

Issuance Date: February 23, 2018
Effective Date: April 1, 2018
Expiration Date: March 31, 2023

**National Pollutant Discharge Elimination System
Waste Discharge Permit No. WA0003697**

State of Washington
Department of Ecology

Industrial Section
PO Box 47600
Olympia, WA 98504-7600

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1342 et seq.

Boise White Paper, L.L.C.
P.O. Box 500
Wallula, WA 99363

is authorized to discharge in accordance with the Special and General Conditions that follow.

<u>Facility Location:</u> State Highway 12 Wallula, Washington	<u>Receiving Water:</u> Columbia River
<u>Treatment Type:</u> Primary clarification followed by secondary treatment in two-cell aerated stabilization basin	<u>SIC Code:</u> 2611 pulp mill, 2631 paperboard mill, 2621 paper mills, 2653 corrugated fiber box plant <u>NAICS Code:</u> 322110, Pulp Mills
<u>Industry Type:</u> Bleached kraft Pulp and Paper Mill	<u>Categorical Industry:</u> Pulp, Paper, and Paperboard

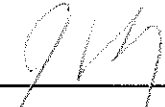

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Summary of Permit Report Submittals

Refer to the Special and General Conditions of this permit for additional submittal requirements.

Permit Section	Submittal	Frequency	First Submittal Date
S1.C.b	Notification of Future Additional Discharges	As necessary	
S3.A	Discharge Monitoring Report (Monthly DMR)	Monthly	May 15, 2018
S3.A	Discharge Monitoring Report (Quarterly DMR)	Quarterly	July 15, 2018
S3.A	Discharge Monitoring Report (Annual DMR)	Annually	January 15, 2019
S3.A	Discharge Monitoring Report - Effluent Characterization Data (Single Sample DMR)	Annually for 2 nd , 3 rd , and 4 th years of permit cycle	April 15, 2020
S3.A	Discharge Monitoring Report – Chlorinated Organics – Bleach Plant Effluent	1/permit cycle	September 30, 2022
S3.F	Reporting Permit Violations	As necessary	
S3.G	Other Reporting	As necessary	
S4.A	Operations and Maintenance Manual	1/permit cycle, update as necessary	October 1, 2018 (within 6 months of permit issuance)
S4.B	Reporting Bypasses	As necessary	
S5.C	Solid Waste Control Plan	1/permit cycle, update as necessary	September 30, 2022
S6	Application for Permit Renewal	1/permit cycle	No later than September 30, 2022
S7	Non-Routine and Unanticipated Discharges	As necessary	
S8.A	Spill Control Plan Changes	As necessary	
S9	Best Management Practices Report	Annually	January 31, 2019
S10	Sediment Sampling and Analyses Plan	1/permit cycle	By April 1, 2021
S10	Sediment Data Report	1/permit cycle	Within six months of the end of the sampling period but no later than September 30, 2022
S11	Outfall Evaluation	1/permit cycle	September 30, 2022

Permit Section	Submittal	Frequency	First Submittal Date
S12	Acute Toxicity Effluent Test Results - Submit with Permit Renewal Application	1/summer and 1/winter within 2 years of permit expiration	September 30, 2022
S13	Chronic Toxicity Effluent Test Results- Submit with Permit Renewal Application	1/summer and 1/winter within 2 years of permit expiration	September 30, 2022
S14	Design Criteria Exceedances Notification	As necessary	
S15.A	Significant Impingement or Entrainment Events	As necessary	
S16.1	Stormwater Runoff Corrective Action Plan	As necessary	
S16.2	Stormwater Best Management Practices Plan (SMBP)	1/permit cycle	March 31, 2019
S16.3	Stormwater Inspection Report	Annually	September 1, 2019
G1	Notice of Change in Authorization	As necessary	
G4	Permit Application for Substantive Changes to the Discharge	As necessary	
G5	Engineering Report for Construction or Modification Activities	As necessary	
G7	Notice of Permit Transfer	As necessary	
G10	Duty to Provide Information	As necessary	
G20	Notice of Discharge of Toxic Pollutants	As necessary	
G21	Compliance Schedules	As necessary	

Special Conditions

S1. Discharge Limits

S1.A. Process Wastewater Discharges

All discharges and activities authorized by this permit must be consistent with the terms and conditions of this permit.

The discharge of any of the following pollutants more frequently than, or at a level in excess of that identified and authorized by this permit violates the terms and conditions of this permit.

Beginning on the effective date of this permit, the Permittee is authorized to discharge wastewater containing pollutants resulting from all operations at the Boise Wallula mill, including storm water runoff, to the Columbia River at the permitted location subject to complying with the following limits:

Effluent Limits: Outfall 001		
Latitude 46.08408 Longitude -118.94822		
Parameter	Average Monthly ^a	Maximum Daily ^b
Biochemical Oxygen Demand (5-day) (BOD5), lbs/day	14,671	28,124
Total Suspended Solids (TSS), lbs/day	31,307	60,505
Adsorbable Organic Halides (AOX) ^d , lbs/day	1,164	1,776
	Average Annual	Maximum Daily ^b
2,3,7,8-TCDD ^e , mg/day	0.25	0.37
	Daily Minimum	Maximum
pH	≥ 6.0 standard units	≤ 9.0 standard units
a	Average monthly effluent limit means the highest allowable average of daily discharges over a calendar month. To calculate the discharge value to compare to the limit, you add the value of each daily discharge measured during a calendar month and divide this sum by the total number of daily discharges measured.	
b	Maximum daily effluent limit is the highest allowable daily discharge. The daily discharge is the average discharge of a pollutant measured during a calendar day. For pollutants with limits expressed in units of mass, calculate the daily discharge as the total mass of the pollutant discharged over the day. This does not apply to pH or temperature.	

c	When pH is continuously monitored, excursions between 5.0 and 6.0, or 9.0 and 10.0 are not be considered violations if no single excursion exceeds 60 minutes in length and total excursions do not exceed 7 hours and 26 minutes per month. Any excursions below 5.0 and above 10.0 at any time are violations.
d	AOX is defined as adsorbable organic halides. Analysis must be conducted in accordance with Method 1650. Adsorbable Organic Halides by Adsorption and Coulometric Titration, Revision B, October 1993, or equivalent method approved by the permitting authority. The Permittee shall report date sampled, AOX concentration (mg/L), effluent flow (MGD), AOX lbs/day, and daily unbleached pulp production (ADT) to first stage bleaching.
e	2,3,7,8-TCDD is 2,3,7,8-tetrachlorodibenzo-p-dioxin. Analysis including sample containers and QA/QC must be conducted in accordance with Method 1613: Tetra-through Octa- chlorinated Dioxin and Furans by Isotopic Dilution HRGC/HRMS, USEPA Office of Water, Engineering and Analysis Division, Revision A or an approved equivalent method. The Permittee must achieve a detection level less than or equal to 5 pg/L at secondary effluent. Compliance with the mass loading 2,3,7,8 TCDD daily limit shall be demonstrated if the 2,3,7,8 TCDD concentration is 5 parts per quadrillion (ppq) or less, or non-detect at a detection limit of 5 ppq or less. In the event that the sample is non-detect at a detection limit greater than minimum level, the Permittee must re-initiate sample collection and analyze for permit compliance as defined above. The original sample(s) shall be discarded.

S1.B Bleach Plant Effluent Discharge at Effective Date

All discharges and activities authorized by this permit must be consistent with the terms and conditions of this permit.

The discharge of any of the following pollutants more frequently than, or at a level in excess of that identified and authorized by this permit violates the terms and conditions of this permit.

Beginning on the effective date of this permit, the Permittee is authorized to discharge wastewater containing pollutants resulting from all operations at the Boise Wallula mill subject to complying with the following limits:

Effluent Limits for Bleach Plant Discharge			
Parameter	Units	Monthly Average ^a	Daily Maximum ^b
2,3,7,8-TCDD ^d	pg/L	NA	<ML ^c (5)
2,3,7,8-TCDF ^e	pg/L	NA	31.9
Chloroform ^{f, g}	lbs/day	8.09	13.52
Trichlorosyringol	µg/L	NA	<ML ^c (2.5)
3,4,5-trichlorolcatechol	µg/L	NA	<ML ^c (5.0)

Effluent Limits for Bleach Plant Discharge			
Parameter	Units	Monthly Average ^a	Daily Maximum ^b
3,4,6-trichlorocatechol	µg/L	NA	<ML ^c (5.0)
3,4,5-trichlorolguaiacol	µg/L	NA	<ML ^c (2.5)
3,4,6-trichlorolguaiacol	µg/L	NA	<ML ^c (2.5)
4,5,6-trichlorolguaiacol	µg/L	NA	<ML ^c (2.5)
2,4,5-trichlorolphenol	µg/L	NA	<ML ^c (2.5)
3,4,6-trichlorolphenol	µg/L	NA	<ML ^c (2.5)
Tetrachlorocatechol	µg/L	NA	<ML ^c (5.0)
Tetrachloroguaiacol	µg/L	NA	<ML ^c (5.0)
2,3,4,6-tetrachlorolphenol	µg/L	NA	<ML ^c (2.5)
Pentachlorophenol	µg/L	NA	<ML ^c (5.0)
a	Average monthly effluent limit means the highest allowable average of daily discharges over a calendar month. To calculate the discharge value to compare to the limit, you add the value of each daily discharge measured during a calendar month and divide this sum by the total number of daily discharges measured. If only one sample is taken during the calendar month, the maximum daily effluent limitation applies to that sample.		
b	Maximum daily effluent limit is the highest allowable daily discharge. The daily discharge is the average discharge of a pollutant measured during a calendar day. For pollutants with limits expressed in units of mass, calculate the daily discharge as the total mass of the pollutant discharged over the day. This does not apply to pH or temperature.		
c	For the purpose of reporting, if a value is less than the minimum level (ML), the Permittee must report the minimum level for the parameter. ML represents the minimum level (as defined in 40 CFR 430.01(i)) for this pollutant.		
d	2,3,7,8-TCDD is 2,3,7,8-tetrachlorodibenzo-p-dioxin. Analysis including sample containers and QA/QC must be conducted in accordance with Method 1613: Tetra-through Octa- chlorinated Dioxin and Furans by Isotopic Dilution HRGC/HRMS, USEPA Office of Water, Engineering and Analysis Division, Revision A or an approved equivalent method. The Permittee must achieve a detection level less than or equal to 5 pg/L. In the event that the sample is non-detect at a detection limit greater than minimum level, the Permittee shall re-initiate sample collection and analyze.		
e	2,3,7,8-TCDF is 2,3,7,8-tetrachlorodibenzofuran. Analysis including sample containers and QA/QC must be conducted in accordance with Method 1613B: Tetra- through Octa- chlorinated Dioxin and Furans by Isotopic Dilution HRGC/HRMS, USEPA Office of Water, Engineering and Analysis Division, Revision A or an approved equivalent method.		
f	Analysis for chloroform shall be conducted in accordance with EPA Method 624 or equivalent. The Permittee shall report date sampled, chloroform concentration (mg/L), bleach plant effluent flow (MGD), lbs/day chloroform, and daily unbleached pulp production (ADT) to first stage bleaching.		

Effluent Limits for Bleach Plant Discharge			
Parameter	Units	Monthly Average ^a	Daily Maximum ^b
g	The twenty four hour composite sampling for chloroform shall consist of a minimum of four individual samples collected during a twenty four hour period and quantitatively composited in the laboratory. The Permittee shall include a detailed description of the method used to composite the samples where there is a modification of the compositing method. If an automated continuous or grab compositing device is used, the report shall include a description of the system and the name of the manufacturer.		

S1.C Integral/Future Additional Discharges

a. Integral Discharges

In addition to the wastewater from the Boise Wallula facility, the Permittee is authorized to accept waste streams for treatment, elementary neutralization, and final discharge from the integral production facilities at the site identified as the de-ink facility (no longer in operation), the calcium carbonate plant, Shared Technical Services (STS) facility, and the container plant. The effluent limits for Outfall 001 will apply to the final effluent for all combinations of effluent from the pulp and paper mill and these integral facilities.

The Permitted is also authorized to collect and treat storm water from the Specialty Minerals property through the wastewater treatment process and discharge treated storm water as part of the process discharge. The Permittee may collect storm water at the de-inking facility property in evaporation ponds at that site or treat it in the Boise wastewater treatment system.

The Permitted is authorized to discharge tank and vessels residuals to the process sewers and waste treatment system for the purposes of maintaining such process equipment as long as the wastewater treatment process is not upset or overloaded and the discharge limits for the facility are not exceeded. Tank or vessel contents shall be minimized to the extent practicable prior to any such discharge to the process sewers.

b. Future Additional Discharges

The Permittee must notify Ecology at least 180 days prior to accepting wastewater or stormwater from any additional discharges not specified by S1.C.a. Boise Wallula must provide the following information in the notification:

1. Name of the discharging facility.
2. A description of the industrial process at the facility.
3. The location of the facility.

4. A description of the proposed discharge(s) including sources, characteristics, and estimated volumes.
5. How the discharge will be treated.
6. Information about how the discharge(s) will be permitted.

If the proposed discharge(s) will be conveyed to the Permittee's wastewater treatment system for treatment or through the Permittee's outfall, the Permittee must submit a revised NPDES permit application identifying this as an additional source. Ecology may require the Permittee to submit an engineering analysis that evaluates the impact of the new waste stream on the Permittee's wastewater treatment system and outfall.

S1.D. Mixing Zone Authorization

Mixing Zone for Outfall 001

The paragraph below defines the maximum boundaries of the mixing zones.

Chronic Mixing Zone

The width of the chronic mixing zone is limited to a distance of 50 feet (15.24 meters). The length of the chronic mixing zone extends 100 feet (30.48 meters) upstream and 358 feet (109.12 meters) downstream of the outfall. The mixing zone extends from the bottom to the top of the water column. The concentration of pollutants at the edge of the chronic zone must meet chronic aquatic life criteria and human health criteria.

Acute Mixing Zone

The width of the acute mixing zone is limited to a distance of 35.8 feet (10.91 meters) in any horizontal direction from the outfall. The length of the acute mixing zone extends 10 feet (3.05 meters) upstream and 35.8 feet (10.91 meters) downstream of the outfall. The mixing zone extends from the bottom to the top of the water column. The concentration of pollutants at the edge of the acute zone must meet acute aquatic life criteria.

Available Dilution (dilution factor)	
Acute Aquatic Life Criteria	61.2:1
Chronic Aquatic Life Criteria	254.8:1
Human Health Criteria - Carcinogen	254.8:1
Human Health Criteria - Non-carcinogen	254.8:1

S2. Monitoring Requirements

S2.A. Monitoring Schedule

The Permittee must monitor in accordance with the following schedule and the requirements specified in **Appendix A**.

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
(1) Secondary Influent ^m			
BOD5 ^b	mg/L	At least 1/week	24-hour Composite ⁿ
	lbs/day	Monthly average	Calculated ^b
(2) Secondary Effluent ^{a,b}			
BOD5 ^b	mg/L	At least 3/week	24-hour Composite ⁿ
	lbs/day	At least 3/week	Calculated ^b
TSS ^b	mg/L	At least 3/week	24-hour Composite ⁿ
	lbs/day	At least 3/week	Calculated ^b
AOX	mg/L	Quarterly ¹	24-hour Composite ⁿ
	lbs/day	Quarterly ¹	Calculated ^b
2,3,7,8-TCDD ^h	pg/ L	Annually	24-hour Composite ⁿ
2,3,7,8-TCDF ^h	pg/ L	Annually	24-hour Composite ⁿ
(3) Final Effluent ^a			
Flow	million gallons/day (mgd)	Daily	Continuous Recording ^c
pH ^d	Standard Units	Continuous ^c	Metered
	Standard Units	Daily Minimum and Daily Maximum	Recorded and Reported
	Minutes	Once per defined event	Duration pH excursion
Temperature	degrees Fahrenheit (°F)	Continuous ^c	Continuous Recording ^c
		Monthly Average and Maximum Day Value	Calculated
(4) Bleach Plant Influent			
Kraft Pulp Production	ADT/Day	Daily	Recorded and Reported
(5) Bleach Plant Effluent			
2,3,7,8-TCDD ^h	pg/ L	Quarterly ¹	24-hour Composite ⁿ
2,3,7,8-TCDF ^h	pg/ L	Quarterly ¹	24-hour Composite ⁿ
Chloroform	µg/ L	Once per permit cycle ^g	24-hour Composite ⁿ

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
	lbs/day	Once per permit cycle ^g	Calculated ^b
Trichlorosyringol	μg/ L	Once per permit cycle ^g	24-hour Composite ⁿ
3,4,5-trichlorolcatechol			
3,4,6-trichlorolcatechol			
3,4,5-trichlorolguaiacol			
3,4,6-trichlorolguaiacol			
4,5,6-trichlorolguaiacol			
2,4,5-trichlorolphenol			
3,4,6-trichlorolphenol			
Tetrachlorocatechol			
Tetrachloroguaiacol			
2,3,4,6-tetrachlorophenol			
Pentachlorophenol			
(6) At the Reel ^e			
Paper Production	MDT/Day ^e	Daily	Recorded
(7) Primary Sludge			
2,3,7,8-TCDD ^h	ng/Kg	Annually	Grab ^j
2,3,7,8-TCDF ^h	ng/Kg	Annually	Grab ^j
(8) Effluent Characterization (With Permit Renewal Application): The Permittee must sample the final process wastewater effluent at Outfall 001 and analyze for the following priority pollutants as identified in Appendix A ⁱ . The Permittee must submit the results as specified for annual DMRS by Condition S3.A below.			
Cyanide	μg/L	Annual in 2 nd , 3 rd , and 4 th year of permit cycle	Grab ^j
Total Phenolic Compounds	μg/L	Annual in 2 nd , 3 rd , and 4 th year of permit cycle	Grab ^j
Priority Pollutants (PP) – Total Metals	μg/L; ng/L for mercury	Annual in 2 nd , 3 rd , and 4 th year of permit cycle	24-hour Composite ⁿ ; Grab for mercury ^j

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
PP – Volatile Organic Compounds	µg/L	Annual in 2 nd , 3 rd , and 4 th year of permit cycle	Grab ^j
PP – Acid-extractable Compounds	µg/L	Annual in 2 nd , 3 rd , and 4 th year of permit cycle	24-hour Composite ⁿ
PP – Base-neutral Compounds	µg/L	Annual in 2 nd , 3 rd , and 4 th year of permit cycle	24-hour Composite ⁿ
PP – Dioxin	pg/L	Annual in 2 nd , 3 rd , and 4 th year of permit cycle	24-hour Composite ⁿ
PP – Pesticides/PCBs	µg/L	Annual in 2 nd and 3 rd year of permit cycle, when used on-site ^k	24-hour Composite ⁿ
PP – Pesticides/PCBs	µg/L	Annual in 4 th year of permit cycle	24-hour Composite ⁿ

Footnotes

a	Effluent sampling points shall be defined as follows: 1) Final effluent is that effluent stream after the treated effluent from the wastewater treatment system and non-contact cooling water are combined and 2) Secondary effluent shall be treated effluent from the wastewater treatment system prior to the combination with any other streams.
b	Mass discharge calculations for BOD, TSS, and AOX are done on the basis of secondary treatment flow times secondary treatment effluent concentrations. Mass discharge calculations for Chloroform are done on the basis of bleach plant effluent flow times bleach plant effluent concentration.
c	Continuous means uninterrupted except for brief lengths of time for calibration, power failure, or unanticipated equipment repair or maintenance. The time interval for the associated data logger must be no greater than 30 minutes. The Permittee must sample at least once per day when continuous monitoring is not possible.
d	The Permittee must report the instantaneous maximum and minimum pH monthly. Do not average pH values. The Permittee must record and report the: <ul style="list-style-type: none"> • Number of minutes the pH value measured between 5.0 and 6.0 and between 9.0 and 10.0 for each day. • Total minutes for the month. • Monthly instantaneous maximum and minimum pH.
e	As described in 40 CFR Part 430, machine dry tons are based on normal moisture content at the reel for each paper machine which is: No. 1 (10%), No. 2 (10%), and No. 3 (4-6%). Machine tons are on the basis of gross production at the reel.

f	AOX monitoring frequency may be adjusted by Ecology five years from the effective date of the previous permit term (October 2, 2006) as allowed in 63 FR 18572, April 15, 1998.
g	Upon satisfactory demonstration of compliance with the chloroform standard, or upon monthly certification of 100% ClO ₂ substitution for Cl ₂ in the bleaching process. The monthly certification may be addressed in the monthly DMR submittal.
h	2,3,7,8-TCDD is 2,3,7,8-tetrachlorodibenzo-p-dioxin and 2,3,7,8-TCDF is 2,3,7,8 tetrachlorodibenzofuran. Analysis including sample containers and QA/QC shall be conducted in accordance with Method 1613B: Tetra- through Octa- chlorinated Dioxin and Furans by Isotopic Dilution HRGC/HRMS, USEPA Office of Water, Engineering and Analysis Division, Revision A or an approved equivalent method.
i	See Appendix A for the required detection (DL) or quantitation (QL) levels. Report single analytical values below detection as “less than (detection level)” where (detection level) is the numeric value specified in attachment A. Report single analytical values between the agency-required detection and quantitation levels with qualifier code of j following the value.
j	Grab means an individual sample collected over a fifteen (15) minute, or less, period.
k	For years 2 and 3 of the permit, the PCBs and pesticides listed in Appendix A are not required to be tested for unless they are used at the facility.
l	Quarterly means once every calendar quarter.
m	Influent to the ASB means the wastewater that is discharged to the inlet of the aerated stabilization basin.
n	24-hour composite means a series of individual samples collected over a 24-hour period into a single container, and analyzed as one sample.
o	Annually means once every calendar year

S2.B. Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this permit must represent the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality.

Sampling and analytical methods used to meet the monitoring requirements specified in this permit must conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136 (or as applicable in 40 CFR subchapters N [Parts 400–471] or O [Parts 501-503]) unless otherwise specified in this permit. Ecology may only specify alternative methods for parameters without limits and for those parameters without an EPA approved test method in 40 CFR Part 136.

S2.C. Flow Measurement, Field Measurement, and Continuous Monitoring Devices

The Permittee must:

1. Select and use appropriate flow measurement, field measurement, and continuous monitoring devices and methods consistent with accepted scientific practices.
2. Install, calibrate, and maintain these devices to ensure the accuracy of the measurements is consistent with the accepted industry standard, the manufacturer's recommendation, and approved O&M manual procedures for the device and the wastestream.
3. Calibrate continuous monitoring instruments weekly unless it can demonstrate a longer period is sufficient based on monitoring records. The Permittee:
 - a. May calibrate apparatus for continuous monitoring of dissolved oxygen by air calibration.
 - b. Must calibrate continuous pH measurement instruments using a grab sample analyzed in the lab with a pH meter calibrated with standard buffers and analyzed within 15 minutes of sampling.
 - c. Must calibrate continuous chlorine measurement instruments using a grab sample analyzed in the laboratory within 15 minutes of sampling.
4. Calibrate micro-recording temperature devices, known as thermistors, using protocols from Ecology's Quality Assurance Project Plan Development Tool (*Standard Operating Procedures for Continuous Temperature Monitoring of Fresh Water Rivers and Streams Version 1.0 10/26/2011*). This document is available online at:
<https://fortress.wa.gov/ecy/publications/SummaryPages/1703216.html>
Calibration as specified in this document is not required if the Permittee uses recording devices certified by the manufacturer.

5. Use field measurement devices as directed by the manufacturer and do not use reagents beyond their expiration dates.
6. Establish a calibration frequency for each device or instrument in the O&M manual that conforms to the frequency recommended by the manufacturer.
7. Calibrate flow-monitoring devices at a minimum frequency of at least one calibration per year.
8. Maintain calibration records for at least three years.

S2.D. Laboratory Accreditation

The Permittee must ensure that all monitoring data required by Ecology for permit specified parameters is prepared by a laboratory registered or accredited under the provisions of chapter 173-50 WAC, *Accreditation of Environmental Laboratories*. Flow, temperature, settleable solids, conductivity, pH, and internal process control parameters are exempt from this requirement. The Permittee must obtain accreditation for conductivity and pH if it must receive accreditation or registration for other parameters.

S2.E. Request for Reduction in Monitoring

The Permittee may request a reduction of the sampling frequency after twelve (12) months of monitoring. Ecology will review each request and at its discretion grant the request when it reissues the permit or by a permit modification.

The Permittee must:

1. Provide a written request. Clearly state the parameters for which it is requesting reduced monitoring.
2. Clearly state the justification for the reduction.

S3. Reporting and Recording Requirements

The Permittee must monitor and report in accordance with the following conditions. Falsification of information submitted to Ecology is a violation of the terms and conditions of this permit.

S3.A. Discharge Monitoring Reports

The first monitoring period begins on the effective date of the permit (unless otherwise specified). The Permittee must:

1. Summarize, report, and submit monitoring data obtained during each monitoring period on the electronic discharge monitoring report (DMR) form provided by Ecology within the Water Quality Permitting Portal. Include data for each of the parameters tabulated in Special Condition S2 and as required by the form. Report a value for each day sampling occurred (unless specifically exempted in the permit) and for the summary values (when applicable) included on the electronic form.

To find out more information and to sign up for the Water Quality Permitting Portal go to: ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-database.

2. Enter the “No Discharge” reporting code for an entire DMR, for a specific monitoring point, or for a specific parameter as appropriate, if the Permittee did not discharge wastewater or a specific pollutant during a given monitoring period.
3. Report single analytical values below detection as “less than the detection level (DL)” by entering < followed by the numeric value of the detection level (e.g. < 2.0) on the DMR. If the method used did not meet the minimum DL and quantitation level (QL) identified in the permit, report the actual QL and DL in the comments or in the location provided.
4. Report single analytical values between the detection level (DL) and the quantitation level (QL) by entering the estimated value, the code for estimated value/below quantitation limit (j) and any additional information in the comments. Submit a copy of the laboratory report as an attachment using WQWebDMR.
5. Report the test method used for analysis in the comments if the laboratory used an alternative method not specified in the permit and as allowed in Appendix A OR S2.
6. Calculate average values and calculated total values (unless otherwise specified in the permit) using:
 - a. The reported numeric value for all parameters measured between the agency-required detection value and the agency-required quantitation value.
 - b. One-half the detection value (for values reported below detection) if the lab detected the parameter in another sample from the same monitoring point for the same reporting period.
 - c. Zero (for values reported below detection) if the lab did not detect the parameter in another sample for the reporting period.
7. Report single-sample grouped parameters (for example: priority pollutants, PAHs, pulp and paper chlorophenolics, TTOs) on the WQWebDMR form and include: sample date, concentration detected, detection limit (DL) (as necessary), and laboratory quantitation level (QL) (as necessary).

The Permittee must also submit an electronic copy of the laboratory report as an attachment using WQWebDMR. The contract laboratory reports must also include information on the chain of custody, QA/QC results, and documentation of accreditation for the parameter.

8. Ensure that DMRs are electronically submitted no later than the dates specified below, unless otherwise specified in this permit.

9. Submit DMRs for parameters with the monitoring frequencies specified in S2 (monthly, quarterly, annual, etc.) at the reporting schedule identified below. The Permittee must:
 - a. Submit **monthly** DMRs by the 15th day of the following month.
 - b. Submit **quarterly DMRs**, unless otherwise specified in the permit, by the 15th day of the month following the monitoring period. Quarterly sampling periods are January through March, April through June, July through September, and October through December.
 - c. Submit **annual DMRs**, unless otherwise specified in the permit, by January 15 for the previous calendar year. The annual sampling period is the calendar year.

S3.B. Permit Submittals and Schedules

The Permittee must use the Water Quality Permitting Portal – Permit Submittals application (unless otherwise specified in the permit) to submit all other written permit-required reports by the date specified in the permit.

When another permit condition requires submittal of a paper (hard-copy) report, the Permittee must ensure that it is postmarked or received by Ecology no later than the dates specified by this permit. Send these paper reports to Ecology at:

Water Quality Permit Coordinator
Department of Ecology
Industrial Section
PO Box 47600
Olympia, WA 98504-7600

S3.C. Records Retention

The Permittee must retain records of all monitoring information for a minimum of three (3) years. Such information must include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. The Permittee must extend this period of retention during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology.

S3.D. Recording of Results

For each measurement or sample taken, the Permittee must record the following information:

1. The date, exact place, method, and time of sampling or measurement.
2. The individual who performed the sampling or measurement.
3. The dates the analyses were performed.

4. The individual who performed the analyses.
5. The analytical techniques or methods used.
6. The results of all analyses.

S3.E. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by Special Condition S2 of this permit, then the Permittee must include the results of such monitoring in the calculation and reporting of the data submitted in the Permittee's DMR unless otherwise specified by Special Condition S2.

S3.F. Reporting Permit Violations

The Permittee must take the following actions when it violates or is unable to comply with any permit condition:

1. Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the noncompliance and correct the problem.
2. If applicable, immediately repeat sampling and analysis. Submit the results of any repeat sampling to Ecology within thirty (30) days of sampling.

a. Immediate Reporting

The Permittee must immediately report to the Department of Ecology and the Department of Health, Drinking Water Program (at the numbers listed below), all:

Collection system overflows discharging to a water body used as a source of drinking water.

Plant bypasses discharging to a waterbody used as a source of drinking water.

Department of Health,	800-521-0323 (business hours)
Drinking Water Program	877-481-4901 (after business hours)

b. Twenty-Four-Hour Reporting

The Permittee must report the following occurrences of noncompliance by telephone, to Ecology within 24 hours from the time the Permittee becomes aware of any of the following circumstances:

1. Any noncompliance that may endanger health or the environment, unless previously reported under immediate reporting requirements.
2. Any unanticipated bypass that causes an exceedance of any effluent limit in the permit (See Part S4.B., "Bypass Procedures").
3. Any upset that causes an exceedance of an effluent limit in the permit (See G.15, "Upset").

4. Any violation of a maximum daily or instantaneous maximum discharge limit for any of the pollutants in Section S1.A of this permit.
5. Any overflow prior to the treatment works, whether or not such overflow endangers health or the environment or exceeds any effluent limit in the permit. This requirement does not include industrial process wastewater overflows to impermeable surfaces which are collected and routed to the treatment works.

c. Report Within Five Days

The Permittee must also submit a written report within five days of the time that the Permittee becomes aware of any reportable event under subparts a or b, above. The report must contain:

1. A description of the noncompliance and its cause.
2. The period of noncompliance, including exact dates and times.
3. The estimated time the Permittee expects the noncompliance to continue if not yet corrected.
4. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
5. If the noncompliance involves an overflow prior to the treatment works, an estimate of the quantity (in gallons) of untreated overflow.

d. Waiver of Written Reports

Ecology may waive the written report required in subpart c, above, on a case-by-case basis upon request if the Permittee has submitted a timely oral report.

e. All Other Permit Violation Reporting

The Permittee must report all permit violations, which do not require immediate or within 24 hours reporting, when it submits monitoring reports for S3.A ("Reporting"). The reports must contain the information listed in subpart c, above. Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

S3.G. Other Reporting

a. Spills of Oil or Hazardous Materials

The Permittee must report a spill of oil or hazardous materials in accordance with the requirements of RCW 90.56.280 and chapter 173-303-145. You can obtain further instructions at the following website: ecology.wa.gov/About-us/Get-involved/Report-an-environmental-issue/Report-a-spill

b. Failure to Submit Relevant or Correct Facts

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to Ecology, it must submit such facts or information promptly.

S3.H. Maintaining a Copy of This Permit

The Permittee must keep a copy of this permit at the facility and make it available upon request to Ecology inspectors.

S4. Operation and Maintenance

The Permittee must, at all times, properly operate and maintain all facilities or systems of treatment and control (and related appurtenances), which are installed to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes keeping a daily operation logbook (paper or electronic), adequate laboratory controls, and appropriate quality assurance procedures. This provision of the permit requires the Permittee to operate backup or auxiliary facilities or similar systems only when the operation is necessary to achieve compliance with the conditions of this permit.

The Permittee must schedule any facility maintenance, which might require interruption of wastewater treatment and degrade effluent quality, during non-critical water quality periods and carry this maintenance out according to the approved O&M manual or as otherwise approved by Ecology.

S4.A Operations and Maintenance (O&M) Manual

a. O&M Manual Submittal and Requirements

The Permittee must:

1. Update the O&M Manual that meets the requirements of WAC 173-240-150 and submit it to Ecology for approval no later than **October 1, 2018**.
2. Submit to Ecology for review substantial changes or updates to the O&M Manual whenever it incorporates them into the manual.
3. Keep the approved O&M Manual at the permitted facility.
4. Follow the instructions and procedures of this manual.

b. O&M Manual Components

In addition to the requirements of WAC 173-240-150, the O&M Manual must include:

1. Emergency procedures for plant shutdown and cleanup in the event of a wastewater system upset or failure.

2. A review of system components which if failed could pollute surface water or could impact human health. Provide a procedure for a routine schedule of checking the function of these components.
3. Wastewater sampling protocols and procedures for compliance with the sampling and reporting requirements in the wastewater discharge permit.
4. Minimum staffing adequate to operate and maintain the treatment processes and carry out compliance monitoring required by the permit.
5. Treatment plant process control monitoring schedule.
6. A baseline operating condition, which describes the operating parameters and procedures, used to meet the effluent limitations of S1 at the production levels used in developing these limitations.
7. In the event of production rates, which are below the baseline levels used to establish these limitations, the plan shall describe the operating procedures and conditions needed to maintain design treatment efficiency. The monitoring and reporting shall be described in the plan.
8. In the event of an upset, due to plant maintenance activities, severe storm water events, startups or shut downs, power outages, or other causes, the plan shall describe the operating procedures and conditions employed to mitigate the upset. The monitoring and reporting shall be described in the plan.
9. A description of any regularly scheduled maintenance or repair activities at the facility which would affect the volume or character of the wastes discharged to the wastewater treatment system and a plan for monitoring and treating/controlling the discharge of maintenance-related materials (such as cleaners, degreasers, solvents, etc.).
10. Wastewater system maintenance procedures that contribute to the generation of process wastewater.
11. Any directions to maintenance staff when cleaning, or maintaining other equipment or performing other tasks which are necessary to protect the operation of the wastewater system (for example, defining maximum allowable discharge rate for draining a tank, blocking all floor drains before beginning the overhaul of a stationary engine).

S4.B. Bypass Procedures

A bypass is the intentional diversion of waste streams from any portion of a treatment facility. This permit prohibits all bypasses except when the bypass is for essential maintenance, as authorized in special condition S4.B.1, or is approved by Ecology as an anticipated bypass following the procedures in S4.B.2.

1. Bypass for essential maintenance without the potential to cause violation of permit limits or conditions.

This permit allows bypasses for essential maintenance of the treatment system when necessary to ensure efficient operation of the system. The Permittee may bypass the treatment system for essential maintenance only if doing so does not cause violations of effluent limits. The Permittee is not required to notify Ecology when bypassing for essential maintenance. However the Permittee must comply with the monitoring requirements specified in special condition S2.B.

2. Anticipated bypasses for non-essential maintenance

Ecology may approve an anticipated bypass under the conditions listed below. This permit prohibits any anticipated bypass that is not approved through the following process.

- a. If a bypass is for non-essential maintenance, the Permittee must notify Ecology, if possible, at least ten (10) days before the planned date of bypass. The notice must contain:
 - A description of the bypass and the reason the bypass is necessary.
 - An analysis of all known alternatives which would eliminate, reduce, or mitigate the potential impacts from the proposed bypass.
 - A cost-effectiveness analysis of alternatives.
 - The minimum and maximum duration of bypass under each alternative.
 - A recommendation as to the preferred alternative for conducting the bypass.
 - The projected date of bypass initiation.
 - A statement of compliance with SEPA.
 - A request for modification of water quality standards as provided for in WAC 173-201A-410, if an exceedance of any water quality standard is anticipated.
 - Details of the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.
- b. For probable construction bypasses, the Permittee must notify Ecology of the need to bypass as early in the planning process as possible. The Permittee must consider the analysis required above during the project planning and design process. The project-specific engineering report as well as the plans and specifications must include details of probable construction bypasses to the extent practical. In cases where the Permittee determines the probable need to bypass early, the Permittee must continue to analyze conditions up to and including the construction period in an effort to minimize or eliminate the bypass.

- c. Ecology will determine if the Permittee has met the conditions of special condition S4.B.2 a and b and consider the following prior to issuing a determination letter, an administrative order, or a permit modification as appropriate for an anticipated bypass:
- If the Permittee planned and scheduled the bypass to minimize adverse effects on the public and the environment.
 - If the bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. “Severe property damage” means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
 - If feasible alternatives to the bypass exist, such as:
 - The use of auxiliary treatment facilities.
 - Retention of untreated wastes.
 - Stopping production.
 - Maintenance during normal periods of equipment downtime, but not if the Permittee should have installed adequate backup equipment in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance.
 - Transport of untreated wastes to another treatment facility.

S4.C. Tank and Process Vessel Maintenance

The Permittee is authorized to discharge tank and vessels residuals to the process sewers and waste treatment system for the purposes of maintaining such process equipment as long as the discharge limits for the facility in S1.A. are not exceeded. Tank or vessel contents shall be minimized to the extent practicable prior to any such discharge to the process sewers.

S5. Solid Wastes

S5.A. Solid Waste Handling

The Permittee must handle and dispose of all solid waste material in such a manner as to prevent its entry into state ground or surface water.

S5.B. Leachate

The Permittee must not allow leachate from its solid waste material to enter state waters without providing all known, available, and reasonable methods of treatment, nor allow such leachate to cause violations of the State Surface Water Quality Standards, Chapter 173-201A WAC, or the State Ground Water Quality Standards, Chapter 173-200 WAC. The Permittee must apply for a permit or permit modification as may be required for such discharges to state ground or surface waters.

S5.C. Solid Waste Control Plan

The Permittee must submit all proposed revisions or modifications to the existing solid waste control plan to Ecology for review and approval at least 30 days prior to implementation. The Permittee must comply with the solid waste control plan and any subsequent modifications. The Permittee must submit an update of the solid waste control plan by September 30, 2022.

S6. Application for Permit Renewal or Modification for Facility Changes

The Permittee must submit an application for renewal of this permit no later than 180 days prior to permit expiration (no later than **September 30,2022**).

The Permittee must also submit a new application or addendum at least one hundred eighty (180) days prior to commencement of discharges, resulting from the activities listed below, which may result in permit violations. These activities include any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility.

S7. Non-Routine and Unanticipated Wastewater

1. Beginning on the effective date of this permit, the Permittee is authorized to discharge non-routine wastewater or unanticipated wastewater and therefore not listed on the permit application, on a case-by-case basis if approved by Ecology. Prior to any such discharge, the Permittee must contact Ecology and **at a minimum** provide the following information:
 - a. The proposed discharge location.
 - b. The nature of the activity that will generate the discharge.
 - c. Any alternatives to the discharge, such as reuse, storage, or recycling of the water.
 - d. The total volume of water it expects to discharge.
 - e. The results of the chemical analysis of the water.
 - f. The date of proposed discharge.
 - g. The expected rate of discharge discharged, in gallons per minute.

2. The Permittee must analyze the water for all constituents limited for the discharge and report them as required by subpart 1.e above. The analysis must also include any parameter deemed necessary by Ecology. All discharges must comply with the effluent limits as established in Special Condition S1 of this permit, water quality standards, and any other limits imposed by Ecology.
3. The Permittee must limit the discharge rate, as referenced in subpart 1.g above, so it will not cause erosion of ditches or structural damage to culverts and their entrances or exits.
4. The discharge cannot proceed until Ecology has reviewed the information provided and has authorized the discharge by letter to the Permittee or by an Administrative Order. Once approved and if the proposed discharge is to a municipal storm drain, the Permittee must obtain prior approval from the municipality and notify it when it plans to discharge.

S8. Spill Control Plan

S8.A. Spill Control Plan Requirements

The Permittee must:

1. Maintain the existing spill control plan on site.
2. Review the plan at least annually and update the spill plan as needed.
3. Send changes to the plan to Ecology.
4. Follow the plan and any supplements throughout the term of the permit.

S8.B. Spill Control Plan Components

The spill control plan must include the following:

1. A list of all oil and petroleum products and other materials used and/or stored on-site, which when spilled, or otherwise released into the environment, designate as Dangerous Waste (DW) or Extremely Hazardous Waste (EHW) by the procedures set forth in WAC 173-303-070. Include other materials used and/or stored on-site which may become pollutants or cause pollution upon reaching state's waters.
2. A description of preventive measures and facilities (including an overall facility plot showing drainage patterns) which prevent, contain, or treat spills of these materials.
3. A description of the reporting system the Permittee will use to alert responsible managers and legal authorities in the event of a spill.
4. A description of operator training to implement the plan.

S9. Best Management Practices

S9.A Spent Pulping Liquor, Soap, and Turpentine:

The Permittee is subject to the Best Management Practice (BMP) requirements for spent pulping liquor, soap, and turpentine as defined in 40 CFR Part 430.03. This requires the Permittee to develop, implement, and maintain onsite, a plan to prevent spills and leaks of spent pulping liquors, turpentine, and soap which may reach the wastewater treatment system and adversely impact the system's performance. The plan is to focus on prevention measures as a first priority to insure to the extent possible that leaks or spills do not occur. In the event that a significant leak or spill does occur, the plan will provide, where necessary, for containment and diversions of the regulated substance to protect the integrity of the wastewater treatment system.

An annual BMP report must be submitted to Ecology in accordance with 40 CFR 430.03(i)(4) by **January 31st** of each year.

S10. Sediment Monitoring

S10.A. Sediment Sampling and Analysis Plan

The Permittee must submit to Ecology for review and approval a sediment sampling and analysis plan for sediment monitoring by April 1st of the 3rd year following permit issuance. The Permittee must submit two paper copies and an electronic copy (preferably as a PDF). The purpose of the plan is to characterize sediment quality in the immediate vicinity of the Permittee's Outfall 001 discharge. The Permittee must follow the guidance provided in *Sediment Cleanup User's Manual II, Appendix A: Sampling Guidance for NPDES Permits under the Sediment Management Standards* (Ecology, 2015).

S10.B. Sediment Data Report

Following Ecology approval of the sediment sampling and analysis plan, the Permittee must collect sediments between August 15th and September 15th. The Permittee must submit to Ecology a Sediment Data Report containing the results of the sediment sampling and analysis within six months of the end of the sampling period but no later than with the permit renewal application. The Permittee must submit two paper copies and an electronic copy (preferably as a PDF). The sediment data report must conform to the approved sediment sampling and analysis plan. The report must document when the data was successfully loaded into EIM as required below.

In addition to a sediment data report, submit the sediment chemical and biological data to Ecology's EIM database (ecology.wa.gov/Research-Data/Data-resources/Environmental-Information-Management-database). Data must be submitted to EIM according to the instructions on the EIM website.

The data submittal portion of the EIM website (ecology.wa.gov/Research-Data/Data-resources/Environmental-Information-Management-database/EIM-submit-data) provides information and help on formats and requirements for submitting tabular data.

In addition to the EIM data submittal, Ecology's MyEIM tools (ecology.wa.gov/Research-Data/Data-resources/Environmental-Information-Management-database/Using-MyEIM) must be used to confirm that the submitted data was accurately entered into EIM. Any differences between the MyEIM analytical results and sediment data report must be identified and explained.

S11. Outfall Evaluation

The Permittee must inspect the underwater portion of the outfall, including the diffusers, in the fourth year of the permit to document the integrity and continued function of the line and diffusers. If conditions allow for a photographic verification, the Permittee must include such verification in the report. The Permittee must submit a written summary of the inspection report to Ecology with the permit application.

The inspector must at minimum:

- Assess the physical condition of the outfall pipe, diffuser, and associated couplings.
- Determine the extent of sediment accumulation in the vicinity of the diffuser.
- Ensure diffuser ports are free of obstructions and are allowing uniform flow.
- Confirm physical location (latitude/longitude) and depth (at MLLW) of the diffuser section of the outfall.
- Assess physical condition of the submarine line.
- Assess physical condition of anchors used to secure the submarine line.

S12. Acute Toxicity

S12.A. Testing When There is no Permit Limit for Acute Toxicity

The Permittee must:

1. Conduct acute toxicity testing on final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal.
2. Conduct acute toxicity testing on a series of at least five concentrations of effluent, including 100% effluent and a control.
3. Submit the results to Ecology with the permit renewal application.

4. Use each of the following species and protocols for each acute toxicity test:

Acute Toxicity Tests	Species	Method
Fathead minnow 96-hour static-renewal test	<i>Pimephales promelas</i>	EPA-821-R-02-012
Daphnid 48-hour static test	<i>Ceriodaphnia dubia</i> , <i>Daphnia pulex</i> , or <i>Daphnia magna</i>	EPA-821-R-02-012

S12.B. Sampling and Reporting Requirements

1. The Permittee must submit all reports for toxicity testing in accordance with the most recent version of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. Reports must contain toxicity data, bench sheets, and reference toxicant results for test methods. In addition, the Permittee must submit toxicity test data in electronic format (CETIS export file preferred) for entry into Ecology’s database.
2. The Permittee must collect 24-hour composite effluent samples for toxicity testing. The Permittee must cool the samples to 0 - 6 degrees Celsius during collection and send them to the lab immediately upon completion. The lab must begin the toxicity testing as soon as possible but no later than 36 hours after sampling was completed.
3. The laboratory must conduct water quality measurements on all samples and test solutions for toxicity testing, as specified in the most recent version of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*.
4. All toxicity tests must meet quality assurance criteria and test conditions specified in the most recent versions of the EPA methods listed in Subsection C and the Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If Ecology determines any test results to be invalid or anomalous, the Permittee must repeat the testing with freshly collected effluent.
5. The laboratory must use control water and dilution water meeting the requirements of the EPA methods listed in Section A or pristine natural water of sufficient quality for good control performance.
6. The Permittee must conduct whole effluent toxicity tests on an unmodified sample of final effluent.
7. The Permittee may sample receiving water at the same time as the effluent and instruct the lab to measure the hardness of both and increase the hardness of the effluent sample to match the hardness of the receiving water sample prior to beginning the toxicity test. Otherwise, the Permittee must conduct whole effluent toxicity tests on an unmodified sample of final effluent.

8. The Permittee may choose to conduct a full dilution series test during compliance testing in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the acute critical effluent concentration (ACEC). The ACEC equals 1.63% effluent.
9. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing must comply with the acute statistical power standard of 29% as defined in WAC 173-205-020. If the test does not meet the power standard, the Permittee must repeat the test on a fresh sample with an increased number of replicates to increase the power.

S13. Chronic Toxicity

S13.A. Testing When There is no Permit Limit for Chronic Toxicity

The Permittee must:

1. Conduct chronic toxicity testing on final effluent once in the last winter and once in the last summer prior to submission of the application for permit renewal.
2. Conduct chronic toxicity testing on a series of at least five concentrations of effluent and a control. This series of dilutions must include the acute critical effluent concentration (ACEC). The ACEC equals 1.63% effluent. The series of dilutions should also contain the CCEC of 0.39% effluent.
3. Compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.
4. Submit the results to Ecology with the permit renewal application.
5. Perform chronic toxicity tests with all of the following species and the most recent version of the following protocols:

Freshwater Chronic Test	Species	Method
Fathead minnow survival and growth	<i>Pimephales promelas</i>	EPA-821-R-02-013
Water flea survival and reproduction	<i>Ceriodaphnia dubia</i>	EPA-821-R-02-013

S13.B. Sampling and Reporting Requirements

1. The Permittee must submit all reports for toxicity testing in accordance with the most recent version of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*.

Reports must contain toxicity data, bench sheets, and reference toxicant results for test methods. In addition, the Permittee must submit toxicity test data in electronic format (CETIS export file preferred) for entry into Ecology's database.

2. The Permittee must collect 24-hour composite effluent samples for toxicity testing. The Permittee must cool the samples to 0 - 6 degrees Celsius during collection and send them to the lab immediately upon completion. The lab must begin the toxicity testing as soon as possible but no later than 36 hours after sampling was completed.
3. The laboratory must conduct water quality measurements on all samples and test solutions for toxicity testing, as specified in the most recent version of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*.
4. All toxicity tests must meet quality assurance criteria and test conditions specified in the most recent versions of the EPA methods listed in Section C. and the Ecology Publication no. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If Ecology determines any test results to be invalid or anomalous, the Permittee must repeat the testing with freshly collected effluent.
5. The laboratory must use control water and dilution water meeting the requirements of the EPA methods listed in Subsection C. or pristine natural water of sufficient quality for good control performance.
6. The Permittee must conduct whole effluent toxicity tests on an unmodified sample of final effluent.
7. The Permittee may choose to conduct a full dilution series test during compliance testing in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the CCEC and the ACEC. The CCEC and the ACEC may either substitute for the effluent concentrations that are closest to them in the dilution series or be extra effluent concentrations. The CCEC equals 0.39% effluent. The ACEC equals 1.63% effluent.
8. All whole effluent toxicity tests that involve hypothesis testing must comply with the chronic statistical power standard of 39% as defined in WAC 173-205-020. If the test does not meet the power standard, the Permittee must repeat the test on a fresh sample with an increased number of replicates to increase the power.

S14. Facility Loading Criteria

Design Criteria

The Permittee shall notify Ecology if the wastewater flow or waste loading to the ASB secondary treatment system exceed any of the following design criteria for three (3) consecutive months:

Parameter	Design Quantity
Daily Maximum Flow (excluding non-contact cooling water)	24 MGD
10-day average daily BOD5 influent loading	98,000 lb/day

The notification must include a plan and schedule to evaluate the following items: 1) reducing wastewater treatment plant load, 2) increasing wastewater treatment plant capacity, or 3) re-evaluating the wastewater treatment plant capacity.

S15. Cooling Water Intake Structure (CWIS)

Pursuant to Section 316(b) of the Clean Water Act, the Permittee must comply with the following requirements to minimize adverse impact by the facility's cooling water intake structure (CWIS).

S15.A. Operations and Maintenance

The Permittee must, at all times, properly operate and maintain the CWIS including any existing technologies currently used to minimize impingement and entrainment.

Report any significant impingement or entrainment events to Ecology within 24 hours consistent with the requirements in Permit Condition S3.F.b.

1. O&M manual submittal and requirements

The Permittee must:

- a. Prepare an O&M Manual for the CWIS by March 31, 2019.
- b. Make the O&M Manual available for review by Ecology as requested.
- c. Keep the O&M Manual at the permitted facility.
- d. Follow the instructions and procedures of this manual.

2. O&M manual components

The O&M manual must include, at a minimum:

- a. The location, design, construction and capacity of the cooling water infrastructure.

- b. Procedures for cleaning the intake screens to ensure proper operation of the screens.
- c. Procedures for reporting any significant impingement or entrainment to Ecology, as required above.

S15.B. Endangered Species Act

Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act per 40 CFR 125.98.

S16. Stormwater

1. All stormwater runoff must be routed to the process wastewater treatment system and discharged through Outfall 001. Any stormwater runoff from the facility site must be reported within 24 hours and a plan for corrective action submitted within 30 days.
2. The Permittee must develop a Stormwater Best Management Practices (SBMP) Plan. The SBMP Plan must be submitted to Ecology for review and approval no later than **March 31, 2019**. At a minimum, the SBMP Plan must include the following information:
 - a. A site map that identifies the following features for stormwater that is collected within the industrial footprint of the facility:
 - i. The scale or the relative distances between significant structures and drainage systems.
 - ii. Significant features.
 - iii. Stormwater drainage and discharge structures.
 - iv. Paved areas and buildings.
 - v. Surface water locations (including wetlands and drainage ditches).
 - vi. Areas of existing and potential soil erosion (in a significant amount).
 - vii. Lands and waters adjacent to the site that may be helpful in identifying discharge points or drainage routes.
 - b. Best Management Practices (BMPs): The SBMP Plan must describe all BMPs used to prevent stormwater runoff from leaving the portions of the site where industrial activities occur and discharging directly to any surface waters.
 - c. Preventive Maintenance: The SBMP shall include BMPs to inspect and maintain the stormwater collection system and other controls that could fail and result in the discharge of untreated stormwater to surface water.
3. The Permittee must conduct at least one stormwater inspection per year during the wet season (October 1 – April 30).

The Permittee must conduct the wet season inspection during a rainfall event and must include an assessment of the stormwater collection system to determine if any maintenance is necessary for proper operation of the system and to determine if the stormwater is being properly collected. Any observations of stormwater being discharged off-site without treatment must be noted and corrective action measures must be identified to prohibit future discharges of untreated stormwater. The results of the inspection for that year must be submitted to Ecology by September 1st.

4. The SBMP Plan must be modified whenever there is a change in design, construction, operation, or maintenance at the facility that significantly changes the flow of stormwater on the site so that is no longer collected and treated in the waste water treatment system. The Permittee must provide for implementation of any modifications to the SBMP Plan in a timely manner.

General Conditions

G1. Signatory Requirements

1. All applications, reports, or information submitted to Ecology must be signed and certified.
 - a. In the case of corporations, by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or
 - The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 - b. In the case of a partnership, by a general partner.
 - c. In the case of sole proprietorship, by the proprietor.

- d. In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.

Applications for permits for domestic wastewater facilities that are either owned or operated by, or under contract to, a public entity shall be submitted by the public entity.

2. All reports required by this permit and other information requested by Ecology must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described above and submitted to Ecology.
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).
3. Changes to authorization. If an authorization under paragraph G1.2, above, is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph G1.2, above, must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.
4. Certification. Any person signing a document under this section must make the following certification:

“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 gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering 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 fine and imprisonment for knowing violations.”

G2. Right of Inspection and Entry

The Permittee must allow an authorized representative of Ecology, upon the presentation of credentials and such other documents as may be required by law:

1. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit.
2. To have access to and copy, at reasonable times and at reasonable cost, any records required to be kept under the terms and conditions of this permit.

3. To inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.
4. To sample or monitor, at reasonable times, any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

G3. Permit Actions

This permit may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon Ecology's initiative. However, the permit may only be modified, revoked and reissued, or terminated for the reasons specified in 40 CFR 122.62, 122.64 or WAC 173-220-150 according to the procedures of 40 CFR 124.5.

1. The following are causes for terminating this permit during its term, or for denying a permit renewal application:
 - a. Violation of any permit term or condition.
 - b. Obtaining a permit by misrepresentation or failure to disclose all relevant facts.
 - c. A material change in quantity or type of waste disposal.
 - d. A determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations and can only be regulated to acceptable levels by permit modification or termination.
 - e. A change in any condition that requires either a temporary or permanent reduction, or elimination of any discharge or sludge use or disposal practice controlled by the permit.
 - f. Nonpayment of fees assessed pursuant to RCW 90.48.465.
 - g. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.
2. The following are causes for modification but not revocation and reissuance except when the Permittee requests or agrees:
 - a. A material change in the condition of the waters of the state.
 - b. New information not available at the time of permit issuance that would have justified the application of different permit conditions.
 - c. Material and substantial alterations or additions to the permitted facility or activities which occurred after this permit issuance.
 - d. Promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision.
 - e. The Permittee has requested a modification based on other rationale meeting the criteria of 40 CFR Part 122.62.

- f. Ecology has determined that good cause exists for modification of a compliance schedule, and the modification will not violate statutory deadlines.
 - g. Incorporation of an approved local pretreatment program into a municipality's permit.
3. The following are causes for modification or alternatively revocation and reissuance:
- a. When cause exists for termination for reasons listed in 1.a through 1.g of this section, and Ecology determines that modification or revocation and reissuance is appropriate.
 - b. When Ecology has received notification of a proposed transfer of the permit. A permit may also be modified to reflect a transfer after the effective date of an automatic transfer (General Condition G7) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new Permittee.

G4. Reporting Planned Changes

The Permittee must, as soon as possible, but no later than one hundred eighty (180) days prior to the proposed changes, give notice to Ecology of planned physical alterations or additions to the permitted facility, production increases, or process modification which will result in:

1. The permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b).
2. A significant change in the nature or an increase in quantity of pollutants discharged.
3. A significant change in the Permittee's sludge use or disposal practices. Following such notice, and the submittal of a new application or supplement to the existing application, along with required engineering plans and reports, this permit may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.

G5. Plan Review Required

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications must be submitted to Ecology for approval in accordance with chapter 173-240 WAC. Engineering reports, plans, and specifications must be submitted at least one hundred eighty (180) days prior to the planned start of construction unless a shorter time is approved by Ecology. Facilities must be constructed and operated in accordance with the approved plans.

G6. Compliance with Other Laws and Statutes

Nothing in this permit excuses the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G7. Transfer of This Permit

In the event of any change in control or ownership of facilities from which the authorized discharge emanate, the Permittee must notify the succeeding owner or controller of the existence of this permit by letter, a copy of which must be forwarded to Ecology.

1. Transfers by Modification

Except as provided in paragraph (2) below, this permit may be transferred by the Permittee to a new owner or operator only if this permit has been modified or revoked and reissued under 40 CFR 122.62(b)(2), or a minor modification made under 40 CFR 122.63(d), to identify the new Permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

2. Automatic Transfers

This permit may be automatically transferred to a new Permittee if:

- a. The Permittee notifies Ecology at least thirty (30) days in advance of the proposed transfer date.
- b. The notice includes a written agreement between the existing and new Permittees containing a specific date transfer of permit responsibility, coverage, and liability between them.
- c. Ecology does not notify the existing Permittee and the proposed new Permittee of its intent to modify or revoke and reissue this permit. A modification under this subparagraph may also be minor modification under 40 CFR 122.63. If this notice is not received, the transfer is effective on the date specified in the written agreement.

G8. Reduced Production for Compliance

The Permittee, in order to maintain compliance with its permit, must control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

G9. Removed Substances

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters must not be resuspended or reintroduced to the final effluent stream for discharge to state waters.

G10. Duty to Provide Information

The Permittee must submit to Ecology, within a reasonable time, all information which Ecology may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee must also submit to Ecology upon request, copies of records required to be kept by this permit.

G11. Other Requirements of 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

G12. Additional Monitoring

Ecology may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G13. Payment of Fees

The Permittee must submit payment of fees associated with this permit as assessed by Ecology.

G14. Penalties for Violating Permit Conditions

Any person who is found guilty of willfully violating the terms and conditions of this permit is deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars (\$10,000) and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit may incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars (\$10,000) for every such violation. Each and every such violation is a separate and distinct offense, and in case of a continuing violation, every day's continuance is deemed to be a separate and distinct violation.

G15. Upset

Definition – “Upset” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limits because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limits if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An upset occurred and that the Permittee can identify the cause(s) of the upset.
2. The permitted facility was being properly operated at the time of the upset.
3. The Permittee submitted notice of the upset as required in Special Condition S3.F.
4. The Permittee complied with any remedial measures required under S3.F of this permit.

In any enforcement action the Permittee seeking to establish the occurrence of an upset has the burden of proof.

G16. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

G17. Duty to Comply

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G18. Toxic Pollutants

The Permittee must comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G19. Penalties for Tampering

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two (2) years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this condition, punishment shall be a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or by both.

G20. Reporting Requirements Applicable to Existing Manufacturing, Commercial, Mining, and Silvicultural Dischargers

The Permittee belonging to the categories of existing manufacturing, commercial, mining, or silviculture must notify Ecology as soon as they know or have reason to believe:

1. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following “notification levels:”
 - a. One hundred micrograms per liter (100 µg/L).
 - b. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony.
 - c. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
 - d. The level established by the Director in accordance with 40 CFR 122.44(f).

2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following “notification levels:”
 - a. Five hundred micrograms per liter (500µg/L).
 - b. One milligram per liter (1 mg/L) for antimony.
 - c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
 - d. The level established by the Director in accordance with 40 CFR 122.44(f).

G21. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than fourteen (14) days following each schedule date.

Appendix A

LIST OF POLLUTANTS WITH ANALYTICAL METHODS, DETECTION LIMITS AND QUANTITATION LEVELS

The Permittee must use the specified analytical methods, detection limits (DLs) and quantitation levels (QLs) in the following table for permit and application required monitoring unless:

- Another permit condition specifies other methods, detection levels, or quantitation levels.
- 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, not specified in the permit and as allowed above, it must report the test method, DL, and QL on the discharge monitoring report or in the required report.

If the Permittee is unable to obtain the required DL and QL in its effluent due to matrix effects, the Permittee must submit a matrix-specific detection limit (MDL) and a quantitation limit (QL) to Ecology with appropriate laboratory documentation.

When the permit requires the Permittee to measure the base neutral compounds in the list of priority pollutants, it must measure all of the base neutral pollutants listed in the table below. The list includes EPA required base neutral priority pollutants and several additional polynuclear aromatic hydrocarbons (PAHs). The Water Quality Program added several PAHs to the list of base neutrals below from Ecology's Persistent Bioaccumulative Toxics (PBT) List. It only added those PBT parameters of interest to Appendix A that did not increase the overall cost of analysis unreasonably.

Ecology added this appendix to the permit in order to reduce the number of analytical "non-detects" in permit-required monitoring and to measure effluent concentrations near or below criteria values where possible at a reasonable cost.

The lists below include conventional pollutants (as defined in CWA section 502(6) and 40 CFR Part 122.), toxic or priority pollutants as defined in CWA section 307(a)(1) and listed in 40 CFR Part 122 Appendix D, 40 CFR Part 401.15 and 40 CFR Part 423 Appendix A), and nonconventionals. 40 CFR Part 122 Appendix D (Table V) also identifies toxic pollutants and hazardous substances which are required to be reported by dischargers if expected to be present. This permit appendix A list does not include those parameters. The list also includes pulp and paper pollutants identified in 40 CFR Part 430 and the dioxin and furan congeners identified using EPA Method 1613.

CONVENTIONAL POLLUTANTS

Pollutant	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
Biochemical Oxygen Demand		SM5210-B		2 mg/L
Biochemical Oxygen Demand, Soluble		SM5210-B ³		2 mg/L
Fecal Coliform		SM 9221E,9222	N/A	Specified in method - sample aliquot dependent
Oil and Grease (HEM) (Hexane Extractable Material)		1664 A or B	1,400	5,000
pH		SM4500-H ⁺ B	N/A	N/A
Total Suspended Solids		SM2540-D		5 mg/L

NONCONVENTIONAL POLLUTANTS

Pollutant & CAS No. (if available)	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
Alkalinity, Total		SM2320-B		5 mg/L as CaCO ₃
Aluminum, Total	7429-90-5	200.8	2.0	10
Ammonia, Total (as N)		SM4500-NH ₃ -B and C/D/E/G/H		20
Barium Total	7440-39-3	200.8	0.5	2.0
BTEX (benzene +toluene + ethylbenzene + m,o,p xylenes)		EPA SW 846 8021/8260	1	2
Boron, Total	7440-42-8	200.8	2.0	10.0
Chemical Oxygen Demand		SM5220-D		10 mg/L
Chloride		SM4500-Cl B/C/D/E and SM4110 B		Sample and limit dependent
Chlorine, Total Residual		SM4500 Cl G		50.0
Cobalt, Total	7440-48-4	200.8	0.05	0.25
Color		SM2120 B/C/E		10 color units
Dissolved oxygen		SM4500-OC/OG		0.2 mg/L
Flow		Calibrated device		
Fluoride	16984-48-8	SM4500-F E	25	100

NONCONVENTIONAL POLLUTANTS

Pollutant & CAS No. (if available)	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
Hardness, Total		SM2340B		200 as CaCO ₃
Iron, Total	7439-89-6	200.7	12.5	50
Magnesium, Total	7439-95-4	200.7	10	50
Manganese, Total	7439-96-5	200.8	0.1	0.5
Molybdenum, Total	7439-98-7	200.8	0.1	0.5
Nitrate + Nitrite Nitrogen (as N)		SM4500-NO ₃ - E/F/H		100
Nitrogen, Total Kjeldahl (as N)		SM4500-N _{org} B/C and SM4500NH ₃ -B/C/D/EF/G/H		300
NWTPH Dx ⁴		Ecology NWTPH Dx	250	250
NWTPH Gx ⁵		Ecology NWTPH Gx	250	250
Phosphorus, Total (as P)		SM 4500 PB followed by SM4500-PE/PF	3	10
Salinity		SM2520-B		3 practical salinity units or scale (PSU or PSS)
Settleable Solids		SM2540 -F		Sample and limit dependent
Soluble Reactive Phosphorus (as P)		SM4500-P E/F/G	3	10
Sulfate (as mg/L SO ₄)		SM4110-B		0.2 mg/L
Sulfide (as mg/L S)		SM4500-S ² F/D/E/G		0.2 mg/L
Sulfite (as mg/L SO ₃)		SM4500-SO ₃ B		2 mg/L
Temperature (max. 7-day avg.)		Analog recorder or Use micro-recording devices known as thermistors		0.2° C
Tin, Total	7440-31-5	200.8	0.3	1.5
Titanium, Total	7440-32-6	200.8	0.5	2.5
Total Coliform		SM 9221B, 9222B, 9223B	N/A	Specified in method - sample aliquot dependent
Total Organic Carbon		SM5310-B/C/D		1 mg/L
Total dissolved solids		SM2540 C		20 mg/L

<i>PRIORITY POLLUTANTS</i>	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ <i>µg/L unless specified</i>	Quantitation Level (QL)² <i>µg/L unless specified</i>
METALS, CYANIDE & TOTAL PHENOLS					
Antimony, Total	114	7440-36-0	200.8	0.3	1.0
Arsenic, Total	115	7440-38-2	200.8	0.1	0.5
Beryllium, Total	117	7440-41-7	200.8	0.1	0.5
Cadmium, Total	118	7440-43-9	200.8	0.05	0.25
Chromium (hex) dissolved	119	18540-29-9	SM3500-Cr C	0.3	1.2
Chromium, Total	119	7440-47-3	200.8	0.2	1.0
Copper, Total	120	7440-50-8	200.8	0.4	2.0
Lead, Total	122	7439-92-1	200.8	0.1	0.5
Mercury, Total	123	7439-97-6	1631E	0.0002	0.0005
Nickel, Total	124	7440-02-0	200.8	0.1	0.5
Selenium, Total	125	7782-49-2	200.8	1.0	1.0
Silver, Total	126	7440-22-4	200.8	0.04	0.2
Thallium, Total	127	7440-28-0	200.8	0.09	0.36
Zinc, Total	128	7440-66-6	200.8	0.5	2.5
Cyanide, Total	121	57-12-5	335.4	5	10
Cyanide, Weak Acid Dissociable	121		SM4500-CN I	5	10
Cyanide, Free Amenable to Chlorination (Available Cyanide)	121		SM4500-CN G	5	10
Phenols, Total	65		EPA 420.1		50

<i>PRIORITY POLLUTANTS</i>	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ <i>µg/L unless specified</i>	Quantitation Level (QL)² <i>µg/L unless specified</i>
ACID COMPOUNDS					
2-Chlorophenol	24	95-57-8	625	1.0	2.0
2,4-Dichlorophenol	31	120-83-2	625	0.5	1.0
2,4-Dimethylphenol	34	105-67-9	625	0.5	1.0
4,6-dinitro-o-cresol (2-methyl-4,6,-dinitrophenol)	60	534-52-1	625/1625B	2.0	4.0
2,4 dinitrophenol	59	51-28-5	625	1.5	3.0

<i>PRIORITY POLLUTANTS</i>	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
ACID COMPOUNDS					
2-Nitrophenol	57	88-75-5	625	0.5	1.0
4-Nitrophenol	58	100-02-7	625	1.0	2.0
Parachlorometa cresol (4-chloro-3-methylphenol)	22	59-50-7	625	1.0	2.0
Pentachlorophenol	64	87-86-5	625	0.5	1.0
Phenol	65	108-95-2	625	2.0	4.0
2,4,6-Trichlorophenol	21	88-06-2	625	2.0	4.0

<i>PRIORITY POLLUTANTS</i>	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
VOLATILE COMPOUNDS					
Acrolein	2	107-02-8	624	5	10
Acrylonitrile	3	107-13-1	624	1.0	2.0
Benzene	4	71-43-2	624	1.0	2.0
Bromoform	47	75-25-2	624	1.0	2.0
Carbon tetrachloride	6	56-23-5	624/601 or SM6230B	1.0	2.0
Chlorobenzene	7	108-90-7	624	1.0	2.0
Chloroethane	16	75-00-3	624/601	1.0	2.0
2-Chloroethylvinyl Ether	19	110-75-8	624	1.0	2.0
Chloroform	23	67-66-3	624 or SM6210B	1.0	2.0
Dibromochloromethane (chlordibromomethane)	51	124-48-1	624	1.0	2.0
1,2-Dichlorobenzene	25	95-50-1	624	1.9	7.6
1,3-Dichlorobenzene	26	541-73-1	624	1.9	7.6
1,4-Dichlorobenzene	27	106-46-7	624	4.4	17.6
Dichlorobromomethane	48	75-27-4	624	1.0	2.0
1,1-Dichloroethane	13	75-34-3	624	1.0	2.0
1,2-Dichloroethane	10	107-06-2	624	1.0	2.0
1,1-Dichloroethylene	29	75-35-4	624	1.0	2.0
1,2-Dichloropropane	32	78-87-5	624	1.0	2.0

<i>PRIORITY POLLUTANTS</i>	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
VOLATILE COMPOUNDS					
1,3-dichloropropene (mixed isomers) (1,2-dichloropropylene) ⁶	33	542-75-6	624	1.0	2.0
Ethylbenzene	38	100-41-4	624	1.0	2.0
Methyl bromide (Bromomethane)	46	74-83-9	624/601	5.0	10.0
Methyl chloride (Chloromethane)	45	74-87-3	624	1.0	2.0
Methylene chloride	44	75-09-2	624	5.0	10.0
1,1,2,2-Tetrachloroethane	15	79-34-5	624	1.9	2.0
Tetrachloroethylene	85	127-18-4	624	1.0	2.0
Toluene	86	108-88-3	624	1.0	2.0
1,2-Trans-Dichloroethylene (Ethylene dichloride)	30	156-60-5	624	1.0	2.0
1,1,1-Trichloroethane	11	71-55-6	624	1.0	2.0
1,1,2-Trichloroethane	14	79-00-5	624	1.0	2.0
Trichloroethylene	87	79-01-6	624	1.0	2.0
Vinyl chloride	88	75-01-4	624/SM6200B	1.0	2.0

<i>PRIORITY POLLUTANTS</i>	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)					
Acenaphthene	1	83-32-9	625	0.2	0.4
Acenaphthylene	77	208-96-8	625	0.3	0.6
Anthracene	78	120-12-7	625	0.3	0.6
Benzidine	5	92-87-5	625	20	40
Benzyl butyl phthalate	67	85-68-7	625	0.3	0.6
Benzo(a)anthracene	72	56-55-3	625	0.3	0.6
Benzo(b)fluoranthene (3,4-benzofluoranthene) ⁷	74	205-99-2	610/625	0.8	1.6
Benzo(j)fluoranthene ⁷		205-82-3	625	0.5	1.0
Benzo(k)fluoranthene (11,12-benzofluoranthene) ⁷	75	207-08-9	610/625	0.8	1.6

PRIORITY POLLUTANTS	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)					
Benzo(r,s,t)pentaphene		189-55-9	625	1.3	5.0
Benzo(a)pyrene	73	50-32-8	610/625	0.5	1.0
Benzo(ghi)Perylene	79	191-24-2	610/625	0.5	1.0
Bis(2-chloroethoxy)methane	43	111-91-1	625	5.3	21.2
Bis(2-chloroethyl)ether	18	111-44-4	611/625	0.3	1.0
Bis(2-chloroisopropyl)ether	42	39638-32-9	625	0.5	1.0
Bis(2-ethylhexyl)phthalate	66	117-81-7	625	0.3	1.0
4-Bromophenyl phenyl ether	41	101-55-3	625	0.3	0.5
2-Chloronaphthalene	20	91-58-7	625	0.3	0.6
4-Chlorophenyl phenyl ether	40	7005-72-3	625	0.3	0.5
Chrysene	76	218-01-9	610/625	0.3	0.6
Dibenzo (a,h)acridine		226-36-8	610M/625M	2.5	10.0
Dibenzo (a,j)acridine		224-42-0	610M/625M	2.5	10.0
Dibenzo(a-h)anthracene (1,2,5,6-dibenzanthracene)	82	53-70-3	625	0.8	1.6
Dibenzo(a,e)pyrene		192-65-4	610M/625M	2.5	10.0
Dibenzo(a,h)pyrene		189-64-0	625M	2.5	10.0
3,3-Dichlorobenzidine	28	91-94-1	605/625	2.0	14.0
Diethyl phthalate	70	84-66-2	625	1.9	7.6
Dimethyl phthalate	71	131-11-3	625	1.6	6.4
Di-n-butyl phthalate	68	84-74-2	625	0.5	1.0
2,4-dinitrotoluene	35	121-14-2	609/625	1.0	2.0
2,6-dinitrotoluene	36	606-20-2	609/625	1.0	2.0
Di-n-octyl phthalate	69	117-84-0	625	0.3	0.6
1,2-Diphenylhydrazine (as Azobenzene)	37	122-66-7	1625B	5.0	20
Fluoranthene	39	206-44-0	625	0.3	0.6
Fluorene	80	86-73-7	625	0.3	0.6
Hexachlorobenzene	9	118-74-1	612/625	0.3	0.6
Hexachlorobutadiene	52	87-68-3	625	0.5	1.0
Hexachlorocyclopentadiene	53	77-47-4	1625B/625	2.0	4.0
Hexachloroethane	12	67-72-1	625	0.5	1.0

<i>PRIORITY POLLUTANTS</i>	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ <i>µg/L unless specified</i>	Quantitation Level (QL)² <i>µg/L unless specified</i>
BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)					
Indeno(1,2,3-cd)Pyrene	83	193-39-5	610/625	0.5	1.0
Isophorone	54	78-59-1	625	0.5	1.0
3-Methyl cholanthrene		56-49-5	625	2.0	8.0
Naphthalene	55	91-20-3	625	0.4	0.75
Nitrobenzene	56	98-95-3	625	0.5	1.0
N-Nitrosodimethylamine	61	62-75-9	607/625	2.0	4.0
N-Nitrosodi-n-propylamine	63	621-64-7	607/625	0.5	1.0
N-Nitrosodiphenylamine	62	86-30-6	625	1.0	2.0
Perylene		198-55-0	625	1.9	7.6
Phenanthrene	81	85-01-8	625	0.3	0.6
Pyrene	84	129-00-0	625	0.3	0.6
1,2,4-Trichlorobenzene	8	120-82-1	625	0.3	0.6

<i>PRIORITY POLLUTANT</i>	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ <i>µg/L unless specified</i>	Quantitation Level (QL)² <i>µg/L unless specified</i>
DIOXIN					
2,3,7,8-Tetra-Chlorodibenzo-P-Dioxin (2,3,7,8 TCDD)	129	1746-01-6	1613B	1.3 pg/L	5 pg/L

<i>PRIORITY POLLUTANTS</i>	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ <i>µg/L unless specified</i>	Quantitation Level (QL)² <i>µg/L unless specified</i>
PESTICIDES/PCBs					
Aldrin	89	309-00-2	608	0.025	0.05
alpha-BHC	102	319-84-6	608	0.025	0.05

<i>PRIORITY POLLUTANTS</i>	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ <i>µg/L unless specified</i>	Quantitation Level (QL)² <i>µg/L unless specified</i>
PESTICIDES/PCBs					
beta-BHC	103	319-85-7	608	0.025	0.05
gamma-BHC (Lindane)	104	58-89-9	608	0.025	0.05
delta-BHC	105	319-86-8	608	0.025	0.05
Chlordane ⁸	91	57-74-9	608	0.025	0.05
4,4'-DDT	92	50-29-3	608	0.025	0.05
4,4'-DDE	93	72-55-9	608	0.025	0.05
4,4' DDD	94	72-54-8	608	0.025	0.05
Dieldrin	90	60-57-1	608	0.025	0.05
alpha-Endosulfan	95	959-98-8	608	0.025	0.05
beta-Endosulfan	96	33213-65-9	608	0.025	0.05
Endosulfan Sulfate	97	1031-07-8	608	0.025	0.05
Endrin	98	72-20-8	608	0.025	0.05
Endrin Aldehyde	99	7421-93-4	608	0.025	0.05
Heptachlor	100	76-44-8	608	0.025	0.05
Heptachlor Epoxide	101	1024-57-3	608	0.025	0.05
PCB-1242 ⁹	106	53469-21-9	608 - Modified	0.05	0.2
PCB-1254	107	11097-69-1	608 - Modified	0.05	0.2
PCB-1221	108	11104-28-2	608 - Modified	0.05	0.2
PCB-1232	109	11141-16-5	608 - Modified	0.05	0.2
PCB-1248	110	12672-29-6	608 - Modified	0.05	0.2
PCB-1260	111	11096-82-5	608 - Modified	0.05	0.2
PCB-1016 ⁹	112	12674-11-2	608 - Modified	0.05	0.2
Toxaphene	113	8001-35-2	608	0.24	0.5

PULP & PAPER POLLUTANTS (40CFR Part 430)

Pollutant	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
Adsorbable Organic Halides (AOX)		EPA 1650		20
2,3,7,8- Tetrachlorodibenzo- <i>p</i> -dioxin (TCDD) (this is also priority pollutant and is listed above)	1746-01-6	EPA 1613	1.3 pg/L	5 pg/L
2,3,7,8- Tetrachlorodibenzofuran (TCDF)	51207-31-9	EPA 1613	1.3 pg/L	5 pg/L
Trichlorosyringol		EPA 1653		2.5
3,4,5-Trichlorocatechol		EPA 1653		5.0
3,4,6-Trichlorocatechol		EPA 1653		5.0
3,4,5-Trichloroguaiacol		EPA 1653		2.5
3,4,6-Trichloroguaiacol		EPA 1653		2.5
4,5,6-Trichloroguaiacol		EPA 1653		2.5
2,4,5-Trichlorophenol		EPA 1653		2.5
2,4,6-Trichlorophenol		EPA 1653		2.5
Tetrachlorocatechol		EPA 1653		5.0
Tetrachloroguaiacol		EPA 1653		5.0
2,3,4,6-Tetrachlorophenol		EPA 1653		2.5
Pentachlorophenol (this is also priority pollutant and is listed above)		EPA 1653		5.0

1. Detection Level (DL) or detection limit means the minimum concentration of an analyte (substance) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero as determined by the procedure given in 40 CFR part 136, Appendix B.
2. Quantitation Level (QL) also known as Minimum Level of Quantitation (ML) – The lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. It is equivalent to the concentration of the lowest calibration standard, assuming that the lab has used all method-specified sample weights, volumes, and cleanup procedures. The QL is calculated by multiplying the MDL by 3.18 and rounding the result to the number nearest to $(1, 2, \text{ or } 5) \times 10^n$, where n is an integer. (64 FR 30417).

ALSO GIVEN AS:

The smallest detectable concentration of analyte greater than the Detection Limit (DL) where the accuracy (precision & bias) achieves the objectives of the intended purpose. (Report of the Federal Advisory Committee on Detection and Quantitation Approaches and Uses in Clean Water Act Programs Submitted to the US Environmental Protection Agency December 2007).

3. Soluble Biochemical Oxygen Demand method note: First, filter the sample through a Millipore Nylon filter (or equivalent) - pore size of 0.45-0.50 um (prep all filters by filtering 250 ml of laboratory grade deionized water through the filter and discard). Then, analyze sample as per method 5210-B.
4. NWTPH Dx - Northwest Total Petroleum Hydrocarbons Diesel Extended Range – see <http://www.ecy.wa.gov/biblio/97602.html>
5. NWTPH Gx - Northwest Total Petroleum Hydrocarbons Gasoline Extended Range – see <http://www.ecy.wa.gov/biblio/97602.html>
6. 1, 3-dichloroproylene (mixed isomers) You may report this parameter as two separate parameters: cis-1, 3-dichloropropene (10061-01-5) and trans-1, 3-dichloropropene (10061-02-6).
7. Total Benzofluoranthenes - Because Benzo(b)fluoranthene, Benzo(j)fluoranthene and Benzo(k)fluoranthene co-elute you may report these three isomers as total benzofluoranthenes.
8. Chlordane – You may report alpha-chlordane (5103-71-9) and gamma-chlordane (5103-74-2) in place of chlordane (57-74-9). If you report alpha and gamma-chlordane, the DL/PQLs that apply are 0.025/0.050.
9. PCB 1016 & PCB 1242 – You may report these two PCB compounds as one parameter called PCB 1016/1242.