLOROETHANE	4.4	4	ug/L	624.1	110	14-230		LFB		
	0 CHLOROFORM	4.5	4	ug/L	624.1	113	15-138		LFB		
	0 CHLOROMETHANE	4.0	4	ug/L	624.1	100	1-273		LFB		
	0 CIS - 1,3 - DICHLOROPROPENE	4.1	4	ug/L	624.1	103	1-227		LFB		
	0 ETHYLBENZENE	3.7	4	ug/L	624.1	93	37-162		LFB		
	0 METHYLENE CHLORIDE	4.0	4	ug/L	624.1	100	1-221		LFB		
	0 T - 1,2 - DICHLOROETHYLENE	3.9	4	ug/L	624.1	98	54-156		LFB		
	0 TETRACHLOROETHYLENE	4.2	4	ug/L	624.1	105	64-148		LFB		
	0 TOLUENE	4.1	4	ug/L	624.1	103	47-150		LFB		
	0 TRANS- 1,3 - DICHLOROPROPENE	4.0	4	ug/L	624.1	100	17-183		LFB		
	0 TRICHLOROETHYLENE	4.1	4	ug/L	624.1	103	71-157		LFB		
	0 VINYL CHLORIDE	4.0	4	ug/L	624.1	100	1-251		LFB		
	0 ACROLEIN	8.9	10	ug/L	624.1	89	60-140		LFB		
	0 ACRYLONITRILE	18.4	20	ug/L	624.1	92	60-140		LFB		

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Laboratory Fortified Blank

Reference Number: **20-34784**

Report Date: 11/11/20

Batch	Analyte	Result	True Value	Units	Method	% Recovery	Limits*	QC Qualifier Type	QC Comment
625_201006	0 2 - FLUOROBIPHENYL (Surr)	76		%	625		71-119	LFB	
	0 2 - FLUOROPHENOL (Surr)	43		%	625		32-86	LFB	
	0 2,4,6 - TRIBROMOPHENOL (Surr)	84		%	625		64-126	LFB	
	0 d5-NITROBENZENE (Surr)	71		%	625		67-126	LFB	
	0 p-TERPHENYL-d14 (Surr)	87		%	625		69-116	LFB	
	0 2,4,6-TRICHLOROPHENOL	8.9	10	ug/L	625	89	52-129	LFB	
	0 2,4-DICHLOROPHENOL	8.5	10	ug/L	625	85	53-122	LFB	
	0 2,4-DIMETHYLPHENOL	8.3	10	ug/L	625	83	42-120	LFB	
	0 2,4-DINITROPHENOL	8.7	10	ug/L	625	87	1-173	LFB	
	0 2-CHLOROPHENOL	7.3	10	ug/L	625	73	36-120	LFB	
	0 2-NITROPHENOL	8.3	10	ug/L	625	83	45-167	LFB	
	0 4,6-DINITRO-2-METHYLPHENOL	9.8	10	ug/L	625	98	53-130	LFB	
	0 4-CHLORO-3-METHYLPHENOL	9.0	10	ug/L	625	90	41-128	LFB	
	0 4-NITROPHENOL	3.9	10	ug/L	625	39	13-129	LFB	
	0 PENTACHLOROPHENOL	9.7	10	ug/L	625	97	38-152	LFB	
	0 PHENOL	3.5	10	ug/L	625	35	17-120	LFB	
	0 1,2,4-TRICHLOROBENZENE	7.3	10	ug/L	625	73	57-130	LFB	
	0 1,2-DIPHENYLHYDRAZINE	8.5	10	ug/L	625	85	71-125	LFB	
	0 2,4-DINITROTOLUENE	9.8	10	ug/L	625	98	48-127	LFB	
	0 2,6-DINITROTOLUENE	9.4	10	ug/L	625	94	68-137	LFB	
	0 2-CHLORONAPHTHALENE	8.7	10	ug/L	625	87	65-120	LFB	
	0 3,3-DICHLOROBENZIDINE	1.0	1	ug/L	625	100	8-213	LFB	
	0 4-BROMOPHENYL PHENYL ETHER	9.8	10	ug/L	625	98	65-120	LFB	
	0 4-CHLOROPHENYL PHENYL ETHER	9.5	10	ug/L	625	95	38-145	LFB	
	0 ACENAPHTHENE	9.0	10	ug/L	625	90	60-132	LFB	
	0 ACENAPHTHYLENE	8.8	10	ug/L	625	88	54-126	LFB	
	0 ANTHRACENE	9.5	10	ug/L	625	95	43-120	LFB	
	0 BENZ[A]ANTHRACENE	10.3	10	ug/L	625	103	42-133	LFB	
	0 BENZIDINE	7.3	25	ug/L	625	29	1-125	LFB	
	0 BENZO[A]PYRENE	10.4	10	ug/L	625	104	32-148	LFB	
	0 BENZO[B]FLUORANTHENE	26.0	20	ug/L	625	130	42-140	LFB	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Laboratory Fortified Blank

Reference Number: **20-34784**

Report Date: 11/11/20

Batch	Analyte	Result	True		Method	%	Recovery	Limits*	QC		Comment
			Value	Units					Qualifier	Type	
625_201006	0 BENZO[G,H,I]PERYLENE	10.4	10	ug/L	625	104	104	1-195		LFB	
	0 BENZO[K]FLUORANTHENE	7.9	10	ug/L	625	79	79	25-146		LFB	
	0 BENZYL BUTYL PHTHALATE	7.1	10	ug/L	625	71	71	1-140		LFB	
	0 BIS(2-CHLORO-1-METHYLETHYL)ETHER	7.9	10	ug/L	625	79	79	63-139		LFB	
	0 Bis(2-CHLOROETHOXY)METHANE	8.4	10	ug/L	625	84	84	49-165		LFB	
	0 BIS(2-CHLOROETHYL)ETHER	7.7	10	ug/L	625	77	77	43-126		LFB	
	0 CHRYSENE	10.0	10	ug/L	625	100	100	44-140		LFB	
	0 DI(2-ETHYLHEXYL)PHTHALATE	10.1	10	ug/L	625	101	101	29-137		LFB	
	0 DIBENZO[A,H]ANTHRACENE	10.0	10	ug/L	625	100	100	1-200		LFB	
	0 DIETHYL PHTHALATE	8.0	10	ug/L	625	80	80	1-120		LFB	
	0 DIMETHYL PHTHALATE	4.8	10	ug/L	625	48	48	1-120		LFB	
	0 DI-N-BUTYL PHTHALATE	9.3	10	ug/L	625	93	93	8-120		LFB	
	0 DI-N-OCTYL PHTHALATE	10.6	10	ug/L	625	106	106	19-132		LFB	
	0 FLUORANTHENE	9.9	10	ug/L	625	99	99	43-121		LFB	
	0 FLUORENE	9.2	10	ug/L	625	92	92	70-120		LFB	
	0 HEXACHLOROBENZENE	9.3	10	ug/L	625	93	93	8-142		LFB	
	0 HEXACHLOROBUTADIENE	6.2	10	ug/L	625	62	62	38-120		LFB	
	0 HEXACHLOROCYCLOPENTADIENE	6.4	10	ug/L	625	64	64	14-170		LFB	
	0 HEXACHLOROETHANE	6.1	10	ug/L	625	61	61	55-120		LFB	
	0 INDENO[1,2,3-C,D]PYRENE	10.5	10	ug/L	625	105	105	1-151		LFB	
	0 ISOPHORONE	8.6	10	ug/L	625	86	86	47-180		LFB	
	0 NAPHTHALENE	8.0	10	ug/L	625	80	80	36-120		LFB	
	0 NITROBENZENE	8.0	10	ug/L	625	80	80	54-158		LFB	
	0 N-NITROSODIMETHYLAMINE	4.9	10	ug/L	625	49	49	20-116		LFB	
	0 N-NITROSODI-N-PROPYLAMINE	8.3	10	ug/L	625	83	83	14-198		LFB	
	0 N-NITROSODIPHENYLAMINE	9.7	10	ug/L	625	97	97	65-137		LFB	
	0 PHENANTHRENE	9.5	10	ug/L	625	95	95	65-120		LFB	
	0 PYRENE	10.0	10	ug/L	625	100	100	70-120		LFB	
	0 3-METHYL CHOLANTHRENE	12.4	10	ug/L	625	124	124	57-119	HR	LFB	
	0 BENZO(J)FLUORANTHENE	26.0	20	ug/L	625	130	130	42-140		LFB	
	0 BENZO(R,S,T)PENTAPHENE	9.7	10	ug/L	625	97	97	1-172		LFB	
	0 DIBENZO(A,E)PYRENE	10.1	10	ug/L	625	101	101	1-199		LFB	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Laboratory Fortified Blank

Reference Number: **20-34784**

Report Date: 11/11/20

Batch	Analyte	Result	True		Method	% Recovery	Limits*	QC		Comment
			Value	Units				Qualifier	Type	
625_201006	0 DIBENZO(A,H)ACRIDINE	13.1	10	ug/L	625	131	60-131		LFB	
	0 DIBENZO(A,H)PYRENE	11.1	10	ug/L	625	111	4-160		LFB	
	0 DIBENZO(A,J)ACRIDINE	13.0	10	ug/L	625	130	55-136		LFB	
	0 PERYLENE	10.0	10	ug/L	625	100	57-125		LFB	
GXW_201014	0 BENZENE	0.0036	0.004	mg/L	8260C	90	80-120		LFB	
	0 ETHYLBENZENE	0.0037	0.004	mg/L	8260C	93	80-120		LFB	
	0 GASOLINE (C8 - C12)	0.294	0.25	mg/L	8260C	118	80-120		LFB	
	0 TOLUENE	0.0035	0.004	mg/L	8260C	88	80-120		LFB	
	0 TOTAL XYLENES	0.0109	0.012	mg/L	8260C	91	80-120		LFB	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Method Blank

Reference Number: **20-34784**

Report Date: 11/11/20

Batch	Analyte	Result	True		Method	%	Recovery Limits*	QC	QC	Comment
			Value	Units				Qualifier	Type	
624_201006	0 1,1 - DICHLOROETHANE	ND		ug/L	624.1		0-0		MB	
	0 1,1 - DICHLOROETHYLENE	ND		ug/L	624.1		0-0		MB	
	0 1,1,1 - TRICHLOROETHANE	ND		ug/L	624.1		0-0		MB	
	0 1,1,2 - TRICHLOROETHANE	ND		ug/L	624.1		0-0		MB	
	0 1,1,2,2 - TETRACHLOROETHANE	ND		ug/L	624.1		0-0		MB	
	0 1,2 - DICHLOROETHANE	ND		ug/L	624.1		0-0		MB	
	0 1,2 - DICHLOROPROPANE	ND		ug/L	624.1		0-0		MB	
	0 1,2-DICHLOROBENZENE	ND		ug/L	624.1		0-0		MB	
	0 1,3-DICHLOROBENZENE	ND		ug/L	624.1		0-0		MB	
	0 1,4-DICHLOROBENZENE	ND		ug/L	624.1		0-0		MB	
	0 2-CHLOROETHYL VINYL ETHER	ND		ug/L	624.1		0-0		MB	
	0 BENZENE	ND		ug/L	624.1		0-0		MB	
	0 BROMODICHLOROMETHANE	ND		ug/L	624.1		0-0		MB	
	0 BROMOFORM	ND		ug/L	624.1		0-0		MB	
	0 BROMOMETHANE	ND		ug/L	624.1		0-0		MB	
	0 CARBON TETRACHLORIDE	ND		ug/L	624.1		0-0		MB	
	0 CHLOROBENZENE	ND		ug/L	624.1		0-0		MB	
	0 CHLORODIBROMOMETHANE	ND		ug/L	624.1		0-0		MB	
	0 CHLOROETHANE	ND		ug/L	624.1		0-0		MB	
	0 CHLOROFORM	ND		ug/L	624.1		0-0		MB	
	0 CHLOROMETHANE	ND		ug/L	624.1		0-0		MB	
	0 CIS - 1,3 - DICHLOROPROPENE	ND		ug/L	624.1		0-0		MB	
	0 ETHYLBENZENE	ND		ug/L	624.1		0-0		MB	
	0 METHYLENE CHLORIDE	ND		ug/L	624.1		0-0		MB	
	0 T - 1,2 - DICHLOROETHYLENE	ND		ug/L	624.1		0-0		MB	
	0 TETRACHLOROETHYLENE	ND		ug/L	624.1		0-0		MB	
	0 TOLUENE	ND		ug/L	624.1		0-0		MB	
	0 TRANS- 1,3 - DICHLOROPROPENE	ND		ug/L	624.1		0-0		MB	
	0 TRICHLOROETHYLENE	ND		ug/L	624.1		0-0		MB	
	0 VINYL CHLORIDE	ND		ug/L	624.1		0-0		MB	
	0 ACROLEIN	ND		ug/L	624.1		0-0		MB	
	0 ACRYLONITRILE	ND		ug/L	624.1		0-0		MB	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Method Blank

Reference Number: **20-34784**

Report Date: 11/11/20

Batch	Analyte	Result	True Value	Units	Method	% Recovery	Limits*	QC Qualifier Type	QC Comment
625_201006	0 2 - FLUOROBIPHENYL (Surr)	69		%	625		71-119	MB	
	0 2 - FLUOROPHENOL (Surr)	49		%	625		32-86	MB	
	0 2,4,6 - TRIBROMOPHENOL (Surr)	79		%	625		64-126	MB	
	0 d5-NITROBENZENE (Surr)	75		%	625		67-126	MB	
	0 p-TERPHENYL-d14 (Surr)	89		%	625		69-116	MB	
	0 2,4,6-TRICHLOROPHENOL	ND		ug/L	625		0-0	MB	
	0 2,4-DICHLOROPHENOL	ND		ug/L	625		0-0	MB	
	0 2,4-DIMETHYLPHENOL	ND		ug/L	625		0-0	MB	
	0 2,4-DINITROPHENOL	ND		ug/L	625		0-0	MB	
	0 2-CHLOROPHENOL	ND		ug/L	625		0-0	MB	
	0 2-NITROPHENOL	ND		ug/L	625		0-0	MB	
	0 4,6-DINITRO-2-METHYLPHENOL	ND		ug/L	625		0-0	MB	
	0 4-CHLORO-3-METHYLPHENOL	ND		ug/L	625		0-0	MB	
	0 4-NITROPHENOL	ND		ug/L	625		0-0	MB	
	0 PENTACHLOROPHENOL	ND		ug/L	625		0-0	MB	
	0 PHENOL	ND		ug/L	625		0-0	MB	
	0 1,2,4-TRICHLOROBENZENE	ND		ug/L	625		0-0	MB	
	0 1,2-DIPHENYLHYDRAZINE	ND		ug/L	625		0-0	MB	
	0 2,4-DINITROTOLUENE	ND		ug/L	625		0-0	MB	
	0 2,6-DINITROTOLUENE	ND		ug/L	625		0-0	MB	
	0 2-CHLORONAPHTHALENE	ND		ug/L	625		0-0	MB	
	0 3,3-DICHLOROBENZIDINE	ND		ug/L	625		0-0	MB	
	0 4-BROMOPHENYL PHENYL ETHER	ND		ug/L	625		0-0	MB	
	0 4-CHLOROPHENYL PHENYL ETHER	ND		ug/L	625		0-0	MB	
	0 ACENAPHTHENE	ND		ug/L	625		0-0	MB	
	0 ACENAPHTHYLENE	ND		ug/L	625		0-0	MB	
	0 ANTHRACENE	ND		ug/L	625		0-0	MB	
	0 BENZ[A]ANTHRACENE	ND		ug/L	625		0-0	MB	
	0 BENZIDINE	ND		ug/L	625		0-0	MB	
	0 BENZO[A]PYRENE	ND		ug/L	625		0-0	MB	
	0 BENZO[B]FLUORANTHENE	ND		ug/L	625		0-0	MB	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Method Blank

Reference Number: **20-34784**

Report Date: 11/11/20

Batch	Analyte	Result	True		Method	%		QC		Comment
			Value	Units		Recovery	Limits*	Qualifier	Type	
625_201006	0 BENZO[G,H,I]PERYLENE	ND		ug/L	625		0-0		MB	
	0 BENZO[K]FLUORANTHENE	ND		ug/L	625		0-0		MB	
	0 BENZYL BUTYL PHTHALATE	ND		ug/L	625		0-0		MB	
	0 BIS(2-CHLORO-1-METHYLETHYL)ETHER	ND		ug/L	625		0-0		MB	
	0 BIS(2-CHLOROETHOXY)METHANE	ND		ug/L	625		0-0		MB	
	0 BIS(2-CHLOROETHYL)ETHER	ND		ug/L	625		0-0		MB	
	0 CHRYSENE	ND		ug/L	625		0-0		MB	
	0 DI(2-ETHYLHEXYL)PHTHALATE	ND		ug/L	625		0-0		MB	
	0 DIBENZO[A,H]ANTHRACENE	ND		ug/L	625		0-0		MB	
	0 DIETHYL PHTHALATE	ND		ug/L	625		0-0		MB	
	0 DIMETHYL PHTHALATE	ND		ug/L	625		0-0		MB	
	0 DI-N-BUTYL PHTHALATE	ND		ug/L	625		0-0		MB	
	0 DI-N-OCTYL PHTHALATE	ND		ug/L	625		0-0		MB	
	0 FLUORANTHENE	ND		ug/L	625		0-0		MB	
	0 FLUORENE	ND		ug/L	625		0-0		MB	
	0 HEXACHLOROBENZENE	ND		ug/L	625		0-0		MB	
	0 HEXACHLOROBUTADIENE	ND		ug/L	625		0-0		MB	
	0 HEXACHLOROCYCLOPENTADIENE	ND		ug/L	625		0-0		MB	
	0 HEXACHLOROETHANE	ND		ug/L	625		0-0		MB	
	0 INDENO[1,2,3-C,D]PYRENE	ND		ug/L	625		0-0		MB	
	0 ISOPHORONE	ND		ug/L	625		0-0		MB	
	0 NAPHTHALENE	ND		ug/L	625		0-0		MB	
	0 NITROBENZENE	ND		ug/L	625		0-0		MB	
	0 N-NITROSODIMETHYLAMINE	ND		ug/L	625		0-0		MB	
	0 N-NITROSODI-N-PROPYLAMINE	ND		ug/L	625		0-0		MB	
	0 N-NITROSODIPHENYLAMINE	ND		ug/L	625		0-0		MB	
	0 PHENANTHRENE	ND		ug/L	625		0-0		MB	
	0 PYRENE	ND		ug/L	625		0-0		MB	
	0 3-METHYL CHOLANTHRENE	ND		ug/L	625		0-0		MB	
	0 BENZO[J]FLUORANTHENE	ND		ug/L	625		0-0		MB	
	0 BENZO[R,S,T]PENTAPHENE	ND		ug/L	625		0-0		MB	
	0 DIBENZO[A,E]PYRENE	ND		ug/L	625		0-0		MB	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Method Blank

Reference Number: **20-34784**

Report Date: 11/11/20

Batch	Analyte	Result	True		Method	%	QC	QC	Comment
			Value	Units		Recovery	Limits*	Qualifier	
625_201006	0 DIBENZO(A,H)ACRIDINE	ND		ug/L	625		0-0	MB	
	0 DIBENZO(A,H)PYRENE	ND		ug/L	625		0-0	MB	
	0 DIBENZO(A,J)ACRIDINE	ND		ug/L	625		0-0	MB	
	0 PERYLENE	ND		ug/L	625		0-0	MB	
GXW_201014	0 BENZENE	ND		mg/L	8260C		0-0	MB	
	0 ETHYLBENZENE	ND		mg/L	8260C		0-0	MB	
	0 GASOLINE (C8 - C12)	ND		mg/L	8260C		0-0	MB	
	0 TOLUENE	ND		mg/L	8260C		0-0	MB	
	0 TOTAL XYLENES	ND		mg/L	8260C		0-0	MB	
WAD_201009	0 CYANIDE (WAD)	ND		mg/L	SM4500-CN I		0-0	MB	

***Notation:**

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Method Detection Limit Sample

Reference Number: **20-34784**

Report Date: 11/11/20

Batch	Analyte	Result	True		Method	% Recovery	Limits*	QC		Comment
			Value	Units				Qualifier	Type	
GXW_201014	0 BENZENE	0.34	0.4	ug/L	8260C	85	50-150	MDL		
	0 ETHYLBENZENE	0.35	0.4	ug/L	8260C	88	50-150	MDL		
	0 GASOLINE (C8 - C12)	0.102	0.1	mg/L	8260C	102	50-150	MDL		
	0 TOLUENE	0.34	0.4	ug/L	8260C	85	50-150	MDL		
	0 TOTAL XYLENES	1.06	1.2	ug/L	8260C	88	50-150	MDL		

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



**SAMPLE INDEPENDENT
QUALITY CONTROL REPORT**

Quality Control Sample

Reference Number: **20-34784**

Report Date: 11/11/20

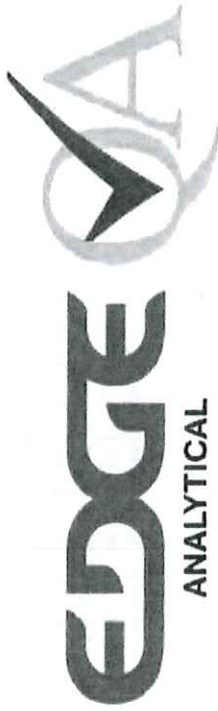
Batch	Analyte	Result	True		Method	%	Recovery	Limits*	QC		Comment
			Value	Units					Qualifier	Type	
WAD_201009	0 CYANIDE (WAD)	0.099	0.100	mg/L	SM4500-CN I	99	90-110			QCS	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



SAMPLE DEPENDENT
QUALITY CONTROL REPORT
Duplicate, Matrix Spike/Matrix Spike Duplicate and Confirmation Result Report

Batch	Sample Analyte	Duplicate		Units	QC			
		Result	Result		%RPD	Limits	Qualifier	Type Comments
Duplicate								
625_201006								
321-60-8	65989 2 - FLUOROBIPHENYL (Surr)	71	69	%	2.9	0-40		DUP
367-12-4	65989 2 - FLUOROPHENOL (Surr)	39	35	%	10.8	0-40		DUP
118-79-6	65989 2,4,6 - TRIBROMOPHENOL (Surr)	75	73	%	2.7	0-40		DUP
98-95-3	65989 d5-NITROBENZENE (Surr)	68	64	%	6.1	0-40		DUP
1718-51-0	65989 p-TERPHENYL-d14 (Surr)	61	64	%	4.8	0-40		DUP
120-82-1	65989 1,2,4-TRICHLOROBENZENE	ND	ND	ug/L	NA	0-40		DUP
122-66-7	65989 1,2-DIPHENYLHYDRAZINE	ND	ND	ug/L	NA	0-40		DUP
90-12-0	65989 1-METHYLNAPHTHALENE	ND	ND	ug/L	NA	0-40		DUP
88-06-2	65989 2,4,6-TRICHLOROPHENOL	ND	ND	ug/L	NA	0-40		DUP
120-83-2	65989 2,4-DICHLOROPHENOL	ND	ND	ug/L	NA	0-40		DUP
105-67-9	65989 2,4-DIMETHYLPHENOL	ND	ND	ug/L	NA	0-40		DUP
51-28-5	65989 2,4-DINITROPHENOL	ND	ND	ug/L	NA	0-40		DUP
121-14-2	65989 2,4-DINITROTOLUENE	ND	ND	ug/L	NA	0-40		DUP
606-20-2	65989 2,6-DINITROTOLUENE	ND	ND	ug/L	NA	0-40		DUP
91-58-7	65989 2-CHLORONAPHTHALENE	ND	ND	ug/L	NA	0-40		DUP
95-57-8	65989 2-CHLOROPHENOL	ND	ND	ug/L	NA	0-40		DUP
91-57-6	65989 2-METHYLNAPHTHALENE	ND	ND	ug/L	NA	0-40		DUP
88-75-5	65989 2-NITROPHENOL	ND	ND	ug/L	NA	0-40		DUP
91-84-1	65989 3,3-DICHLOROBENZIDINE	ND	ND	ug/L	NA	0-40		DUP
56-49-5	65989 3-METHYL CHOLANTHRENE	ND	ND	ug/L	NA	0-40		DUP
534-52-1	65989 4,6-DINITRO-2-METHYLPHENOL	ND	ND	ug/L	NA	0-40		DUP
101-55-3	65989 4-BROMOPHENYL PHENYL ETHER	ND	ND	ug/L	NA	0-40		DUP
59-50-7	65989 4-CHLORO-3-METHYLPHENOL	ND	ND	ug/L	NA	0-40		DUP
7005-72-3	65989 4-CHLOROPHENYL PHENYL ETHER	ND	ND	ug/L	NA	0-40		DUP

%RPD = Relative Percent Difference

NA = Indicates %RPD could not be calculated

Matrix Spike (MS)/Matrix Spike Duplicate (MSD) analyses are used to determine the accuracy (MS) and precision (MSD) of an analytical method in a given sample matrix. Therefore, the usefulness of this report is limited to samples of similar matrices analyzed in the same analytical batch.

Only Duplicate sample with detections are listed in this report

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.

FORM: QC Dependent.rpt

Batch	Sample	Analyte	Duplicate		Units	%RPD	Limits	QC	
			Result	Result				Qualifier	Type
100-02-7	65989	4-NITROPHENOL	ND	ND	ug/L	NA	0-40		DUP
83-32-9	65989	ACENAPHTHENE	ND	ND	ug/L	NA	0-40		DUP
208-96-8	65989	ACENAPHTHYLENE	ND	ND	ug/L	NA	0-40		DUP
120-12-7	65989	ANTHRACENE	ND	ND	ug/L	NA	0-40		DUP
56-55-3	65989	BENZ(A)ANTHRACENE	ND	ND	ug/L	NA	0-40		DUP
92-87-5	65989	BENZIDINE	ND	ND	ug/L	NA	0-40		DUP
205-82-3	65989	BENZO(J)FLUORANTHENE	ND	ND	ug/L	NA	0-40		DUP
189-55-9	65989	BENZO(R,S,T)PENTAPHENE	ND	ND	ug/L	NA	0-40		DUP
50-32-8	65989	BENZO(A)PYRENE	ND	ND	ug/L	NA	0-40		DUP
205-99-2	65989	BENZO(B)FLUORANTHENE	ND	ND	ug/L	NA	0-40		DUP
181-24-2	65989	BENZO(G,H,I)PERYLENE	ND	ND	ug/L	NA	0-40		DUP
207-08-9	65989	BENZO(K)FLUORANTHENE	ND	ND	ug/L	NA	0-40		DUP
85-68-7	65989	BENZYL BUTYL PHTHALATE	ND	ND	ug/L	NA	0-40		DUP
108-60-1	65989	BIS(2-CHLORO-1-METHYLETHYL)ETHENE	ND	ND	ug/L	NA	0-40		DUP
111-81-1	65989	BIS(2-CHLOROETHOXY)METHANE	ND	ND	ug/L	NA	0-40		DUP
111-44-4	65989	BIS(2-CHLOROETHYL)ETHER	ND	ND	ug/L	NA	0-40		DUP
218-01-9	65989	CHRYSENE	ND	ND	ug/L	NA	0-40		DUP
117-81-7	65989	DI(2-ETHYLHEXYL)PHTHALATE	ND	ND	ug/L	NA	0-40		DUP
192-65-4	65989	DIBENZO(A,E)PYRENE	ND	ND	ug/L	NA	0-40		DUP
228-36-8	65989	DIBENZO(A,H)ACRIDINE	ND	ND	ug/L	NA	0-40		DUP
189-64-0	65989	DIBENZO(A,H)PYRENE	ND	ND	ug/L	NA	0-40		DUP
224-42-0	65989	DIBENZO(A,J)ACRIDINE	ND	ND	ug/L	NA	0-40		DUP
53-70-3	65989	DIBENZO(A,J)ANTHRACENE	ND	ND	ug/L	NA	0-40		DUP
84-86-2	65989	DIETHYL PHTHALATE	ND	ND	ug/L	NA	0-40		DUP
131-11-3	65989	DIMETHYL PHTHALATE	ND	ND	ug/L	NA	0-40		DUP
84-74-2	65989	DI-N-BUTYL PHTHALATE	ND	ND	ug/L	NA	0-40		DUP
117-84-0	65989	DI-N-OCTYL PHTHALATE	ND	ND	ug/L	NA	0-40		DUP
206-44-0	65989	FLUORANTHENE	ND	ND	ug/L	NA	0-40		DUP
86-73-7	65989	FLUORENE	ND	ND	ug/L	NA	0-40		DUP
118-74-1	65989	HEXACHLOROBENZENE	ND	ND	ug/L	NA	0-40		DUP
87-48-3	65989	HEXACHLOROBUTADIENE	ND	ND	ug/L	NA	0-40		DUP
77-47-4	65989	HEXACHLOROCYCLOPENTADIENE	ND	ND	ug/L	NA	0-40		DUP
67-72-1	65989	HEXACHLOROETHANE	ND	ND	ug/L	NA	0-40		DUP
193-39-5	65989	INDENO(1,2,3-C,D)PYRENE	ND	ND	ug/L	NA	0-40		DUP

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Batch	Sample Analyte	Duplicate		Units	%RPD	Limits	QC	
		Result	Result				Qualifier	Comments
78-59-1	65989 ISOPHORONE	ND	ND	ug/L	NA	0-40		DUP
91-20-3	65989 NAPHTHALENE	ND	ND	ug/L	NA	0-40		DUP
98-95-3	65989 NITROBENZENE	ND	ND	ug/L	NA	0-40		DUP
62-75-9	65989 N-NITROSODIMETHYLAMINE	ND	ND	ug/L	NA	0-40		DUP
621-64-7	65989 N-NITROSODI-N-PROPYLAMINE	ND	ND	ug/L	NA	0-40		DUP
86-30-6	65989 N-NITROSODIPHENYLAMINE	ND	ND	ug/L	NA	0-40		DUP
87-86-5	65989 PENTACHLOROPHENOL	ND	ND	ug/L	NA	0-40		DUP
198-55-0	65989 PERYLENE	ND	ND	ug/L	NA	0-40		DUP
85-01-8	65989 PHENANTHRENE	ND	ND	ug/L	NA	0-40		DUP
108-95-2	65989 PHENOL	ND	ND	ug/L	NA	0-40		DUP
129-00-0	65989 PYRENE	ND	ND	ug/L	NA	0-40		DUP
GXW_201014								
71-43-2	66162 BENZENE	1.7	1.6	mg/L	6.1	0-30		DUP
100-41-4	66162 ETHYLBENZENE	2.0	1.7	mg/L	16.2	0-30		DUP
68334-30-5	66162 GASOLINE (C8 - C12)	20	18	mg/L	10.5	0-30	J	DUP
108-88-3	66162 TOLUENE	1.9	1.8	mg/L	5.4	0-30		DUP
1330-20-7	66162 TOTAL XYLENES	2.87	2.46	mg/L	15.4	0-30		DUP
WAD_201009								
57-12-5	65989 CYANIDE (WAD)	0.011	0.011	mg/L	0.0	0-50		DUP

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Batch/CAS	Sample	Analyte	Result	Result	Result	Conc	Units	MS	MSD	Limits*	%RPD	Limits*	Qualifier	Type	Comments
Laboratory Fortified Matrix (MS)															
624_201006															
75-34-3	65647	1,1 - DICHLOROETHANE	ND	3.6	3.7	4	ug/L	90	93	59-155	2.7	0-40		LFM	
75-35-4	65647	1,1 - DICHLOROETHYLENE	ND	3.8	3.8	4	ug/L	95	95	1-234	0.0	0-32		LFM	
71-55-6	65647	1,1,1 - TRICHLOROETHANE	ND	3.8	3.8	4	ug/L	95	96	52-162	0.0	0-36		LFM	
79-00-5	65647	1,1,2 - TRICHLOROETHANE	ND	3.8	4.0	4	ug/L	95	100	52-150	5.1	0-45		LFM	
79-34-5	65647	1,1,2,2 - TETRACHLOROETHANE	ND	3.5	3.5	4	ug/L	88	88	46-157	0.0	0-61		LFM	
107-06-2	65647	1,2 - DICHLOROETHANE	ND	3.7	3.7	4	ug/L	93	93	49-155	0.0	0-49		LFM	
78-87-5	65647	1,2 - DICHLOROPROPANE	ND	3.6	3.7	4	ug/L	90	93	1-210	2.7	0-55		LFM	
95-50-1	65647	1,2-DICHLOROBENZENE	ND	3.4	3.5	4	ug/L	85	88	18-190	2.9	0-57		LFM	
541-73-1	65647	1,3-DICHLOROBENZENE	ND	3.5	3.5	4	ug/L	88	88	59-156	0.0	0-43		LFM	
106-46-7	65647	1,4-DICHLOROBENZENE	ND	3.7	3.8	4	ug/L	93	95	18-190	2.7	0-57		LFM	
110-75-8	65647	2-CHLOROETHYL VINYL ETHER	ND	7.3	7.8	10	ug/L	73	78	2-305	6.6	0-20		LFM	
107-02-8	65647	ACROLEIN	ND	2.9	2.4	10	ug/L	29	24	40-160	18.9	0-60	M2	LFM	
107-13-1	65647	ACRYLONITRILE	ND	8.5	8.9	10	ug/L	85	89	40-160	4.6	0-60		LFM	
71-43-2	65647	BENZENE	ND	3.9	3.9	4	ug/L	98	98	37-151	0.0	0-61		LFM	
75-27-4	65647	BROMODICHLOROMETHANE	ND	3.6	3.6	4	ug/L	90	90	35-155	0.0	0-58		LFM	
75-25-2	65647	BROMOFORM	ND	3.3	3.2	4	ug/L	83	80	45-169	3.1	0-42		LFM	
74-83-8	65647	BROMOMETHANE	ND	3.7	3.9	4	ug/L	93	98	1-242	5.3	0-61		LFM	
56-23-5	65647	CARBON TETRACHLORIDE	ND	4.0	3.9	4	ug/L	100	98	70-140	2.5	0-41		LFM	
108-90-7	65647	CHLOROBENZENE	ND	3.6	3.7	4	ug/L	90	93	37-160	2.7	0-53		LFM	
124-48-1	65647	CHLORODIBROMOMETHANE	ND	3.6	3.7	4	ug/L	90	93	53-149	2.7	0-50		LFM	
75-00-3	65647	CHLOROETHANE	ND	4.0	3.7	4	ug/L	100	93	14-230	7.8	0-78		LFM	
67-86-3	65647	CHLOROFORM	ND	4.4	4.3	4	ug/L	110	108	51-138	2.3	0-54		LFM	
74-87-3	65647	CHLOROMETHANE	ND	3.3	3.2	4	ug/L	83	80	1-273	3.1	0-60		LFM	
10061-01-5	65647	CIS - 1,3 - DICHLOROPROPENE	ND	4.0	4.0	4	ug/L	100	100	1-227	0.0	0-58		LFM	
100-41-4	65647	ETHYLBENZENE	ND	3.6	3.6	4	ug/L	90	90	37-162	0.0	0-63		LFM	
75-09-2	65647	METHYLENE CHLORIDE	ND	4.8	4.7	4	ug/L	120	118	1-221	2.1	0-28		LFM	
156-60-5	65647	T - 1,2 - DICHLOROETHYLENE	ND	3.7	3.7	4	ug/L	93	93	54-156	0.0	0-45		LFM	
127-18-4	65647	TETRACHLOROETHYLENE	ND	4.1	4.1	4	ug/L	103	103	64-148	0.0	0-39		LFM	
108-88-3	65647	TOLUENE	ND	4.1	4.2	4	ug/L	103	105	47-150	2.4	0-41		LFM	
10061-02-6	65647	TRANS- 1,3 - DICHLOROPROPENE	ND	3.9	3.8	4	ug/L	98	95	17-183	2.6	0-86		LFM	
79-01-6	65647	TRICHLOROETHYLENE	ND	3.9	3.8	4	ug/L	98	95	70-157	2.6	0-48		LFM	
75-01-4	65647	VINYL CHLORIDE	ND	3.5	3.2	4	ug/L	88	80	1-251	9.0	0-66		LFM	

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Batch/CAS	Sample Analyte	Result	Spike Result	Duplicate		Spike Conc	Units	Percent Recovery		Limits*	%RPD	Limits*	QC Qualifier	Type	Comments
				Result	Conc			MS	MSD						
625_201006															
321-60-8	65648 2 - FLUOROBIPHENYL (Surr)	64	68			%		NA	NA	71-119	NA	0-20		LFM	
367-12-4	65648 2 - FLUOROPHENOL (Surr)	32	34			%		NA	NA	32-86	NA	0-20		LFM	
118-79-6	65648 2,4,6 - TRIBROMOPHENOL (Surr)	81	81			%		NA	NA	64-126	NA	0-20		LFM	
98-95-3	65648 d5-NITROBENZENE (Surr)	55	62			%		NA	NA	67-126	NA	0-20		LFM	
1718-51-0	65648 p-TERPHENYL-d14 (Surr)	82	74			%		NA	NA	69-116	NA	0-20		LFM	
120-82-1	65648 1,2,4-TRICHLOROBENZENE	ND	6.2	10	10	ug/L		62	NA	44-142	NA	0-50		LFM	
122-66-7	65648 1,2-DIPHENYLHYDRAZINE	ND	8.3	10	10	ug/L		83	NA	67-127	NA	0-40		LFM	
88-06-2	65648 2,4,6-TRICHLOROPHENOL	ND	7.2	10	10	ug/L		72	NA	37-144	NA	0-40		LFM	
120-83-2	65648 2,4-DICHLOROPHENOL	ND	8.0	10	10	ug/L		80	NA	39-135	NA	0-40		LFM	
105-67-9	65648 2,4-DIMETHYLPHENOL	ND	8.1	10	10	ug/L		81	NA	32-120	NA	0-40		LFM	
51-28-5	65648 2,4-DINITROPHENOL	ND	2.6	10	10	ug/L		26	NA	1-191	NA	0-40		LFM	
121-14-2	65648 2,4-DINITROTOLUENE	ND	8.8	10	10	ug/L		88	NA	39-139	NA	0-42		LFM	
606-20-2	65648 2,6-DINITROTOLUENE	ND	8.7	10	10	ug/L		87	NA	50-158	NA	0-40		LFM	
91-59-7	65648 2-CHLORONAPHTHALENE	ND	7.6	10	10	ug/L		76	NA	60-120	NA	0-40		LFM	
95-57-8	65648 2-CHLOROPHENOL	ND	6.5	10	10	ug/L		65	NA	23-134	NA	0-40		LFM	
88-75-5	65648 2-NITROPHENOL	ND	7.1	10	10	ug/L		71	NA	29-182	NA	0-40		LFM	
91-94-1	65648 3,3-DICHLOROBENZIDINE	ND	0.4	1	1	ug/L		40	NA	1-262	NA	0-40		LFM	
56-49-5	65648 3-METHYL CHOLANTHRENE	ND	8.4	10	10	ug/L		84	NA	5-125	NA	0-40		LFM	
534-52-1	65648 4,6-DINITRO-2-METHYLPHENOL	ND	4.9	10	10	ug/L		49	NA	1-181	NA	0-40		LFM	
101-55-3	65648 4-BROMOPHENYL PHENYL ETHER	ND	9.1	10	10	ug/L		91	NA	53-127	NA	0-40		LFM	
59-50-7	65648 4-CHLORO-3-METHYLPHENOL	ND	9.6	10	10	ug/L		96	NA	22-147	NA	0-40		LFM	
7005-72-3	65648 4-CHLOROPHENYL PHENYL ETHER	ND	8.6	10	10	ug/L		86	NA	25-158	NA	0-40		LFM	
100-02-7	65648 4-NITROPHENOL	ND	2.7	10	10	ug/L		27	NA	1-132	NA	0-40		LFM	
83-32-9	65648 ACENAPHTHENE	ND	8.1	10	10	ug/L		81	NA	47-145	NA	0-40		LFM	
208-96-8	65648 ACENAPHTHYLENE	ND	7.7	10	10	ug/L		77	NA	33-145	NA	0-40		LFM	
120-12-7	65648 ANTHRACENE	ND	8.4	10	10	ug/L		84	NA	27-133	NA	0-40		LFM	
56-55-3	65648 BENZ[A]ANTHRACENE	ND	8.7	10	10	ug/L		87	NA	33-143	NA	0-40		LFM	
92-87-5	65648 BENZIDINE	ND	ND	25	25	ug/L		100	NA	1-59	NA	0-40	P	LFM	
205-82-3	65648 BENZO[J]FLUORANTHENE	ND	20.0	20	20	ug/L		59	NA	21-123	NA	0-40		LFM	
189-55-9	65648 BENZO[R,S,T]PENTAPHENE	ND	5.9	10	10	ug/L		82	NA	1-156	NA	0-40		LFM	
50-32-8	65648 BENZO[A]PYRENE	ND	8.2	10	10	ug/L		100	NA	17-163	NA	0-40		LFM	
205-99-2	65648 BENZO[B]FLUORANTHENE	ND	20.0	20	20	ug/L		76	NA	24-159	NA	0-40		LFM	
191-24-2	65648 BENZO[G,H,I]PERYLENE	ND	7.6	10	10	ug/L			NA	1-219	NA	0-40		LFM	

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			Result	Result	Result	Result			MS	MSD							
207-08-9	65648	BENZOKI FLUORANTHENE	ND	6.6	10	10	ug/L	66	NA	NA	11-162	NA	0-40			LFM	
85-68-7	65648	BENZYL BUTYL PHTHALATE	ND	7.6	10	10	ug/L	76	NA	NA	1-152	NA	0-40			LFM	
108-50-1	65648	BIS(2-CHLORO-1-METHYLETHYL)ETHANE	ND	6.8	10	10	ug/L	68	NA	NA	36-166	NA	0-40			LFM	
111-91-1	65648	Bis(2-CHLOROETHOXY)METHANE	ND	7.4	10	10	ug/L	74	NA	NA	33-184	NA	0-40			LFM	
111-44-4	65648	BIS(2-CHLOROETHYL)ETHER	ND	6.5	10	10	ug/L	65	NA	NA	12-158	NA	0-40			LFM	
218-01-9	65648	CHRYSENE	ND	8.5	10	10	ug/L	85	NA	NA	17-168	NA	0-40			LFM	
117-91-7	65648	DI(2-ETHYLHEXYL)PHTHALATE	ND	3.7	10	10	ug/L	37	NA	NA	8-158	NA	0-40			LFM	
192-65-4	65648	DIBENZO(A,E)PYRENE	ND	6.3	10	10	ug/L	63	NA	NA	1-154	NA	0-40			LFM	
228-36-8	65648	DIBENZO(A,H)ACRIDINE	ND	11.0	10	10	ug/L	110	NA	NA	25-133	NA	0-40			LFM	
189-64-0	65648	DIBENZO(A,H)PYRENE	ND	6.9	10	10	ug/L	69	NA	NA	4-160	NA	0-40			LFM	
224-42-0	65648	DIBENZO(A,J)ACRIDINE	ND	11.4	10	10	ug/L	114	NA	NA	31-139	NA	0-40			LFM	
53-70-3	65648	DIBENZO(A,H)ANTHRACENE	ND	6.9	10	10	ug/L	69	NA	NA	1-227	NA	0-40			LFM	
84-66-2	65648	DIETHYL PHTHALATE	ND	8.2	10	10	ug/L	82	NA	NA	1-120	NA	0-40			LFM	
131-11-3	65648	DIMETHYL PHTHALATE	ND	6.1	10	10	ug/L	61	NA	NA	1-120	NA	0-40			LFM	
84-74-2	65648	DI-N-BUTYL PHTHALATE	ND	9.0	10	10	ug/L	90	NA	NA	1-120	NA	0-40			LFM	
117-94-0	65648	DI-N-OCTYL PHTHALATE	ND	3.1	10	10	ug/L	31	NA	NA	4-146	NA	0-40			LFM	
206-44-0	65648	FLUORANTHENE	ND	9.0	10	10	ug/L	90	NA	NA	26-137	NA	0-40			LFM	
86-73-7	65648	FLUORENE	ND	8.6	10	10	ug/L	86	NA	NA	59-121	NA	0-40			LFM	
118-74-1	65648	HEXACHLOROBENZENE	ND	8.1	10	10	ug/L	81	NA	NA	1-152	NA	0-40			LFM	
87-68-3	65648	HEXACHLOROBUTADIENE	ND	5.0	10	10	ug/L	50	NA	NA	24-120	NA	0-40			LFM	
77-47-4	65648	HEXACHLOROCYCLOPENTADIENE	ND	1.4	10	10	ug/L	14	NA	NA	1-142	NA	0-40			LFM	
67-72-1	65648	HEXACHLOROETHANE	ND	4.4	10	10	ug/L	44	NA	NA	40-120	NA	0-40			LFM	
193-38-5	65648	INDENO[1,2,3-C]PYRENE	ND	7.7	10	10	ug/L	77	NA	NA	1-171	NA	0-40			LFM	
78-59-1	65648	ISOPHORONE	ND	7.7	10	10	ug/L	77	NA	NA	21-195	NA	0-40			LFM	
91-20-3	65648	NAPHTHALENE	ND	6.6	10	10	ug/L	66	NA	NA	21-133	NA	0-40			LFM	
98-95-3	65648	NITROBENZENE	ND	6.9	10	10	ug/L	69	NA	NA	35-180	NA	0-40			LFM	
62-75-9	65648	N-NITROSODIMETHYLAMINE	ND	4.2	10	10	ug/L	42	NA	NA	19-109	NA	0-40			LFM	
621-84-7	65648	N-NITROSODI-N-PROPYLAMINE	ND	7.2	10	10	ug/L	72	NA	NA	1-230	NA	0-40			LFM	
86-30-6	65648	N-NITROSODIPHENYLAMINE	ND	9.2	10	10	ug/L	92	NA	NA	61-139	NA	0-40			LFM	
87-85-5	65648	PENTACHLOROPHENOL	ND	7.5	10	10	ug/L	75	NA	NA	14-176	NA	0-40			LFM	
198-55-0	65648	PERYLENE	ND	8.1	10	10	ug/L	81	NA	NA	18-114	NA	0-40			LFM	
85-01-8	65648	PHENANTHRENE	ND	8.7	10	10	ug/L	87	NA	NA	54-120	NA	0-40			LFM	
108-95-2	65648	PHENOL	ND	3.6	10	10	ug/L	36	NA	NA	5-120	NA	0-40			LFM	
129-00-0	65648	PYRENE	ND	8.9	10	10	ug/L	89	NA	NA	52-120	NA	0-40			LFM	

%RPD = Relative Percent Difference

NA = Indicates %RPD could not be calculated

Matrix Spike (MS)/Matrix Spike Duplicate (MSD) analyses are used to determine the accuracy (MS) and precision (MSD) of an analytical method in a given sample matrix. Therefore, the usefulness of this report is limited to samples of similar matrices analyzed in the same analytical batch.

Only Duplicate sample with detections are listed in this report

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.

FORM: QC Dependent.rpt

Batch/CAS	Sample	Analyte	Duplicate			Spike Result	Spike Conc	Units	Percent Recovery		Limits*	%RPD	Limits*	QC		
			Result	Result	Conc				MS	MSD				Qualifier	Type	Comments
GXW_201014																
71-43-2	66161	BENZENE	ND	0.0036	0.004	mg/L	90	NA	NA	70-130	NA	0-0		LFM		
100-41-4	66161	ETHYLBENZENE	ND	0.0037	0.004	mg/L	93	NA	NA	70-130	NA	0-0		LFM		
108-88-3	66161	TOLUENE	ND	0.0037	0.004	mg/L	93	NA	NA	70-130	NA	0-0		LFM		
1330-20-7	66161	TOTAL XYLENES	ND	0.0112	0.012	mg/L	93	NA	NA	70-130	NA	0-0		LFM		
WAD_201009																
57-12-5	65989	CYANIDE (WAD)	0.011	0.053	0.058	mg/L	84	94	80-120	11.2		0-20		LFM		

%RPD = Relative Percent Difference

NA = Indicates %RPD could not be calculated

Matrix Spike (MS)/Matrix Spike Duplicate (MSD) analyses are used to determine the accuracy (MS) and precision (MSD) of an analytical method in a given sample matrix. Therefore, the usefulness of this report is limited to samples of similar matrices analyzed in the same analytical batch.

Only Duplicate sample with detections are listed in this report

Limits are intended for water matrices only. These criteria are for guidance only when reported with solids/solids.

FORM: QC Dependent.rpt



QUALITY CONTROL REPORT SURROGATE REPORT

Reference Number: 20-34784

Report Date: 11/11/20

Lab No	Analyte	Result	Qualifier	Units	Method	Limit
324_201006 65989	1,2 - DICHLOROETHANE-d4 (Surr)	104		%	624.1	Acceptance Limit 70-130%
	4-BROMOFLUOROBENZENE (Surr)	98		%		Acceptance Limit 70-130%
	d8-TOLUENE (Surr)	108		%		Acceptance Limit 70-130%
325_201006 65989	2,4,6 - TRIBROMOPHENOL (Surr)	75		%	625	
	2 - FLUOROBIPHENYL (Surr)	71		%		
	2 - FLUOROPHENOL (Surr)	39		%		
	d5-PHENOL (Surr)	34		%		
	p-TERPHENYL-d14 (Surr)	61		%		
	d5-NITROBENZENE (Surr)	68		%		
3XW_201014 65989	4-BROMOFLUOROBENZENE (Surr)	101		%	8260C	Acceptance Range is 70-130%
	d8-TOLUENE (Surr)	99		%		Acceptance Range: 50-150%

*Notation:

A surrogate is a pure compound added to a sample in the laboratory just before processing so that the overall efficiency of a method can be determined.

The Acceptance Limits (or Control Limits) approximate a 99% confidence interval around the mean recovery.



QUALITY CONTROL REPORT SURROGATE REPORT

Reference Number: 20-34784

Report Date: 11/11/20

Lab No	Analyte	Result	Qualifier	Units	Method	Limit
324_201006 65989	1,2 - DICHLOROETHANE-d4 (Surr)	104		%	624.1	Acceptance Limit 70-130%
	4-BROMOFLUOROBENZENE (Surr)	98		%		Acceptance Limit 70-130%
	d8-TOLUENE (Surr)	108		%		Acceptance Limit 70-130%
325_201006 65989	2,4,6 - TRIBROMOPHENOL (Surr)	75		%	625	
	2 - FLUOROBIPHENYL (Surr)	71		%		
	2 - FLUOROPHENOL (Surr)	39		%		
	d5-PHENOL (Surr)	34		%		
	p-TERPHENYL-d14 (Surr)	61		%		
	d5-NITROBENZENE (Surr)	68		%		
3XW_201014 65989	4-BROMOFLUOROBENZENE (Surr)	101		%	8260C	Acceptance Range is 70-130%
	d8-TOLUENE (Surr)	99		%		Acceptance Range: 50-150%

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A surrogate is a pure compound added to a sample in the laboratory just before processing so that the overall efficiency of a method can be determined.

The Acceptance Limits (or Control Limits) approximate a 99% confidence interval around the mean recovery.



ANALYTICAL

Page 1 of 1

Qualifier Definitions

Reference Number: 20-34784

Report Date: 11/11/20

Qualifier	Definition
HR	High QCS recovery due to increased detector response No sample dectections, therefore, no further action taken for this analysis set.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
P	The Laboratory Fortified Blank was within limits. Little or No recovery of the MS/MSD indicates matrix effects. Detection at the reported amount may not have been achieved.
PA	A sample vial with the appropriate pH was not provided for analysis of this compound.

Note: Some qualifier definitions found on this page may pertain to results or QC data which are not printed with this report.

FORM: QualifierDefs

SPECTRA Laboratories - Kitsap

...Where experience matters

Analytical Report

Spectra Laboratories LLC
2221 Ross Way
Tacoma, WA 98421

Project 2020090963-Revised
Sampler
Date Received 09/30/2020

Client ID: 090963-2

Lab No: 202618-01

Sample Date: 09/29/20

Analyte	Method	Result	Qualifiers	Units	PQL	Analysis Date	Analyst
Chloride	EPA 300.0	273	P	mg/L	50.0	11/11/2020	SZ
Nitrate+Nitrite-N	EPA 300.0	0.66	---	mg/L	0.01	10/5/2020	SZ
Ortho-Phosphate	SM 4500 P E	1.04	---	mg/L	0.05	10/1/2020	SZ
Phosphorus (Total)	SM 4500 P F	3.35	---	mg/L	0.02	10/6/2020	KW

P - Sample analyzed past holding time.

Lab Qualifiers Comments:

Approved By



Angela Kaelin
Lab Supervisor/ QA Manager

QC Results Summary

Test	QC ID	Blank	LCS (% Rec)	MS (% Rec)	MS Dup (% Rec)	MS (% RPD)
		< PQL	85 - 115 %	75 - 125 %	75 - 125 %	< 25 %
Ortho-Phosphate	742	0.000	105	104	106	1.9
Nitrate+Nitrite-N	748	0.000	97	95	95	0.1
Phosphorus (Total)	752	0.006	101	86	87	1.2
Chloride	916	0.000	102	98	99	0.7

Approved By



Angela Kaelin
Lab Supervisor/ QA Manager

SPECIAL INSTRUCTIONS/COMMENTS:

Due 10/9/20 Please

CHAIN of CUSTODY

SPECTRA PROJECT #

202618-0148

SPECTRA Laboratories

2221 Ross Way, Tacoma, WA 98421

(253) 272-4850 Fax (253) 572-9838

www.spectra-lab.com info@spectra-lab.com

Return Samples Y N x Page 1 of 1

STANDARD

RUSH

ADDRESS
CHANGE ☐

ADDRESS: 2221 Ross Way Tacoma WA 98421

CLIENT: Spectra Laboratories

PROJECT: 2020090963

CONTACT: Marie H

SUBBED TO: Poulsbo

PHONE: 253-272-4850 FAX: 253-572-9838

e-MAIL: marieh@spectra-lab.com ☐ Prefer FAX
or e-MAIL ☐

PURCHASE ORDER #

NUMBER OF CONTAINERS

SAMPLE ID DATE SAMPLED TIME SAMPLED MATRIX

090963-1 09/29/20 1200 water 1

090963-2 09/29/20 1200 water 2

HYDROCARBONS

ORGANICS

METALS

OTHER

TOTAL METALS (SPECIFY) Hg, Na

Nitrate

Orthophosphate

N + N

T-Phos

Fixed Dissolved Solids

LAB USE ONLY

Shipped Via:

US Mail UPS Fed Ex Courier Client

Shipping Container:

Cooler Box Envelope None

Tracking #

Custody Seals: Y N Intact: Y N

Cooler Temp. Sample Temp.

SIGNATURE

PRINTED NAME

COMPANY

DATE

TIME

RELINQUISHED BY

RECEIVED BY

RELINQUISHED BY

RECEIVED BY

Jen Draven

Jen Draven

Spectra-T

09/30/20

1401

Danny Garcia

Spectra-K

09/30/20

1401

D Garcia

Spectra

9/30/20

1550

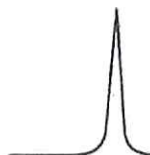
AB

Spectra

9/30/20

1550

Payment Terms: Net 30 days. Past due accounts subject to 1 1/2 % per month interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other costs of collection regardless of whether suit is filed in Pierce Co., WA venue. Spectra Analytical, Inc.



SPECTRA Laboratories - Kitsap

...Where experience matters

Analytical Report

Spectra Laboratories LLC
2221 Ross Way
Tacoma, WA 98421

Project 2020090963
Sampler
Date Received 09/30/2020

Client ID: 090963-2

Lab No: 202618-01

Sample Date: 09/29/20

Analyte	Method	Result	Qualifiers	Units	RL	PQL	Analysis Date	Analyst
Nitrate+Nitrite-N	EPA 300.0	0.66	---	mg/L	0.1	0.01	10/5/2020	SZ
Ortho-Phosphate	SM 4500 P E	1.04	---	mg/L	.01	0.05	10/1/2020	SZ
Phosphorus (Total)	SM 4500 P F	3.35	---	mg/L	0.01	0.02	10/6/2020	KW

Lab Qualifiers Comments:

Approved By

Angela Kaelin
Lab Supervisor/ QA Manager

QC Results Summary

Test	QC ID	Blank	LCS (% Rec)	MS (% Rec)	MS Dup (% Rec)	MS (% RPD)
		< PQL	85 - 115 %	75 - 125 %	75 - 125 %	< 25 %
Ortho-Phosphate	742	0.000	105	104	106	1.9
Nitrate+Nitrite-N	748	0.000	97	95	95	0.1
Phosphorus (Total)	752	0.006	101	86	87	1.2

Approved By

Angela Kaelin
Lab Supervisor/ QA Manager

SPECIAL INSTRUCTIONS/COMMENTS:

Due 10/9/20 Please

CHAIN of CUSTODY

SPECTRA PROJECT #

202618-01401

SPECTRA Laboratories

2221 Ross Way, Tacoma, WA 98421

(253) 272-4850 Fax (253) 572-9838

www.spectra-lab.com info@spectra-lab.com

Return Samples Y

N x Page 1

of 1

STANDARD

RUSH

ADDRESS
CHANGE

ADDRESS: 2221 Ross Way Tacoma WA 98421

CLIENT: Spectra Laboratories

PROJECT: 2020090963

CONTACT: Marie H

SUBBED TO: Poulsbo

PHONE: 253-272-4850 FAX: 253-572-9838

e-MAIL: marieh@spectra-lab.com

☐ Prefer FAX
☐ or e-MAIL

PURCHASE ORDER #:

NUMBER OF CONTAINERS

SAMPLE ID DATE SAMPLED TIME SAMPLED MATRIX

1 090963-1 09/29/20 1200 water 1

2 090963-2 09/29/20 1200 water 2

3

4

5

6

7

8

9

0

HYDROCARBONS

ORGANICS

METALS

OTHER

TOTAL METALS (SPECIFY) Hg, Pb

Nitrate

Orthophosphate

N + P

T-Phos

Fixed Dissolved Solids

LAB USE ONLY

Shipped Via:

US Mail UPS Fed Ex Courier Client

Cooler Shipping Container:

Box Envelope None

Tracking #:

Custody Seals: Y N Intact: Y N

Cooler Temp. Sample Temp.

SIGNATURE

PRINTED NAME

COMPANY

DATE

TIME

RELINQUISHED BY

RECEIVED BY

RELINQUISHED BY

RECEIVED BY

Jen Draven

Jen Draven

Spectra-T

09/30/20

1401

Danny Garcia

Spectra-K

09/30/20

1401

Spectra

Spectra

9/30/20

1550

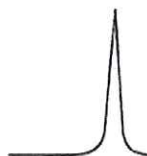
Spectra

Spectra

9/30/20

1550

Payment Terms: Net 30 days. Past due accounts subject to 1 1/2 % per month interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other costs of collection regardless of whether suit is filed in Pierce Co., WA venue. Spectra Analytical, Inc.



SPECTRA Laboratories - Kitsap

...Where experience matters

Analytical Report

Spectra Laboratories LLC
2221 Ross Way
Tacoma, WA 98421

Project 2020090963
Sampler
Date Received 10/02/2020

Client ID: 090963-2

Lab No: 202671-01

Sample Date: 09/29/20

Analyte	Method	Result	Qualifiers	Units	RL	PQL	Analysis Date	Analyst
Dissolved Oxygen (DO)	SM 2510 B	2.16	P	mg/L	2	2.00	10/2/2020	SZ

DO Blank True Value - 8.69 mg/L

Lab Qualifiers Comments:

Approved By

Angela Kaelin
Lab Supervisor/ QA Manager

QC Results Summary

Test	QC ID	Blank	LCS (% Rec)	MS (% Rec)	MS Dup (% Rec)	MS (% RPD)
		< PQL	85 - 115 %	75 - 125 %	75 - 125 %	< 25 %
Dissolved Oxygen (DO)	745	8.530	--	--	--	--

Approved By

Angela Kaelin
Lab Supervisor/ QA Manager



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Spectra Laboratories

Marie Holt
2221 Ross Way
Tacoma, WA 98421

RE: 2020090963

Work Order Number: 2010027

October 15, 2020

Attention Marie Holt:

Fremont Analytical, Inc. received 1 sample(s) on 10/2/2020 for the analyses presented in the following report.

Mercury by Method 1631E

Organochlorine Pesticides by EPA Method 608

Polychlorinated Biphenyls (PCB) by EPA 608

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Original

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Fremont
Analytical

Date: 10/15/2020

CLIENT: Spectra Laboratories
Project: 2020090963
Work Order: 2010027

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2010027-001	090963-2	09/29/2020 12:00 PM	10/02/2020 9:47 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Original



CLIENT: Spectra Laboratories
Project: 2020090963

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Prep Comments for METHOD (PREP-PCB-W), SAMPLE (2010027-001B) required Acid Cleanup Procedure (Using Method No 3665A).

Prep Comments for METHOD (PREP-PCB-W), SAMPLE (2010027-001B) required Florisil Cleanup Procedure (Using Method No 3620C).

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

Work Order: 2010027

Date Reported: 10/15/2020

Client: Spectra Laboratories

Collection Date: 9/29/2020 12:00:00 PM

Project: 2020090963

Lab ID: 2010027-001

Matrix: Water

Client Sample ID: 090963-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polychlorinated Biphenyls (PCB) by EPA 608				Batch ID: 29888		Analyst: SB
Aroclor 1016	ND	0.0993		µg/L	1	10/6/2020 11:03:50 AM
Aroclor 1221	ND	0.0993		µg/L	1	10/6/2020 11:03:50 AM
Aroclor 1232	ND	0.0993		µg/L	1	10/6/2020 11:03:50 AM
Aroclor 1242	ND	0.0993		µg/L	1	10/6/2020 11:03:50 AM
Aroclor 1248	ND	0.0993		µg/L	1	10/6/2020 11:03:50 AM
Aroclor 1254	ND	0.0993		µg/L	1	10/6/2020 11:03:50 AM
Aroclor 1260	ND	0.0993		µg/L	1	10/6/2020 11:03:50 AM
Aroclor 1262	ND	0.0993		µg/L	1	10/6/2020 11:03:50 AM
Aroclor 1268	ND	0.0993		µg/L	1	10/6/2020 11:03:50 AM
Total PCBs	ND	0.0993		µg/L	1	10/6/2020 11:03:50 AM
Surr: Decachlorobiphenyl	36.0	5 - 124		%Rec	1	10/6/2020 11:03:50 AM
Surr: Tetrachloro-m-xylene	59.3	21.2 - 115		%Rec	1	10/6/2020 11:03:50 AM

Organochlorine Pesticides by EPA Method 608

Batch ID: 29902

Analyst: DW

Toxaphene	ND	0.0996		µg/L	1	10/9/2020 4:16:54 PM
alpha-BHC	ND	0.0996		µg/L	1	10/9/2020 4:16:54 PM
beta-BHC	ND	0.0996		µg/L	1	10/9/2020 4:16:54 PM
Gamma BHC (Lindane)	ND	0.149		µg/L	1	10/9/2020 4:16:54 PM
delta-BHC	ND	0.0996		µg/L	1	10/9/2020 4:16:54 PM
Heptachlor	ND	0.0996		µg/L	1	10/9/2020 4:16:54 PM
Aldrin	ND	0.0996		µg/L	1	10/9/2020 4:16:54 PM
Heptachlor epoxide	ND	0.0996		µg/L	1	10/9/2020 4:16:54 PM
gamma-Chlordane	ND	0.0996		µg/L	1	10/9/2020 4:16:54 PM
Endosulfan I	ND	0.0996		µg/L	1	10/9/2020 4:16:54 PM
alpha-Chlordane	ND	0.0996		µg/L	1	10/9/2020 4:16:54 PM
Dieldrin	ND	0.0996		µg/L	1	10/9/2020 4:16:54 PM
4,4'-DDE	ND	0.149		µg/L	1	10/9/2020 4:16:54 PM
Endrin	ND	0.149		µg/L	1	10/9/2020 4:16:54 PM
Endosulfan II	ND	0.149		µg/L	1	10/9/2020 4:16:54 PM
4,4'-DDD	ND	0.149		µg/L	1	10/9/2020 4:16:54 PM
Endrin aldehyde	ND	0.149		µg/L	1	10/9/2020 4:16:54 PM
Endosulfan sulfate	ND	0.149		µg/L	1	10/9/2020 4:16:54 PM
4,4'-DDT	ND	0.149		µg/L	1	10/9/2020 4:16:54 PM
Surr: Decachlorobiphenyl	10.1	5 - 123		%Rec	1	10/9/2020 4:16:54 PM
Surr: Tetrachloro-m-xylene	65.1	13.3 - 139		%Rec	1	10/9/2020 4:16:54 PM



Fremont
Analytical

Analytical Report

Work Order: 2010027

Date Reported: 10/15/2020

Client: Spectra Laboratories

Collection Date: 9/29/2020 12:00:00 PM

Project: 2020090963

Lab ID: 2010027-001

Matrix: Water

Client Sample ID: 090963-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Mercury by Method 1631E

Batch ID: 29935

Analyst: SG

Mercury	2.70	0.500		ng/L	1	10/7/2020 8:21:53 PM
---------	------	-------	--	------	---	----------------------



Date: 10/15/2020

Work Order: 2010027

CLIENT: Spectra Laboratories

Project: 2020090963

QC SUMMARY REPORT

Mercury by Method 1631E

Sample ID: MB-29935	SampType: MBLK	Units: ng/L	Prep Date: 10/7/2020	RunNo: 62481							
Client ID: MBLKW	Batch ID: 29935		Analysis Date: 10/7/2020	SeqNo: 1253757							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

Sample ID: MB2-29935	SampType: MBLK	Units: ng/L	Prep Date: 10/7/2020	RunNo: 62481							
Client ID: MBLKW	Batch ID: 29935		Analysis Date: 10/7/2020	SeqNo: 1253758							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

Sample ID: MB3-29935	SampType: MBLK	Units: ng/L	Prep Date: 10/7/2020	RunNo: 62481							
Client ID: MBLKW	Batch ID: 29935		Analysis Date: 10/7/2020	SeqNo: 1253759							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

Sample ID: LCS-29935	SampType: LCS	Units: ng/L	Prep Date: 10/7/2020	RunNo: 62481							
Client ID: LCSW	Batch ID: 29935		Analysis Date: 10/7/2020	SeqNo: 1253760							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	22.9	0.500	25.00	0	91.6	80	120				

Sample ID: 2010015-001CDUP		SampType: DUP		Units: ng/L		Prep Date: 10/7/2020		RunNo: 62481			
Client ID: BATCH		Batch ID: 29935				Analysis Date: 10/7/2020		SeqNo: 1253762			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500						0			24

Original



Date: 10/15/2020

Work Order: 2010027

CLIENT: Spectra Laboratories

Project: 2020090963

QC SUMMARY REPORT

Mercury by Method 1631E

Sample ID: 2010015-001CMS		SampType: MS		Units: ng/L		Prep Date: 10/7/2020		RunNo: 62481			
Client ID: BATCH		Batch ID: 29935				Analysis Date: 10/7/2020		SeqNo: 1253763			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	16.5	0.500	25.00	0	66.0	71	125				S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: 2010015-001CMSD		SampType: MSD		Units: ng/L		Prep Date: 10/7/2020		RunNo: 62481			
Client ID: BATCH		Batch ID: 29935				Analysis Date: 10/7/2020		SeqNo: 1253764			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	16.5	0.500	25.00	0	66.0	71	125	16.50	0	24	S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Original



Date: 10/15/2020

Work Order: 2010027

CLIENT: Spectra Laboratories

Project: 2020090963

QC SUMMARY REPORT

Polychlorinated Biphenyls (PCB) by EPA 608

Sample ID: MB-29888	SampType: MBLK	Units: µg/L	Prep Date: 10/2/2020	RunNo: 62363							
Client ID: MBLKW	Batch ID: 29888		Analysis Date: 10/6/2020	SeqNo: 1251267							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aroclor 1016	ND	0.0996									
Aroclor 1221	ND	0.0996									
Aroclor 1232	ND	0.0996									
Aroclor 1242	ND	0.0996									
Aroclor 1248	ND	0.0996									
Aroclor 1254	ND	0.0996									
Aroclor 1260	ND	0.0996									
Aroclor 1262	ND	0.0996									
Aroclor 1268	ND	0.0996									
Total PCBs	ND	0.0996									

Surr: Decachlorobiphenyl
Surr: Tetrachloro-m-xylene

398.3 71.9 5 124
398.3 96.0 21.2 115

Sample ID: LCS1-29888	SampType: LCS	Units: µg/L		Prep Date: 10/2/2020	RunNo: 62363						
Client ID: LCSW	Batch ID: 29888			Analysis Date: 10/6/2020	SeqNo: 1251268						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aroclor 1016
Aroclor 1260
Surr: Decachlorobiphenyl
Surr: Tetrachloro-m-xylene

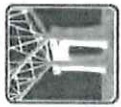
1.63 81.5 6.74 118
2.01 101 5 123
243 60.9 5 124
278 69.7 21.2 115

Sample ID: LCS1D-29888	SampType: LCS	Units: µg/L	Prep Date: 10/2/2020	RunNo: 62363							
Client ID: LCSW02	Batch ID: 29888		Analysis Date: 10/6/2020	SeqNo: 1251269							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aroclor 1016
Aroclor 1260
Surr: Decachlorobiphenyl

2.44 123 6.74 118 1.627 40.2 20 RS
2.92 146 5 123 2.007 37.1 20 RS
359 89.9 5 124 0

Original



Fremont
Analytical

Date: 10/15/2020

Work Order: 2010027

CLIENT: Spectra Laboratories

Project: 2020090963

QC SUMMARY REPORT
Polychlorinated Biphenyls (PCB) by EPA 608

Sample ID: LCS1D-29888	Sample Type: LCSD	Units: µg/L	Prep Date: 10/2/2020	RunNo: 62363							
Client ID: LCSW02	Batch ID: 29888		Analysis Date: 10/6/2020	SeqNo: 1251269							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: Tetrachloro-m-xylene

0

NOTES:

S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

R - High RPD observed.

Sample ID: 2010027-001BMS	SampleType: MS	Units: µg/L	Prep Date: 10/2/2020	RunNo: 62363							
Client ID: 090963-2	Batch ID: 29888		Analysis Date: 10/6/2020	SeqNo: 1251272							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Atoclor 1016

159

Atoclor 1260

176

Surr: Decachlorobiphenyl

124

Surr: Tetrachloro-m-xylene

115



Date: 10/15/2020

Work Order: 2010027

CLIENT: Spectra Laboratories

Project: 2020090963

QC SUMMARY REPORT

Organochlorine Pesticides by EPA Method 608

Sample ID: MB-29902	SampType: MBLK	Units: µg/L	Prep Date: 10/5/2020	RunNo: 62464							
Client ID: MBLKW	Batch ID: 29902		Analysis Date: 10/9/2020	SeqNo: 1253580							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Toxaphene	ND	0.0989									
alpha-BHC	ND	0.0989									
beta-BHC	ND	0.0989									
Gamma BHC (Lindane)	ND	0.148									
delta-BHC	ND	0.0989									
Heptachlor	ND	0.0989									
Aldrin	ND	0.0989									
Heptachlor epoxide	ND	0.0989									
gamma-Chlordane	ND	0.0989									
Endosulfan I	ND	0.0989									
alpha-Chlordane	ND	0.0989									
Dieldrin	ND	0.0989									
4,4'-DDE	ND	0.148									
Endrin	ND	0.148									
Endosulfan II	ND	0.148									
4,4'-DDD	ND	0.148									
Endrin aldehyde	ND	0.148									
Endosulfan sulfate	ND	0.148									
4,4'-DDT	ND	0.148									
Surr: Decachlorobiphenyl	0.166		0.3958		41.9	5	123				
Surr: Tetrachloro-m-xylene	0.300		0.3958		75.9	13.3	139				

Sample ID: LCS1-29902	SampType: LCS	Units: µg/L		Prep Date: 10/5/2020	RunNo: 62464						
Client ID: LCSW	Batch ID: 29902			Analysis Date: 10/9/2020	SeqNo: 1253581						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

alpha-BHC	0.907	0.0986	0.9858	0	92.0	53.2	113				
beta-BHC	0.979	0.0986	0.9858	0	99.3	63.1	120				
Gamma BHC (Lindane)	0.821	0.148	0.9858	0	83.3	55.7	114				
delta-BHC	1.02	0.0986	0.9858	0	103	63.6	121				

Original



Date: 10/15/2020

Work Order: 2010027

CLIENT: Spectra Laboratories

Project: 2020090963

QC SUMMARY REPORT **Organochlorine Pesticides by EPA Method 608**

Sample ID: LCS1-29902	SampType: LCS	Units: µg/L	Prep Date: 10/5/2020	RunNo: 62464							
Client ID: LCSW	Batch ID: 29902		Analysis Date: 10/9/2020	SeqNo: 1253581							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Heptachlor	0.899	0.0986	0.9858	0	91.2	50.4	115				
Aldrin	0.836	0.0986	0.9858	0	84.8	16	133				
Heptachlor epoxide	0.947	0.0986	0.9858	0	96.1	58.9	123				
gamma-Chlordane	0.938	0.0986	0.9858	0	95.2	58.6	122				
Endosulfan I	0.914	0.0986	0.9858	0	92.7	60.1	122				
alpha-Chlordane	0.950	0.0986	0.9858	0	96.3	54.3	126				
Dieldrin	0.980	0.0986	0.9858	0	99.4	63.4	125				
4,4'-DDE	0.935	0.148	0.9858	0	94.9	58.2	126				
Endrin	0.993	0.148	0.9858	0	101	63.8	128				
Endosulfan II	0.950	0.148	0.9858	0	96.4	61.5	122				
4,4'-DDD	1.00	0.148	0.9858	0	102	61.4	132				
Endrin aldehyde	0.943	0.148	0.9858	0	95.6	54.2	126				
Endosulfan sulfate	0.995	0.148	0.9858	0	101	57.6	139				
4,4'-DDT	1.03	0.148	0.9858	0	105	60	138				
Surr: Decachlorobiphenyl	0.187		0.3943		47.5	5	123				
Surr: Tetrachloro-m-xylene	0.345		0.3943		87.6	13.3	139				

Sample ID: LCS2-29902	SampType: LCS	Units: µg/L		Prep Date: 10/5/2020	RunNo: 62464						
Client ID: LCSW	Batch ID: 29902			Analysis Date: 10/9/2020	SeqNo: 1253582						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	2.60	0.0986	1.972	0	132	37.9	133				
Surr: Decachlorobiphenyl	0.181		0.3943		46.0	5	123				
Surr: Tetrachloro-m-xylene	0.357		0.3943		90.4	13.3	139				

Original



Date: 10/15/2020

Work Order: 2010027

CLIENT: Spectra Laboratories

Project: 2020090963

QC SUMMARY REPORT

Organochlorine Pesticides by EPA Method 608

Sample ID: 2010025-001AMS	SampType: MS	Units: µg/L	Prep Date: 10/5/2020	RunNo: 62464							
Client ID: BATCH	Batch ID: 29902		Analysis Date: 10/9/2020	SeqNo: 1253584							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

alpha-BHC	0.972	0.0987	0.9871	0	98.4	36.5	124				
beta-BHC	1.10	0.0987	0.9871	0	111	42.5	132				
Gamma BHC (Lindane)	0.998	0.148	0.9871	0	101	38.8	126				
delta-BHC	1.01	0.0987	0.9871	0	102	42	135				
Heptachlor	0.767	0.0987	0.9871	0	77.7	53.5	124				
Aldrin	0.552	0.0987	0.9871	0	55.9	34.7	127				
Heptachlor epoxide	0.962	0.0987	0.9871	0	97.5	42.2	136				
gamma-Chlordane	0.653	0.0987	0.9871	0	66.2	38.8	136				
Endosulfan I	1.02	0.0987	0.9871	0	104	39.7	137				
alpha-Chlordane	0.653	0.0987	0.9871	0	66.1	39.6	135				
Dieldrin	0.898	0.0987	0.9871	0	91.0	43.1	140				
4,4'-DDE	0.381	0.148	0.9871	0	38.6	36.8	141				
Endrin	0.979	0.148	0.9871	0	99.2	52.1	140				
Endosulfan II	0.953	0.148	0.9871	0	96.6	42.4	145				
4,4'-DDD	0.653	0.148	0.9871	0	66.2	44.9	153				
Endrin aldehyde	0.744	0.148	0.9871	0	75.3	42.6	131				
Endosulfan sulfate	0.948	0.148	0.9871	0	96.0	50.4	144				
4,4'-DDT	0.417	0.148	0.9871	0	42.2	51.9	154				S
Surr: Decachlorobiphenyl	0.0548		0.3948		13.9	5	123				
Surr: Tetrachloro-m-xylene	0.254		0.3948		64.4	13.3	139				

NOTES:

S - Outlying spike recovery(ies) observed (DDT). A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: 2010025-001AMSD	SampType: MSD	Units: µg/L		Prep Date: 10/5/2020	RunNo: 62464						
Client ID: BATCH	Batch ID: 29902			Analysis Date: 10/9/2020	SeqNo: 1253585						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

alpha-BHC	0.978	0.0988	0.9885	0	98.9	36.5	124	0.9716	0.614	30	
beta-BHC	1.10	0.0988	0.9885	0	111	42.5	132	1.097	0.425	30	
Gamma BHC (Lindane)	1.00	0.148	0.9885	0	102	38.8	126	0.9981	0.678	30	
delta-BHC	1.02	0.0988	0.9885	0	104	42	135	1.007	1.74	30	

Original



Date: 10/15/2020

Work Order: 2010027

CLIENT: Spectra Laboratories

Project: 2020090963

QC SUMMARY REPORT

Organochlorine Pesticides by EPA Method 608

Sample ID: 2010025-001AMSD		SampType: MSD		Units: µg/L		Prep Date: 10/5/2020		RunNo: 62464	
Client ID: BATCH		Batch ID: 29902		Analysis Date: 10/9/2020		SeqNo: 1253585			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Heptachlor	0.585	0.0988	0.9885	0	69.3	53.5	124	0.7670	11.2 30
Aldrin	0.482	0.0988	0.9885	0	48.7	34.7	127	0.5515	13.5 30
Heptachlor epoxide	0.897	0.0988	0.9885	0	90.8	42.2	136	0.9621	6.97 30
gamma-Chlordane	0.550	0.0988	0.9885	0	55.7	38.8	136	0.6530	17.1 30
Endosulfan I	0.964	0.0988	0.9885	0	97.5	39.7	137	1.024	6.00 30
alpha-Chlordane	0.564	0.0988	0.9885	0	57.0	39.6	135	0.6527	14.7 30
Dieldrin	0.814	0.0988	0.9885	0	82.4	43.1	140	0.8980	9.77 30
4,4'-DDE	0.337	0.148	0.9885	0	34.1	36.8	141	0.3812	12.3 30 S
Endrin	0.904	0.148	0.9885	0	91.4	52.1	140	0.9790	7.99 30
Endosulfan II	0.910	0.148	0.9885	0	92.1	42.4	145	0.9532	4.59 30
4,4'-DDD	0.571	0.148	0.9885	0	57.8	44.9	153	0.6534	13.4 30
Endrin aldehyde	0.624	0.148	0.9885	0	63.1	42.6	131	0.7436	17.5 30
Endosulfan sulfate	0.929	0.148	0.9885	0	94.0	50.4	144	0.9478	1.95 30
4,4'-DDT	0.376	0.148	0.9885	0	38.0	51.9	154	0.4169	10.4 30 S
Surr: Decachlorobiphenyl	0.0541		0.3954		13.7	5	123		0
Surr: Tetrachloro-m-xylene	0.253		0.3954		64.0	13.3	139		0

NOTES:

S - Outlying spike recovery(ies) observed (DDT). A duplicate analysis was performed with similar results indicating a possible matrix effect.
 S - Outlying spike recovery(ies) observed. (DDE) A duplicate analysis was performed and recovered within range.



Sample Log-In Check List

Client Name: **SPECTRA**
 Logged by: **Clare Griggs**

Work Order Number: **2010027**
 Date Received: **10/2/2020 9:47:00 AM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
 2. How was the sample delivered? UPS

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
 4. Shipping container/cooler in good condition? Yes ☒ No ☐
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes ☐ No ☐ Not Present ☒
 6. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
 7. Were all items received at a temperature of >2°C to 6°C * Yes ☒ No ☐ NA ☐
 8. Sample(s) in proper container(s)? Yes ☒ No ☐
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
 10. Are samples properly preserved? Yes ☒ No ☐
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
 12. Is there headspace in the VOA vials? Yes ☐ No ☐ NA ☒
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
 By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
 Regarding: _____
 Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp °C
Sample	2.3

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Original

Turnaround Time Requested

CHAIN of CUSTODY

STANDARD ☒ RUSH ☐ SPECIAL

Lab Approval Required

SPECTRA PROJECT #

2010027

6 of 16

SPECTRA Laboratories

...Where experience matters

Return Samples Yes No X

CLIENT: Spectra Laboratories ADDRESS: 2221 Ross Way Tacoma, WA ZIP: 98421 ADDRESS CHANGE ☐

PROJECT: 2020090963

CONTACT: Marie Holt

SUBBED TO: Fremont Analytical

PHONE: 253-272-4850

e-MAIL: marieh@spectra-lab.com

PURCHASE ORDER #:

PROJECT: 2020090963				NUMBER OF CONTAINERS				HYDROCARBONS										ORGANICS					METALS				OTHER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
CONTACT: Marie Holt								BTX										BTX/MWTPH-G					NWTPH-G					NWTPH-DX					1664 SGT-HEM (TPH)										1664 HEM (FOG)					8260/824 VOA										8260 CHLOR SOLVENTS					8270/825 SEM VOA					8270 PAH/PNA					608 PCB/Pesticides					TOTAL METALS RCRA 8										TOTAL METALS (SPECIFY)					TCMP METALS RCRA 8					TCMP METALS (SPECIFY)					PH 8040/8045										TX/TOX 8076					TURBIDITY					FLASH POINT					BOD					SOLIDS (SPECIFY)					Fecal Coliform - MPN or MF					Hg by 1631E																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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								BTX										BTEX/MWTPH-G					NWTPH-G					NWTPH-DX					1664 SGT-HEM (TPH)										1664 HEM (FOG)					8260/824 VOA										8260 CHLOR SOLVENTS					8270/825 SEM VOA					8270 PAH/PNA					608 PCB/Pesticides					TOTAL METALS RCRA 8										TOTAL METALS (SPECIFY)					TCMP METALS RCRA 8					TCMP METALS (SPECIFY)					PH 8040/8045										TX/TOX 8076					TURBIDITY					FLASH POINT					BOD					SOLIDS (SPECIFY)					Fecal Coliform - MPN or MF					Hg by 1631E																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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PURCHASE ORDER #:				SAMPLE ID				DATE SAMPLED				TIME SAMPLED				MATRIX				090963-2				09/29/20				1200				Water				3				X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				</			

SPECIAL INSTRUCTIONS/COMMENTS:

RELINQUISHED BY	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RECEIVED BY	<i>Jen Draven</i>	Jen Draven	Spectra	10/01/20	3:00 PM
RELINQUISHED BY	<i>Laura Baker</i>	Laura Baker		10/2/20	9:47 AM
RECEIVED BY					
RELINQUISHED BY					
RECEIVED BY					

Sample Receipt (lab use only)
 Total # of containers _____
 COC seals present? _____ Intact? _____
 Temp at receipt _____ deg. C.
 Received within hold time? _____
 Proper sample containers? _____
 Received via _____ Cooler? _____

Payment Terms: Net 30 days. Past due accounts subject to 1 1/2 % per month interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other costs of collection regardless of whether suit is filed in Pierce Co., WA venue.



Shipment Receipt

October 15, 2020

1Z9035360390098673

Where

Ship From

Spectra Laboratories, Spectra Laboratories
2221 Ross Way, Tacoma, WA 98421
jenniferd@spectra-lab.com, (253) 272-4850

Ship To

REG Grays Harbor, Anna
2850 John Stevens Way, HOQUIAM, WA 98550
360-532-3752

What

Package 1 - 1Z9035360390098673

Weight
6 lbs

Dimensions
13 in x 9 in x 13 in
My Packaging

Service Details - UPS Ground

Scheduled Daily Pickup : **Include In pending pickup on 10/15/2020**

SPECTRA LABORATORIES, LLC
2221 ROSS WAY, TACOMA, WA 98421
US

Estimated Delivery Friday October 16, 2020 , End of Day

Additional Options

Email Notifications: jenniferd@spectra-lab.com
UPS Carbon Neutral

Payment

Bill Shipping Charges To: Shipper - 903536 - Spectra Laboratories

Shipping Total

Shipping Fees

Package 1	
UPS Ground	\$11.89
Delivery Area	\$3.45
Surcharge -- Extended	
Fuel Surcharge	\$0.96

Additional Option Fees

Carbon Neutral	\$0.05
----------------	--------

Subtotals

Shipping Fees	\$16.30
Additional Option Fees	\$0.05
Combined Charges	\$16.35

Transportation Charges: for services listed as guaranteed, refunds apply to transportation charges only. See Terms and Conditions in the Service Guide for details. Certain commodities and high value shipments may require additional transit time for customs clearance.

Rate includes a fuel Surcharge, but excludes taxes, duties and other charges that may apply to the shipment.
Your invoice may vary from the displayed reference rates

Note: This document is not an invoice.

All shipments are subject to the UPS Tariff/Terms and Conditions of Service ("UPS terms") in effect on the date of shipment, which are available at www.ups.com/terms. Pursuant to the UPS Terms, UPS's maximum liability for loss or damage to each domestic package or international shipment is limited to \$100, unless the shipper declares a greater value in the declared value field of the UPS shipping system used and pays the applicable charge (in which case UPS's maximum liability is the declared value). Special terms apply to some services and articles. Please review the UPS Terms for liability limits, exclusions from liability, maximum declared values, prohibited items, and other important terms of service. The shipper agrees that in the absence of a greater declared value, \$100 value is a reasonable limitation under the circumstances of the transportation. Claims not timely made (generally noticed within sixty days and filed within nine months, but filed within sixty days for international shipments) are deemed waived and will not be paid. See the UPS Terms for details. Under no circumstances will UPS be liable for any special, incidental, or consequential damages.



1515 80th St. E.
Tacoma, WA 98404
(253) 531-3121

October 16, 2020

Spectra Laboratories
2221 Ross Way
Tacoma, WA 98421
Attn: Marie Holt

Dear Ms. Holt:

Results of analysis of one wastewater sample taken by Rosa McGough on 09-29-2020 at 12:00 p.m. and received on 09-30-2020 at 1:50 p.m. are as follows:

**Sample
Identification**

Grab - 2020090963-2

**Total Coliform
(per 100 mLs)**

3,000,000

Lab Number: 08969814

Please note that the sample exceeds the maximum holding time of 24 hours for non-drinking water samples.

Sample was analyzed by multiple tube fermentation (MPN) procedure according to Standard Methods for the Examination of Water and Wastewater, 22nd Edition, Section 9221B.

Chain of custody record is enclosed.

Sincerely,

A handwritten signature in cursive script, appearing to read "Diane DuMond", with a small upward-pointing arrow at the end of the signature.

Diane DuMond
Microbiologist

DD:ndh
Enclosure



WATER
MANAGEMENT
LABORATORIES INC.

Chain of Custody

1515 80th St E Tacoma, WA 98404 | (253) 531 - 3121 | customerservice@watermanagementlabs.com

Sample #	# of Bottles	Sample Type		Date Sampled	Time Sampled	Sampled By	Sample Identification	Test(s) Requested									
		Water	Waste														
1	1	X		9-29-20	12:00	Rosa McGough	Grab 2020090963-2										
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Company Name: <u>Spectra Laboratories</u>		Report to: <u>Marie Holt</u>		Remarks:	
Company Address: <u>2221 Ross Way</u>		Phone #: <u>253-272-4850</u>			
<u>Tacoma WA 98421</u>		Email: <u>Marie.Holt@spectra-lab.com</u>			
Printed Name		Signature		Company	
Relinquished by: <u>Marie Holt</u>		<u>Marie Holt</u>		<u>Spectra</u>	
Received by: <u>David G. K. H.</u>		<u>David G. K. H.</u>		<u>Spectra</u>	
Relinquished by: <u>David G. K. H.</u>		<u>David G. K. H.</u>		<u>Spectra</u>	
Received by: <u>Nancy DuMar</u>		<u>Nancy DuMar</u>		<u>WML</u>	
				Date / Time	
				9-30-20 1317	
				9-30-20 1317	
				9-30-20 1340	
				9-30-20 1340	



November 16, 2020

Service Request No:E2000936

Marie Holt
Spectra Laboratories
2221 Ross Way
Tacoma, WA 98421

Laboratory Results for: 2020090963

Dear Marie,

Enclosed are the results of the sample(s) submitted to our laboratory October 02, 2020
For your reference, these analyses have been assigned our service request number **E2000936**.

Revision I - This report was revised on November 16th, 2020 to report only 2,3,7,8-TCDD; originally reported the full 17 monitored dioxin/furan compounds.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the final complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the TNI 2009 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental



Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client: Spectra Lab
Project: 2020090963
Sample Matrix: W

Service Request No.: E2000936
Date Received: 10/02/20

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 10/02/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000498: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

Y flags – Cleanup Standard

The recoveries for the cleanup standard, 37Cl-2,3,7,8-TCDD are below control limits in the batch QC samples. The sample results are not affected since this labeled standard is provided as a means of demonstrating that both the sample extraction and subsequent cleanup steps performed as expected, and is not used in quantitation of target analytes.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: Spectra Laboratories
Project: 2020090963

Service Request:E2000936

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
E2000936-001	090963-2	9/29/2020	1200

Service Request Summary

2 1000 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
 Location: EHRMS-WIC 7A
 Pressure Gas:
 Rush

Project Chemist: Corey Grandits
 Originating Lab: HOUSTON
 Logged By: CGRANDITS
 Date Received: 10/02/20
 Internal Due Date: 10/23/2020
 QAP: LAB QAP
 Qualifier Set: HRMS Qualifier Set
 Formset: Lab Standard
 Merged?: N
 Report to MDL?: Y
 P.O. Number: 2020090963
 EDD: No EDD Specified

Folder #: E2000936
 Client Name: Spectra Laboratories
 Project Name: 2020090963
 Project Number:
 Report To: Marie Holt
 Spectra Laboratories
 2221 Ross Way
 Tacoma, WA 98421
 USA
 Phone Number: 253-272-4850
 Cell Number:
 Fax Number: 253-572-9838
 E-mail: marieh@spectra-lab.com

Lab Samp No.	Client Samp No	Matrix	Collected	
E2000936-001	090963-2	Wastewater	09/29/20 1200	II
Dioxins Furans/1613B				HOUSTON

Service Request Summary

Folder #: E2000936
Client Name: Spectra Laboratories
Project Name: 2020090963
Project Number:
Report To: Marie Holt
Spectra Laboratories
2221 Ross Way
Tacoma, WA 98421
USA
Phone Number: 253-272-4850
Cell Number:
Fax Number: 253-572-9838
E-mail: marleh@spectra-lab.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 10/02/20
Internal Due Date: 10/23/2020
QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: 2020090963
EDD: No EDD Specified

2 1000 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 7A
Pressure Gas:
Rush

Data Qualifiers

HRMS Qualifier Set

- B Indicates the associated analyte was found in the method blank at >1/10th the reported value.
- E Estimated value. The reported concentration is above the calibration range of the instrument.
- H Sample extracted and/or analyzed out of suggested holding time.
- J Estimated value. The reported concentration is below the MRL.
- K The ion abundance ratio between the primary and secondary ions were outside of theoretical acceptance limits. The concentration of this analyte should be considered as an estimate.
- P Chlorodiphenyl ether interference was present at the retention time of the target analyte. Reported result should be considered an estimate.
- Q Monitored lock-mass indicates matrix-interference. Reported result is estimated.
- S Signal saturated detector. Result reported from dilution.
- U Compound was analyzed for, but was not detected (ND).
- X See Case Narrative.
- Y Isotopically Labeled Standard recovery outside of acceptance limits. In all cases, the signal-to-nois ratios are greater than 10:1, making the recoveries acceptable.
- i The MDL/MRL have been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCetration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Department of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Conservation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Conservation	04016-2020	4/30/2021
Texas Commission on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Washington Department of Health	C819	11/14/2020

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID E2000936

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
10/20/20	LKL	001

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
10/20/20	W	001

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID E2000936

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
10/20/20	LKL	001

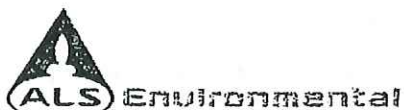
Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
10/20/20	W	001



Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com



Cooler Receipt Form

Project Chemist UH

Client/Project SPECTRA Thermometer ID 1831

Date/Time Received: 10/12/10 Initials: JM Date/Time Logged in: 10/12/10 Initials UH

1. Method of delivery: ☐ US Mail ☐ Fed Ex ☒ UPS ☐ DHL ☐ Courier ☐ Client

2. Samples received in: ☒ Cooler ☐ Box ☐ Envelope ☐ Other

3. Were custody seals on coolers? ☐ Yes ☐ No
Were they intact? ☐ Yes ☐ No ☐ N/A
Were they signed and dated? ☐ Yes ☐ No ☐ N/A

If yes, how many
and where?

4. Packing Material: ☐ Inserts ☒ Baggies ☒ Bubble Wrap ☐ Gel Packs ☒ Wet Ice ☐ Sleeves ☐ Other

5. Foreign or Regulated Soil? ☐ Yes ☒ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
-		10/12/10	0900	JM	1.8	<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

6. Were custody papers properly filled out (ink, signed, dated, etc)? ☒ Yes ☐ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ☒ Yes ☐ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ☒ Yes ☐ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ☒ Yes ☐ No
10. Did sample labels and tags agree with custody documents? ☒ Yes ☐ No

Notes, Discrepancies, & Resolutions:

Service request Label:



10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sample. The COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6°C.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10°C.
- ✓ Air samples are shipped and stored cold, at 0 to 6°C
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report



Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 367484 Prep WorkFlow: OrgExtAq(365) Status: Prepped
 Team: Semivoo GCMS/TWOODS Prep Method: Method Sep Funnel/Jar Prep Date/Time: 10/12/20 10:40

#	Lab Code	Client ID	B#	Method /Test	pH	CI	Matrix	Amt. Ext.	Sample Description
1	E2000923-001	I102166-01	.01	1613B/Dioxins Furans	6		Water	968mL	yellow tint
2	E2000936-001	090963-2	.01	1613B/Dioxins Furans	7		Wastewater	1037mL	Clear
3	E2000937-001	2010977-01	.01	1613B/Dioxins Furans	7		Water	989mL	clear
4	E2000940-001	MB-2A	.01	1613B/Dioxins Furans	7		Drinking Water	969mL	
5	E2000940-002	MB-3	.01	1613B/Dioxins Furans	7		Drinking Water	956mL	
6	E2000940-003	MB-6	.01	1613B/Dioxins Furans	7		Drinking Water	972mL	
7	E2000940-004	MB-61	.01	1613B/Dioxins Furans	7		Drinking Water	950mL	
8	E2000940-005	MB-65	.01	1613B/Dioxins Furans	7		Drinking Water	949mL	
9	E2000941-001	704WW10220	.01	1613B/Dioxins Furans	8		Wastewater	964mL	yellow
10	E2000945-001	R28963-58 Drinking Water	.01	1613B/Dioxins Furans	5		Drinking Water	1000mL	PT Clear
11	E2000947-001	20-280-0019	.01	1613B/Dioxins Furans	7		Water	1071mL	
12	E2000948-001	FEFF100520+ ID	.01	1613B/Dioxins Furans Unadjusted	7		Wastewater	923.00mL	Orange
13	E2000955-001	AD34646-1461-01	.01	1613B/Dioxins Furans	6		Water	991mL	
14	E2000955-002	AD34647-1416-04	.01	1613B/Dioxins Furans	7		Water	978mL	
15	E2000960-001	AQ 1.5- LOD - 1613	.01	1613B/Dioxins Furans	5		Water	1000mL	@75ul MDL 0.02-0.2ng/mlClear
16	E2000960-002	AQ 5.0- LOQ - 1613	.01	1613B/Dioxins Furans	5		Water	1000mL	@250ul MDL 0.02-0.2ng/mlClear
17	E2000960-003	AQ 3.0- LOD - 1613	.01	1613B/Dioxins Furans	5		Water	1000mL	@150ul MDL 0.02-0.2ng/mlClear
18	E20000498-01	MB		1613B/Dioxins Furans	5		Liquid	1000.0mL	
19	E20000498-02	LCS		1613B/Dioxins Furans	5		Liquid	1000.0mL	
20	E20000498-03	DLCS		1613B/Dioxins Furans	5		Liquid	1000.0mL	
21	E20000498-04	AQ 5.0- LOQ - 1613 DUP	.02	1613B/Dioxins Furans	5		Liquid	1000mL	
22	J2005057-001	Mill Discharge (EFF-1)	.04	1613B/Dioxins Furans	1		Water	1046mL	
23	R2009052-001	Entry Point - Finished	.09	1613B/Dioxins Furans	7		Drinking Water	1034mL	

Spiking Solutions

Name:	8290/1613B Cleanup Working Standard	Inventory ID	212315	Logbook Ref:	tw 212315 09/08/20 8ng/ml	Expires On:	01/06/2021
E2000923-001	100.00µL	E2000936-001	100.00µL	E2000937-001	100.00µL	E2000940-001	100.00µL
E2000940-004	100.00µL	E2000940-005	100.00µL	E2000941-001	100.00µL	E2000945-001	100.00µL
E2000955-001	100.00µL	E2000955-002	100.00µL	E2000960-001	100.00µL	E2000960-002	100.00µL
E20000498-01	100.00µL	E20000498-02	100.00µL	E20000498-02	100.00µL	E20000498-03	100.00µL
J2005057-001	100.00µL	R2009052-001	100.00µL				
Name:	1613B Matrix Working Standard	Inventory ID	212382	Logbook Ref:	tw 212382 2-20ng/ml	Expires On:	02/24/2021
E20000498-02	100.00µL	E20000498-02	100.00µL	E20000498-03	100.00µL		

Preparation Information Benchsheet

Prep Run#: 367484 **Prep WorkFlow:** OrgExtAq(365) **Status:** Prepped
Team: Semivoo GCMS/TWOODS **Prep Method:** Method Sep Funnel/Jar **Prep Date/Time:** 10/12/20 10:40

Name: 1613B/23/TO-9A MDL Native Solution **Inventory ID:** 213115 **Logbook Ref:** tw 10/12/20 213115 **Expires On:** 02/24/2021

E2000960-001 75.00µL E2000960-002 250.00µL E2000960-003 150.00µL EQ2000498-04 250.00µL

Name: 1613B Labeled Working Standard **Inventory ID:** 213116 **Logbook Ref:** tw 10/12/20 2-4ng/ml 213116 **Expires On:** 12/16/2020

E2000923-001	1,000.00µL	E2000936-001	1,000.00µL	E2000937-001	1,000.00µL	E2000940-001	1,000.00µL	E2000940-002	1,000.00µL	E2000940-003	1,000.00µL
E2000940-004	1,000.00µL	E2000940-005	1,000.00µL	E2000941-001	1,000.00µL	E2000945-001	1,000.00µL	E2000947-001	1,000.00µL	E2000948-001	1,000.00µL
E2000955-001	1,000.00µL	E2000955-002	1,000.00µL	E2000960-001	1,000.00µL	E2000960-002	1,000.00µL	E2000960-003	1,000.00µL	E2000960-004	1,000.00µL
EQ2000498-01	1,000.00µL	EQ2000498-02	1,000.00µL	EQ2000498-02	1,000.00µL	EQ2000498-03	1,000.00µL	EQ2000498-03	1,000.00µL	EQ2000498-04	1,000.00µL
J2005057-001	1,000.00µL	R20009052-001	1,000.00µL								

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	10/12/20 10:40	Started:	10/13/20 10:00	Started:	10/13/20 12:00	Started:	10/14/20 13:00
Finished:	10/12/20 17:00	Finished:	10/13/20 11:00	Finished:	10/13/20 15:00	Finished:	10/14/20 16:00
By:	TWOODS	By:	TWOODS	By:	TWOODS	By:	TWOODS
Comments		Comments		Comments		Comments	

Comments:

Reviewed By: LKL Date: 10/19/2020

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
 Yes No



Analytical Results

ALS Environmental - Houston HRMS
10450 Standcliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Spectra Laboratories
Project: 2020090963
Sample Matrix: Wastewater
Sample Name: 090963-2
Lab Code: E2000936-001

Service Request: E2000936
Date Collected: 09/29/20 12:00
Date Received: 10/02/20 09:00
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1037mL
Data File Name: P622912
ICAL Date: 09/02/20

Date Analyzed: 10/16/20 20:02
Date Extracted: 10/12/20
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P622875
Cal Ver. File Name: P622909

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	3.81	4.82			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Spectra Laboratories
Project: 2020090963
Sample Matrix: Wastewater
Sample Name: 090963-2
Lab Code: E2000936-001

Service Request: E2000936
Date Collected: 09/29/20 12:00
Date Received: 10/02/20 09:00

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1037mL
Data File Name: P622912
ICAL Date: 09/02/20

Date Analyzed: 10/16/20 20:02
Date Extracted: 10/12/20
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P622875
Cal Ver. File Name: P622909

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	899.586	45		31-137	0.81	1.023
37Cl-2,3,7,8-TCDD	800	406.791	51		42-164	NA	1.024

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Spectra Laboratories
Project: 2020090963
Sample Matrix: Wastewater

Service Request: E2000936
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2000498-01

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1000.0mL

Date Analyzed: 10/15/20 12:19
Date Extracted: 10/12/20
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P622875
Cal Ver. File Name: P622872

Data File Name: P622875
ICAL Date: 09/02/20

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	3.99	5.00			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Spectra Laboratories
Project: 2020090963
Sample Matrix: Wastewater
Sample Name: Method Blank
Lab Code: EQ2000498-01

Service Request: E2000936
Date Collected: NA
Date Received: NA
Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1000.0mL
Data File Name: P622875
ICAL Date: 09/02/20

Date Analyzed: 10/15/20 12:19
Date Extracted: 10/12/20
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P622875
Cal Ver. File Name: P622872

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	953.956	48		31-137	0.78	1.023
37Cl-2,3,7,8-TCDD	800	326.884	41	Y	42-164	NA	1.024



Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

QA/QC Report

Client: Spectra Laboratories
Project: 2020090963
Sample Matrix: Wastewater

Service Request: E2000936
Date Analyzed: 10/15/20
Date Extracted: 10/12/20

Duplicate Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar

Units: pg/L
Basis: NA
Analysis Lot: 699628

Lab Control Sample
EQ2000498-02

Duplicate Lab Control Sample
EQ2000498-03

Analyte Name	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
2,3,7,8-TCDD	173	200	86	203	200	102	73-146	16	50

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Spectra Laboratories
Project: 2020090963
Sample Matrix: Wastewater

Service Request: E2000936
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2000498-02

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1000.0mL

Date Analyzed: 10/15/20 18:21
Date Extracted: 10/12/20
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P622875
Cal Ver. File Name: P622872

Data File Name: P622882
ICAL Date: 09/02/20

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	173		6.20	6.20	0.79	1.001	1

Analytical Report

Client: Spectra Laboratories
Project: 2020090963
Sample Matrix: Wastewater

Service Request: E2000936

Date Collected: NA

Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2000498-02

Units: Percent

Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1000.0mL

Date Analyzed: 10/15/20 18:21

Date Extracted: 10/12/20

Instrument Name: E-HRMS-08

GC Column: DB-5MSUI

Data File Name: P622882

Blank File Name: P622875

ICAL Date: 09/02/20

Cal Ver. File Name: P622872

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	995.672	50		31-137	0.78	1.024
37Cl-2,3,7,8-TCDD	800	329.432	41	Y	42-164	NA	1.024

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Spectra Laboratories
Project: 2020090963
Sample Matrix: Wastewater

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2000498-03

Service Request: E2000936
Date Collected: NA
Date Received: NA

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1000.0mL

Date Analyzed: 10/15/20 19:10
Date Extracted: 10/12/20
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P622875
Cal Ver. File Name: P622872

Data File Name: P622883
ICAL Date: 09/02/20

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	203		9.24	9.24	0.77	1.001	1

Analytical Report

Client: Spectra Laboratories

Service Request: E2000936

Project: 2020090963

Date Collected: NA

Sample Matrix: Wastewater

Date Received: NA

Sample Name: Duplicate Lab Control Sample

Units: Percent

Lab Code: EQ2000498-03

Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B

Date Analyzed: 10/15/20 19:10

Prep Method: Method Sep Funnel/Jar

Date Extracted: 10/12/20

Sample Amount: 1000.0mL

Instrument Name: E-HRMS-08

GC Column: DB-5MSUI

Data File Name: P622883

Blank File Name: P622875

ICAL Date: 09/02/20

Cal Ver. File Name: P622872

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	897.178	45		31-137	0.74	1.024
37Cl-2,3,7,8-TCDD	800	301.732	38	Y	42-164	NA	1.024

SPECTRA Laboratories

2221 Ross Way, Tacoma, WA 98421
(253) 272-4850 Fax (253) 572-9838
www.spectra-lab.com info@spectra-lab.com

SPECIAL INSTRUCTIONS/COMMENTS:

Shipped in 2 coolers

CHAIN of CUSTODY

SPECTRA PROJECT #

220090963

Return Samples ☒ Y ☐ N Page ☐ of ☐

STANDARD ☒ RUSH ☐

ADDRESS ☐ CHANGE ☐

CLIENT: Weyerhaeuser Raymond Lumber ADDRESS:

PROJECT: Priority Pollutant Scan

CONTACT: Nancy Wood Sigler

SAMPLED BY: Ron McGough

PHONE: 360-581-7824

e-MAIL:

PURCHASE ORDER #:

SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX
	9/29/2000	12:00	W 28

1

2

3

4

5

6

7

8

9

0

Bottles marked with
"C" are time composite
samples
Metals & Asbestos
BOD-CDD-
Ammonia
NUS

NUMBER OF CONTAINERS

HYDROCARBONS				ORGANICS				METALS				OTHER			
NWTPH-HClD	BTEX	BTEX/NWTPH-G	NWTPH-G	NWTPH-DX	1664 SGT-HEM (TPH)	1664 HEM (FOG)	8260/624 VOA	8260 CHLOR SOLVENTS	8270/625 SEMI VOA	8270 PAH/PNA	8082/808 PCB	TOTAL METALS RCRA 8	TOTAL METALS (SPECIFY)	TCLP METALS RCRA 8	TCLP METALS (SPECIFY)

X

SIGNATURE

PRINTED NAME

COMPANY

DATE

TIME

RELINQUISHED BY

RECEIVED BY

RELINQUISHED BY

RECEIVED BY

t=4.3°C

Ron McGough

Ron McGough

Weyerhaeuser

9-29-20

12:00pm

1030

Spectra

9/30/20

Payment Terms: Net 30 days. Past due accounts subject to 1 1/2 % per month interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other costs of collection regardless of whether suit is filed in Pierce Co., WA venue. Spectra Analytical, LLC