

Issuance Date: February 16, 2016  
Effective Date: March 1, 2016  
Expiration Date: February 28, 2021

**National Pollutant Discharge Elimination System  
Waste Discharge Permit No. WA0000078**

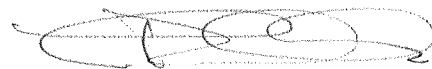
State of Washington  
Department of Ecology  
Industrial Section  
PO Box 47600  
Olympia, WA 98504-7600

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.

Longview Fibre Paper and Packaging, Inc  
d/b/a KapStone Kraft Paper Corporation  
PO Box 639  
Longview, WA 98632

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

<u>Facility Location:</u> 300 Fibre Way, Longview, WA 98632	<u>Receiving Water:</u> Columbia River
<u>Wastewater Treatment Type:</u> Industrial – Primary clarification, activated sludge, and secondary clarification Domestic – Primary clarification, trickling filter, secondary clarification, and disinfection	<u>SIC Codes and NAICS Codes:</u> 2621, 2631, & 2653 322121, 322130, 322211 <u>Industry Type and Categorical Industry:</u> Pulp, Paper, and Paperboard Mill 40 CFR Part 430 Subparts C, J, and L



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Industrial Section Supervisor  
Waste 2 Resources Program

## Table of Contents

<b>Summary of Permit Report Submittals .....</b>	<b>5</b>
<b>Special Conditions.....</b>	<b>7</b>
<b>S1. Discharge Limits .....</b>	<b>7</b>
S1.A. Process Wastewater, Domestic Wastewater, and Stormwater Discharges.....	7
S1.B. Mixing Zone Authorization.....	8
<b>S2. Monitoring Requirements .....</b>	<b>9</b>
S2.A. Monitoring Schedule.....	9
S2.B. Sampling and Analytical Procedures .....	13
S2.C. Flow Measurement, Field Measurement, and Continuous Monitoring Devices.....	13
S2.D. Laboratory Accreditation .....	14
S2.E. Request for Reduction in Monitoring.....	14
<b>S3. Reporting and Recording Requirements .....</b>	<b>14</b>
S3.A. Reporting.....	14
S3.B. Permit Submittals and Schedules .....	16
S3.C. Records Retention .....	16
S3.D. Recording of Results .....	16
S3.E. Additional Monitoring by the Permittee .....	17
S3.F. Reporting Permit Violations.....	17
S3.G. Other Reporting.....	18
S3.H. Maintaining a Copy of this Permit .....	19
<b>S4. Operation and Maintenance .....</b>	<b>19</b>
S4.A. Operations and Maintenance (O&M) Manual.....	19
S4.B. Bypass Procedures .....	20
<b>S5. Solid Wastes.....</b>	<b>22</b>
S5.A. Solid Waste Handling .....	22
S5.B. Leachate .....	23
S5.C. Solid Waste Control Plan.....	23
<b>S6. Application for Permit Renewal or Modification for Facility Changes.....</b>	<b>23</b>
<b>S7. Facility Loading .....</b>	<b>23</b>
<b>S8. Non-Routine and Unanticipated Wastewater .....</b>	<b>24</b>
<b>S9. Spill Control Plan.....</b>	<b>24</b>
S9.A. Spill Control Plan Submittals and Requirements .....	24
S9.B. Spill Control Plan Components.....	25
<b>S10. Stormwater Pollution Prevention Plan .....</b>	<b>25</b>
S10.A Stormwater Management .....	25
S10.B Stormwater Pollution Prevention Plan (SWPPP).....	25
S10.C Inspections.....	26
S10.D SWPPP Modifications.....	27
<b>S11. Outfall Evaluation.....</b>	<b>27</b>

<b>S12. Certified Operator .....</b>	<b>28</b>
<b>S13. Acute Toxicity.....</b>	<b>28</b>
S13.A. Testing when there is No Permit Limit for Acute Toxicity .....	28
S13.B. Sampling and Reporting Requirements.....	28
<b>S14. Chronic Toxicity.....</b>	<b>29</b>
S14.A. Testing when there is no Permit Limit for Chronic Toxicity .....	29
S14.B. Sampling and Reporting Requirements.....	30
<b>S15. Cooling Water Intake Structure.....</b>	<b>31</b>
S15.A. Operations and Maintenance .....	31
S15.B. Information and Compliance Report.....	31
S15.C. Endangered Species Act.....	32
S15.D. Cooling Water Intake Structure Inspections.....	32
<b>S16. Treatment System Efficiency Study .....</b>	<b>32</b>
<b>S17. Material Unloading Pollution Prevention Plan.....</b>	<b>33</b>
<b><i>General Conditions .....</i></b>	<b><i>34</i></b>
<b>G1. Signatory Requirements.....</b>	<b>34</b>
<b>G2. Right of Inspection and Entry .....</b>	<b>35</b>
<b>G3. Permit Actions.....</b>	<b>35</b>
<b>G4. Reporting Planned Changes.....</b>	<b>36</b>
<b>G5. Plan Review Required .....</b>	<b>37</b>
<b>G6. Compliance with Other Laws and Statutes .....</b>	<b>37</b>
<b>G7. Transfer of this Permit .....</b>	<b>37</b>
<b>G8. Reduced Production for Compliance .....</b>	<b>38</b>
<b>G9. Removed Substances.....</b>	<b>38</b>
<b>G10. Duty to Provide Information.....</b>	<b>38</b>
<b>G11. Other Requirements of 40 CFR.....</b>	<b>38</b>
<b>G12. Additional Monitoring.....</b>	<b>38</b>
<b>G13. Payment of Fees.....</b>	<b>39</b>
<b>G14. Penalties for Violating Permit Conditions.....</b>	<b>39</b>
<b>G15. Upset.....</b>	<b>39</b>
<b>G16. Property Rights .....</b>	<b>40</b>
<b>G17. Duty to Comply .....</b>	<b>40</b>
<b>G18. Toxic Pollutants.....</b>	<b>40</b>
<b>G19. Penalties for Tampering .....</b>	<b>40</b>

<b>G20. Reporting Requirements Applicable to Existing Manufacturing, Commercial, Mining, and Silvicultural Dischargers .....</b>	<b>40</b>
<b>G21. Compliance Schedules .....</b>	<b>41</b>
<b><i>APPENDIX A</i>.....</b>	<b>42</b>

## 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
S3.A	Discharge Monitoring Report	Monthly	April 15, 2016
S3.A	Discharge Monitoring Report	Semi-Annually	July 15, 2016
S3.A	Discharge Monitoring Report	Annually	January 15, 2017
S3.F	Reporting Permit Violations	As necessary	
S3.G	Other Reporting	As necessary	
S4.A	Operations and Maintenance Manual Update	1/permit cycle	March 1, 2017
S4.A	Operations and Maintenance Manual Update	As Necessary	
S4.A	Treatment System Operating Plan	1/permit cycle	February 28, 2020
S4.B	Reporting Bypasses	As necessary	
S5.C	Solid Waste Control Plan	1/permit cycle	September 1, 2016
S6	Permit Application Update or Supplement	As necessary	
S6	Application for Permit Renewal	1/permit cycle	February 28, 2020
S7	UNOX Design Criteria Notification	As necessary	
S8	Non-Routine and Unanticipated Wastewater	As necessary	
S9	Spill Plan Update	As necessary	
S10.A	Stormwater Corrective Action Plan	As necessary	
S10.B	Stormwater Pollution Prevention Plan	1/permit cycle	September 1, 2016
S10.C	Stormwater Inspections Report	Annually	September 1, 2016
S10.D	SWPPP Update	As necessary	
S11	Outfall Evaluation Report	Every three years	October 27, 2017
S13	Acute Toxicity Effluent Test Results – Last Winter	1/permit cycle	Within 60 days of Sample Date and no later than June 28, 2019
S13	Acute Toxicity Effluent Test Results – Last Summer	1/permit cycle	Within 60 days of Sample Date and no later than November 28, 2019
S14	Chronic Toxicity Effluent Test Results – Last Winter	1/permit cycle	Within 60 days of Sample Date and no later than June 28, 2019
S14	Chronic Toxicity Effluent Test Results – Last Summer	1/permit cycle	Within 60 days of Sample Date and no later than November 28, 2019

<b>Permit Section</b>	<b>Submittal</b>	<b>Frequency</b>	<b>First Submittal Date</b>
S15.A	Significant impingement or entrainment events	As necessary	
S15.B	Revised EPA Form 2-C Supplemental Cooling Water Intake Structures form	1/permit cycle	March 1, 2017
S15.B	Information and compliance report	1/permit cycle	February 28, 2020
S16	Treatment System Efficiency Study	1/permit cycle	February 28, 2020
S17	Material Unloading Pollution Prevention Plan	1/permit cycle	December 31, 2016
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	
G13	Payment of Fees	As assessed	
G21	Compliance Schedules	As necessary	

## Special Conditions

### S1. Discharge Limits

#### S1.A. Process Wastewater, Domestic Wastewater, and Stormwater 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 process wastewater, domestic wastewater, and stormwater to the Columbia River at the permitted location subject to complying with the following limits:

<b>Effluent Limits: Outfall # 001</b>		
<b>Latitude 46.095833 Longitude -122.927778</b>		
<b>Parameter</b>	<b>Average Monthly <sup>a</sup></b>	<b>Maximum Daily <sup>b</sup></b>
Biochemical Oxygen Demand (5-day) (BOD <sub>5</sub> )	13,800	42,700
Total Suspended Solids (TSS)	33,900	67,600
	<b>Minimum</b>	<b>Maximum</b>
pH <sup>c</sup>	5.6 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 5.6 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.	

<b>Effluent Limits: Sanitary Wastewater Treatment Plant (Outfall 001)</b>		
<b>Monitoring Point 00S</b>		
<b>Parameter</b>	<b>Average Monthly <sup>a</sup></b>	<b>Average Weekly <sup>b</sup></b>
Carbonaceous Biochemical Oxygen Demand (CBOD <sub>5</sub> )	25 milligrams/liter (mg/L)	40 milligrams/liter (mg/L)
	30 pounds/day (lbs/day)	48 pounds/day (lbs/day)
Total Suspended Solids (TSS)	30 mg/L	45 mg/L
	36 lbs/day	54 lbs/day
Percent Removal from Influent, CBOD <sub>5</sub> and TSS	≥ 65% <sup>c</sup>	N/A
	<b>Minimum</b>	<b>Maximum</b>
pH	6.0 standard units	9.0 standard units
Chlorine Residual	0.1 parts per million (ppm)	6.0 ppm
<b>Parameter</b>	<b>Monthly geometric mean</b>	<b>Weekly geometric mean</b>
Fecal Coliform Bacteria <sup>d</sup>	200 organisms /100 milliliter (mL)	400 organisms /100 mL
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	Average weekly discharge limit means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges' measured during that week. See footnote d for fecal coliform calculations.	
c	Percent removal from the influent means the percent removal efficiency across a treatment plant for a given pollutant parameter, calculated as the monthly average influent concentration (AIC) minus the monthly average effluent concentration (AEC) divided by the AIC multiplied by 100.	
d	Ecology provides directions to calculate the monthly and the 7-day geometric mean in publication No. 04-10-020, Information Manual for Treatment Plant Operators available at: <a href="http://www.ecy.wa.gov/pubs/0410020.pdf">http://www.ecy.wa.gov/pubs/0410020.pdf</a>	

### **S1.B. Mixing Zone Authorization**

#### **Mixing Zone for Outfall 001**

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



**Chronic Mixing Zone**

The mixing zone is an oblong circle around the diffuser 441 feet long and 484 feet wide. 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 acute mixing zone is a circle with radius of 24 feet (7.3 meters) measured from the center of each discharge port. 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.

	<b>Available Dilution (dilution factor)</b>
Acute Aquatic Life Criteria	20
Chronic Aquatic Life Criteria	115
Human Health Criteria - Carcinogen	183
Human Health Criteria - Non-carcinogen	184

**S2. Monitoring Requirements**

**S2.A. Monitoring Schedule**

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

<b>Parameter</b>	<b>Units &amp; Speciation</b>	<b>Minimum Sampling Frequency</b>	<b>Sample Type</b>
<b>(1) UNOX Influent <sup>a</sup> (Process Wastewater Treatment System Outfall 001)</b>			
Flow	Million gallons per day (MGD)	1/Day – recorded but not reported	Estimated
		Monthly Average and Maximum Day Value	Calculated <sup>b</sup> and Reported
Biochemical Oxygen Demand (BOD <sub>5</sub> )	mg/L	Weekly <sup>c</sup>	24-Hr Composite <sup>d</sup>
	lbs/day	Weekly <sup>c</sup>	Calculated <sup>b</sup>
Total Suspended Solids (TSS)	mg/L	Weekly <sup>c</sup>	24-Hr Composite <sup>d</sup>
	lbs/day	Weekly <sup>c</sup>	Calculated <sup>b</sup>
<b>(2) Domestic Wastewater Treatment Plant Influent <sup>a</sup></b>			

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Carbonaceous BOD <sub>5</sub> (CBOD <sub>5</sub> )	mg/L	Weekly <sup>c</sup>	Grab <sup>e</sup>
TSS	mg/L	Weekly <sup>c</sup>	Grab <sup>e</sup>
<b>(3) Outfall 001 Effluent <sup>f</sup></b>			
Flow	MGD	1/Day – recorded but not reported	Metered
		Monthly Average and Maximum Day Value	Calculated <sup>b</sup> and Reported
BOD <sub>5</sub>	mg/L	3/week <sup>c,g</sup>	24-Hr Composite <sup>d</sup>
	lbs/day	3/week <sup>c,g</sup>	Calculated <sup>b</sup>
TSS	mg/L	3/week <sup>c,g</sup>	24-Hr Composite <sup>d</sup>
	lbs/day	3/ week <sup>c,g</sup>	Calculated <sup>b</sup>
pH <sup>h</sup>	Standard units	Continuous <sup>i</sup>	Metered
	Standard Units	Daily Minimum and Daily Maximum	Recorded and Reported
	Minutes	Once per defined event	Duration pH excursion
Temperature	Degress Fahrenheit	Continuous <sup>i</sup>	Measured
		Monthly Average and Maximum Day Value	Calculated <sup>b</sup> and Reported
<b>(4) Domestic Wastewater Treatment Plant Effluent <sup>f</sup></b>			
Flow	Thousand gallons per day (KGD)	1/Day – recorded but not reported	Metered
		Monthly Average and Maximum Day Value	Calculated <sup>b</sup> and Reported
CBOD <sub>5</sub> <sup>k</sup>	mg/L	Weekly <sup>c</sup>	Grab <sup>e</sup>
	lbs/day	Monthly Average and Average Weekly Value	Calculated <sup>b</sup> and Reported
CBOD <sub>5</sub>	Percent Removal <sup>l</sup>	Monthly	Calculated <sup>b</sup>
TSS	mg/L	Weekly <sup>c</sup>	Grab <sup>e</sup>
	lbs/day	Monthly Average and Average Weekly Value	Calculated <sup>b</sup> and Reported
TSS	Percent Removal <sup>l</sup>	Average Monthly	Calculated <sup>b</sup>
Fecal Coliform <sup>m</sup>	# /100 ml	Weekly <sup>c</sup>	Grab <sup>e</sup>
pH <sup>h</sup>	standard units	Daily	Grab <sup>e</sup>
Chlorine Residual	Parts per million (ppm)	Daily	Grab <sup>e</sup>
<b>(5) Production</b>			

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Total Primary Production	Air dry tons/day (ADT/day)	1/Day – recorded but not reported	Recorded
		Monthly Average	Calculated <sup>b</sup> and Reported
Old Corrugated Cardboard Pulp Production	ADT/day	1/Day – recorded but not reported	Recorded
		Monthly Average	Calculated <sup>b</sup> and Reported
Non-Intergrated Paperboard Production	ADT/day	1/Day – recorded but not reported	Recorded
		Monthly Average	Calculated <sup>b</sup> and Reported
Unbleached Kraft Pulp Production	ADT/day	1/Day – recorded but not reported	Recorded
		Monthly Average	Calculated <sup>b</sup> and Reported
<b>(6) Effluent Characterization <sup>p</sup> – Final Wastewater Effluent <sup>f</sup></b>			
Alkalinity	mg/L	Once per year	Grab <sup>e</sup>
Hardness (as CaCO <sub>3</sub> )	mg/L	Once per year	Grab <sup>e</sup>
Cyanide	µg/L	Once in the fourth year of the permit	Grab <sup>e</sup>
Total Phenolic Compounds	µg/L	Once per year	Grab <sup>e</sup>
Priority Pollutants (PP) – Total Metals	µg/L; ng/L for mercury	Once per year	24-Hr Composite <sup>d</sup> Grab <sup>e</sup> for mercury
PP – Volatile Organic Compounds	µg/L	Once per year	Grab <sup>e</sup>
PP – Acid-extractable Compounds	µg/L	Once per year	24-Hr Composite <sup>d</sup>
PP – Base-neutral Compounds	µg/L	Once per year	24-Hr Composite <sup>d</sup>
PP - Dioxin	pg/L	Once per year	24-Hr Composite <sup>d</sup>
PP – Pesticides/PCBs	µg/L	Once per year, when used on-site <sup>n</sup>	24-Hr Composite <sup>d</sup>
PP – Pesticides/PCBs	µg/L	Once in the fourth year of the permit	24-Hr Composite <sup>d</sup>
<b>(7) Whole Effluent Toxicity Testing – Final Wastewater Effluent <sup>f</sup></b>			
Acute Toxicity Testing	As required by Special Condition S14	Two times/permit term as described in	24 hour composite <sup>d</sup>

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
		Special Condition S14 <sup>o</sup>	
Chronic Toxicity Testing	As required by Special Condition S15	Two times/permit term as described in Special Condition S15 <sup>o</sup>	24 hour composite <sup>d</sup>
<b>(8) Water Intake Structure</b>			
Arsenic	µg/L	Semi-Annually <sup>o</sup>	Grab <sup>e</sup>
Footnotes			
a	Influent means the raw wastewater flow; sample at the headworks of the treatment plant excluding any side-stream returns from inside the plant.		
b	Calculated values are determined using the results of the respective sample(s). Flow and production values are calculated by summing the daily measured values during the month and dividing by the number of days in the month. Average concentration values are calculated by summing the concentration values measured during the month and dividing the total by the number of samples analyzed for that parameter during the month. Pollutant loading rates are calculated using the following formula: $\text{Concentration (in mg/L)} \times \text{Flow (in MGD)} \times \text{Conversion Factor (8.34)} = \text{lbs/day}$		
c	Weekly means a minimum of one (1) time during each calendar week and on a rotational basis throughout the days of the week, except weekends and holidays. 3/week means three (3) times during each calendar week and on a rotational basis throughout the days of the week, except weekends and holidays.		
d	24-hour composite means a series of individual samples collected over a 24-hour period into a single container, and analyzed as one sample.		
e	Grab means an individual sample collected over a fifteen (15) minute, or less, period.		
f	Effluent means wastewater exiting, or that has exited, the last treatment process or operation.		
g	The monitoring frequency for this parameter has been reduced as a result of consistent performance well below the permit limits. If two limit violations for a particular parameter occur in a 12 consecutive month period, the reduced monitoring frequency is no longer allowed for that parameter and the Permittee must revert to sampling the daily. Any changes in sampling frequency must be noted in the monthly report cover letter for the month in which the change occurs.		
h	The Permittee must report the instantaneous maximum and minimum pH monthly. Do not average pH values.		
i	Continuous means uninterrupted except for brief lengths of time for calibration, power failure, or unanticipated equipment repair or maintenance. The Permittee must sample at least once every four hours when continuous monitoring is not possible.		
j	The Permittee must record and report the: <ul style="list-style-type: none"> <li>Number of minutes the pH value measured between 5.0 and 5.6 and between 9.0 and 10.0 for each day.</li> </ul>		

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
	<ul style="list-style-type: none"> <li>Total minutes for the month.</li> <li>Monthly instantaneous maximum and minimum pH.</li> </ul> <p>If multiple excursions occur during the day, note the duration for each excursion. If submitting electronic DMRs, include this additional information in the parameter notes.</p>		
k	Take effluent samples for the CBOD <sub>5</sub> analysis before or after the disinfection process. If taken after, dechlorinate and reseed the sample.		
l	$\% \text{ removal} = \frac{\text{Influent concentration (mg/L)} - \text{Effluent concentration (mg/L)}}{\text{Influent concentration (mg/L)}} \times 100$ <p>Calculate the percent (%) removal of CBOD<sub>5</sub> and TSS using the above equation.</p>		
m	Report a numerical value for fecal coliforms following the procedures in Ecology's <i>Information Manual for Wastewater Treatment Plant Operators</i> , Publication Number 04-10-020 available at: <a href="http://www.ecy.wa.gov/programs/wq/permits/guidance.html">http://www.ecy.wa.gov/programs/wq/permits/guidance.html</a> . Do not report a result as too numerous to count (TNTC).		
n	For every year except the 4th year 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.		
o	Semi-annual means two times per year. Semi-annual sampling is conducted at least once in January through June and at least once in July through December.		
p	Effluent characterization sampling must be conducted in a manner that is representative of the discharge. Throughout the permit cycle, the facility must alternate the sample collection periods to include the dry season and the wet season when stormwater is present in the system.		

**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 and the manufacturer's recommendation for that type of device.
3. Calibrate continuous monitoring instruments for measuring pH and temperature weekly unless it can demonstrate a longer period is sufficient based on monitoring records. The Permittee:
  - a. 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.
  - b. Must calibrate continuous chlorine measurement instruments using a grab sample analyzed in the laboratory within 15 minutes of sampling.
4. 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, and internal process control parameters are exempt from this requirement.

#### **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.
2. Clearly state the parameters for which it is requesting reduced monitoring.
3. 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. Reporting**

The first monitoring period begins on the effective date of the permit. 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 Water Quality Permitting Portal go to: <http://www.ecy.wa.gov/programs/wq/permits/paris/webdmr.html>

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 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.
5. Calculate average 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 for the reporting period.
  - c. Zero (for values reported below detection) if the lab did not detect the parameter in another sample for the reporting period.
6. Report single-sample grouped parameters (for example priority pollutants) on the WAWebDMR 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.

7. Ensure that DMRs are electronically submitted no later than the dates specified below, unless otherwise specified in this permit.
8. 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 15<sup>th</sup> day of the following month.

- b. Submit **semiannual** DMRs, unless otherwise specified in the permit, by July 15 and January 15 of each year. Semiannual sampling periods are January through June, and July 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.
9. Submit reports to Ecology online using Ecology's electronic WAWebDMR submittal forms (electronic DMRs) as required above.

### **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 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 Ecology and the Department of Health, Drinking Water Program (at the numbers listed below), all:

- Failures of the disinfection system which results in the discharge of sanitary wastewater that has not been disinfected.
- 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.

Southwest Regional Office	360-407-6300
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 at the telephone number listed above, 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.

**f. Report Submittal**

The Permittee must submit reports as specified in Permit Condition S3.B.

**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:

<http://www.ecy.wa.gov/programs/spills/other/reportaspill.htm>.

**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 to incorporate the Cooling Water Intake Structure and submit it to Ecology for approval by **March 1, 2017**.
2. Maintain and follow an Operations and Maintenance (O&M) Manual for both wastewater treatment plants and the cooling water intake structure that reflects the current operations.
3. Submit to Ecology for review substantial changes or updates to the O&M Manual whenever it incorporates them into the manual.
4. Keep the approved O&M Manual at the permitted facility.

**b. O&M Manual Components**

In addition to the requirements of WAC 173-240-080 and -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. Wastewater sampling protocols and procedures for compliance with the sampling and reporting requirements in the wastewater discharge permit.

**c. Treatment System Operating Plan**

The Permittee must summarize the following information in the initial chapter of the O&M Manual entitled the “Treatment System Operating Plan.” For the purposes of this permit, a Treatment System Operating Plan (TSOP) is a concise summary of specifically defined elements of the O&M Manual.

The Permittee must submit an updated Treatment System Operating Plan to Ecology with the application for renewal. The Permittee must update this plan as necessary to include requirements for any major modifications of the treatment system.

The TSOP must not conflict with the O&M Manual and must include the following information:

1. Baseline operating conditions, which describe the operating parameters and procedures, used to meet the effluent limits of S1 at the production levels used in developing these limits.
2. In the event of production rates or plant personnel, which are below the baseline levels used to establish these limits, the plan must describe the operating procedures and conditions needed to maintain design treatment efficiency.
3. In the event of an upset, due to plant maintenance activities, severe stormwater events, start ups or shut downs, or other causes, the plan must describe the operating procedures and conditions employed to mitigate the upset. The monitoring and reporting must be described in the plan.
4. 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.).
5. Solid waste management procedures that will ensure solid waste that is generated by operations at the facility, including operation and maintenance of the wastewater treatment systems, does not enter waters of the state.

**S4.B. Bypass Procedures**

This permit prohibits a bypass, which is the intentional diversion of waste streams from any portion of a treatment facility.

Ecology may take enforcement action against a Permittee for a bypass unless one of the following circumstances (1, 2, or 3) applies.

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

This permit authorizes a bypass if it allows for essential maintenance and does not have the potential to cause violations of limits or other conditions of this permit, or adversely impact public health as determined by Ecology prior to the bypass. The Permittee must submit prior notice, if possible, at least ten (10) days before the date of the bypass.

2. Bypass is unavoidable, unanticipated, and results in noncompliance of this permit.

This permit authorizes such a bypass only if:

- a. 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.
  - b. No 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.
    - Transport of untreated wastes to another treatment facility or preventative maintenance), or transport of untreated wastes to another treatment facility.
  - c. The Permittee has properly notified Ecology of the bypass as required in Special Condition S3.F of this permit.
3. If bypass is anticipated and has the potential to result in noncompliance of this permit.
    - a. The Permittee must notify Ecology at least thirty (30) days before the planned date of bypass. The notice must contain:
      - A description of the bypass and its cause.
      - An analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing.
      - A cost-effectiveness analysis of alternatives including comparative resource damage assessment.
      - 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 reoccurrence 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 consider the following prior to issuing an administrative order for this type of bypass:
- If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.
  - If feasible alternatives to bypass exist, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.
  - If the Permittee planned and scheduled the bypass to minimize adverse effects on the public and the environment.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, Ecology will approve or deny the request. Ecology will give the public an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Ecology will approve a request to bypass by issuing an administrative order under RCW 90.48.120.

## **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 an update of the solid waste control plan by **September 1, 2016**. The updated plan must including the following, at a minimum:

1. Any necessary updates to the information in the current solid waste control plan;
2. Best management practices to minimize fugitive emissions from material storage and handling operations from entering nearby surface waters; and
3. Best management practices to minimize the amount of plastics and other solid waste that is discharged to the wastewater treatment system from the processing of OCC rejects.

**S6. Application for Permit Renewal or Modification for Facility Changes**

The Permittee must submit an application for renewal of this permit by **February 28, 2020**.

The Permittee must also submit a new application or supplement 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. Facility Loading**

**Design Criteria**

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

Maximum Month Design Flow (MMDF):	57 MGD
Average Monthly BOD <sub>5</sub> Influent Loading:	54,700 lb/day
Average Monthly TSS Influent Loading:	42,800 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.

## **S8. Non-Routine and Unanticipated Wastewater**

1. Beginning on the effective date of this permit, the Permittee is authorized to discharge non-routine wastewater 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, 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.

## **S9. Spill Control Plan**

### **S9.A. Spill Control Plan Submittals and Requirements**

The Permittee must:

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



### **S9.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, including, but not limited to, spills to the wastewater treatment system.
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.

The Permittee may submit plans and manuals required by 40 CFR Part 112, contingency plans required by Chapter 173-303 WAC, or other plans required by other agencies, which meet the intent of this section.

## **S10. Stormwater Pollution Prevention Plan**

### **S10.A Stormwater Management**

All stormwater generated by the Permittee that has the potential to be contaminated by industrial activities must be collected and routed to the process wastewater treatment system and discharged through Outfall 001. Any potentially contaminated stormwater generated by the Permittee that is not collected and treated prior to being discharged from the site must be reported within 24 hours and a plan for corrective action submitted within 30 days.

Stormwater that exceeds the design storm event for the stormwater collection system is not required to be collected; however, such an event must be reported in the subsequent monthly DMR.

The SWPPP required by Permit Condition S10.B shall identify the areas that are not subject to Permit Condition S10.A due to the fact that there are no industrial activities in the area and, therefore, no potential for stormwater to be contaminated by such activities.

### **S10.B Stormwater Pollution Prevention Plan (SWPPP)**

The Permittee must create and implement a stormwater pollution prevention plan (SWPPP). The SWPPP must contain a site map, a detailed assessment of the facility, and a detailed description of best management practices (BMPs). BMPs may include, but are not limited to, source controls, treatment methods, and employee training, where applicable. The SWPPP must be

submitted to Ecology for review and approval no later than **September 1, 2016**. At a minimum, the SWPPP must include the following information:

- a. A site map that identifies:
  - i. The scale or the relative distances between significant structures and drainage systems.
  - ii. Significant features.
  - iii. Stormwater drainage(s) and discharge structures.
  - iv. Paved areas and buildings.
  - v. Areas of pollutant contact (actual or potential) associated with specific industrial activities.
  - vi. Surface water locations (including wetlands and drainage ditches).
  - vii. Areas of existing and potential soil erosion (in a significant amount).
  - viii. Vehicle maintenance areas.
  - ix. Lands and waters adjacent to the site that may be helpful in identifying discharge points or drainage routes.
- b. Best Management Practices (BMPs): The SWPPP must describe each BMP selected to eliminate or reduce the potential to contaminate stormwater or groundwater. The following BMPs must be included in the SWPPP, at a minimum:
  - i. Good Housekeeping: The SWPPP shall include BMPs that define ongoing maintenance and cleanup, as appropriate, of areas which may contribute pollutants to the stormwater or to the groundwater. The SWPPP shall include the schedule/frequency for completing each housekeeping task, based upon industrial activity in the area and sampling results or observations made during inspections. At a minimum, the BMPs specified by Permit Condition S3.B.4.b.i.2) of the Industrial Stormwater General Permit with an effective date of January 2, 2015 must be included in the good housekeeping BMPs that are considered for the site.
  - ii. Preventive Maintenance: The SWPPP shall include BMPs to inspect and maintain the stormwater drainage system and other controls that could fail and result in the discharge of untreated stormwater to surface water. At a minimum, the BMPs specified by Permit Condition S3.B.4.b.i.3) of the Industrial Stormwater General Permit with an effective date of January 2, 2015 must be included in the preventative maintenance BMPs that are considered for the site.

### **S10.C Inspections**

The Permittee shall conduct one inspection per year during the wet season (October 1 – April 30).

The wet season inspection shall be conducted during a rainfall event by personnel trained by LFPP in the requirements of the SWPPP to verify that the description of potential pollutant sources required under this permit are accurate; that the site map required in the SWPPP has been updated or otherwise modified to reflect current conditions; and that the controls to reduce pollutants in stormwater discharges associated with industrial activity and to minimize the potential for the discharge of untreated stormwater to surface waters are being implemented and are adequate. The wet weather inspection shall include observations of the presence of floating materials, suspended solids, oil sheen, discolorations, turbidity, odor, etc. in the stormwater collection systems.

The results of the inspection for that year must be submitted to Ecology by September 1<sup>st</sup>.

#### **S10.D SWPPP Modifications**

The SWPPP 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 it is no longer collected by the stormwater collection system. The Permittee must provide for implementation of any modifications to the SWPPP in a timely manner. Submit to Ecology any substantial changes or updates to the SWPPP whenever they are incorporated into the SWPPP.

### **S11. Outfall Evaluation**

The Permittee must inspect, every three years, the submerged portion of the outfall line and diffuser to document its integrity and continued function. If conditions allow for a photographic verification, the Permittee must include such verification in the report. By **October 27, 2017 and every three years thereafter**, the Permittee must submit the inspection report to Ecology. The Permittee must submit hard-copies of any video files to Ecology as required by Permit Condition S3.B. The Portal does not support submittal of video files.

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, including side sewer laterals up to the ordinary high water line.
- Assess physical condition of anchors used to secure the submarine line.

The report must include the following, at a minimum:

- The Survey Report from the inspector, including photographic verification if conditions allows, and
- Identification of any repairs that are necessary to maintain the integrity and continued function of the outfall line and diffuser, including a proposed schedule for the repairs.

## S12. Certified Operator

The domestic wastewater treatment plant must be operated by an operator certified by the state of Washington for at least a Class II plant. This operator must be in responsible charge of the day-to-day operation of the wastewater treatment plant. When the plant is operated on more than one daily shift, the operator-in-charge of each shift must be certified at a level not lower than one level below the classification of the plant.

## S13. Acute Toxicity

### S13.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 winter and once in the last summer prior to submission of the application for permit renewal.
2. Submit the results to Ecology within 60 days of the sample date and no later than **June 28, 2019** for the last winter sample and no later than **November 28, 2019** for the last summer sample.
3. Conduct acute toxicity testing on a series of at least five concentrations of effluent, including 100% effluent and a control.
4. Use each of the following species and protocols for each acute toxicity test.  
The Permittee may request approval from Ecology to use a substitute species:

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>	EPA-821-R-02-012

### 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 bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data in electronic format for entry into Ecology's database, then the Permittee must send the data to Ecology along with the test report, bench sheets, and reference toxicant results.

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 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 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 5.0% effluent.
8. 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.

## **S14. Chronic Toxicity**

### **S14.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. Submit the results to Ecology within 60 days of the sample date and no later than **June 28, 2019** for the last winter sample and no later than **November 28, 2019** for the last summer sample.

3. Conduct chronic toxicity testing on a series of at least five concentrations of effluent and a control. This series of dilutions must include the ACEC. The ACEC equals 5.0% effluent. The series of dilutions should also contain the chronic critical effluent concentration (CCEC) of 0.9% effluent.
4. 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.
5. Perform chronic toxicity tests with all of the following species and the most recent version of the following protocols. The Permittee may request approval from Ecology to use a substitute species:

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

**S14.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 bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data in electronic format for entry into Ecology’s database, then the Permittee must send the data to Ecology along with the test report, bench sheets, and reference toxicant results.
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 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 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 0.9% effluent. The ACEC equals 5.0% 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.

## **S15. Cooling Water Intake Structure**

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.

### **S15.B. Information and Compliance Report**

The Permittee must prepare an information and compliance report for the CWIS and submit it to Ecology by **February 28, 2020**. The information and compliance report must be consistent with 40 CFR 122.21(r)(2) and (3) and applicable provisions of paragraphs (4), (5), (6), (7), and (8).

1. The facility must submit a revised EPA Form 2-C Supplemental Cooling Water Intake Structures form by **March 1, 2017** to provide the percentage of the intake flow that is used exclusively for cooling.
2. If the facility does not meet the applicability requirements of 40 CFR 125.91, the facility may propose a site-specific alternative for complying with the BTA requirement pursuant to Section 316(b), or propose one of the designated technologies prescribed in 40 CFR Section 125.94(c) to meet the impingement mortality requirement.

### **S15.C. 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.

### **S15.D. Cooling Water Intake Structure Inspections**

The Permittee must inspect the cooling water intake structure to ensure that it is being properly operated and maintained and to identify any potential impingement or entrainment of aquatic organisms.

1. The inspections must be conducted at least once per week.
  - a. The Permittee may request to reduce the frequency of the inspections (for all or certain portions of the year) after the inspections have been conducted for at least one year.
  - b. The request must include justification for reducing the inspection frequency.
2. The inspections must evaluate the operation of the structure as well as note any evidence of impingement or entrainment of aquatic organisms.
3. The inspection form must document any corrective actions taken as a result of the investigation.
4. The records associated with the inspections must be retained for a minimum of three (3) years and made available to Ecology inspectors upon request.

## **S16. Treatment System Efficiency Study**

The Permittee must prepare and submit a process wastewater treatment system efficiency study to Ecology for review with the permit renewal application and no later than **February 28, 2020**. The process wastewater treatment system efficiency study is meant to evaluate the adequacy of the process wastewater treatment system and to ensure that efficient operation is maintained. The following must be included in the study:

- a. Applicable design information for the components of the process wastewater treatment system, such as:
  - Schematic of the treatment units and characterization of the wastewater streams treated by the system,
  - Unit sizing and depth,
  - Current and design flow rates (peak hourly, maximum monthly, and average day),
  - Detention times,
  - Solids loading rates,
  - Overflow rates,
  - Mixed liquor suspended solids (MLSS),
  - Food-to-mass ratio (F/M ratio), and



- Recycle rates.
- b. An analysis of current treatment and removal efficiencies for the design criteria parameters (BOD and TSS) for each treatment unit. The removal efficiencies should be determined from a minimum of six, 24-hour composite samples collected from both the influent and effluent of each treatment unit. Three of the sampling events must be conducted during dry weather flows and three of the sampling events must be conducted during wet weather flows. Samples must be collected at least 30 days apart from each other.
- c. A discussion of any relevant operational changes, such as production increases, modifications to process units, etc., that could potentially cause an increase in hydraulic and/or organic loading to the wastewater treatment system that are anticipated to occur within the subsequent five years.

### **S17. Material Unloading Pollution Prevention Plan**

The Department has determined that the Permittee must use best management practices when unloading materials, such as wood chips, hog fuel, sawdust, etc, from barges and ships to minimize the release of fugitive emissions to nearby surface waters. The Permittee must submit a Material Unloading Pollution Prevention plan to Ecology for review and approval by **December 31, 2016**. The plan must be implemented upon approval by Ecology.

## 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.

In the case of a partnership, by a general partner.

In the case of sole proprietorship, by the proprietor.

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.E.
4. The Permittee complied with any remedial measures required under S3.E 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**

<b>Pollutant</b>	<b>CAS Number (if available)</b>	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> µg/L unless specified</b>	<b>Quantitation Level (QL)<sup>2</sup> µg/L unless specified</b>
Biochemical Oxygen Demand		SM5210-B		2 mg/L
Biochemical Oxygen Demand, Soluble		SM5210-B <sup>3</sup>		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 <sup>+</sup> B	N/A	N/A
Total Suspended Solids		SM2540-D		5 mg/L

**NONCONVENTIONAL POLLUTANTS**

<b>Pollutant &amp; CAS No. (if available)</b>	<b>CAS Number (if available)</b>	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> µg/L unless specified</b>	<b>Quantitation Level (QL)<sup>2</sup> µg/L unless specified</b>
Alkalinity, Total		SM2320-B		5 mg/L as CaCO <sub>3</sub>
Aluminum, Total	7429-90-5	200.8	2.0	10
Ammonia, Total (as N)		SM4500-NH <sub>3</sub> -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

**NONCONVENTIONAL POLLUTANTS**

<b>Pollutant &amp; CAS No. (if available)</b>	<b>CAS Number (if available)</b>	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> µg/L unless specified</b>	<b>Quantitation Level (QL)<sup>2</sup> µg/L unless specified</b>
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
Hardness, Total		SM2340B		200 as CaCO <sub>3</sub>
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 <sub>3</sub> - E/F/H		100
Nitrogen, Total Kjeldahl (as N)		SM4500-N <sub>org</sub> B/C and SM4500NH <sub>3</sub> -B/C/D/EF/G/H		300
NWTPH Dx <sup>4</sup>		Ecology NWTPH Dx	250	250
NWTPH Gx <sup>5</sup>		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 <sub>4</sub> )		SM4110-B		0.2 mg/L
Sulfide (as mg/L S)		SM4500-S <sup>2</sup> F/D/E/G		0.2 mg/L

**NONCONVENTIONAL POLLUTANTS**

<b>Pollutant &amp; CAS No. (if available)</b>	<b>CAS Number (if available)</b>	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> µg/L unless specified</b>	<b>Quantitation Level (QL)<sup>2</sup> µg/L unless specified</b>
Sulfite (as mg/L SO <sub>3</sub> )		SM4500-SO3B		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

<b>Priority Pollutant</b>	<b>PP #</b>	<b>CAS Number (if available)</b>	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> µg/L unless specified</b>	<b>Quantitation Level (QL)<sup>2</sup> µg/L unless specified</b>
<b>METALS, CYANIDE &amp; TOTAL PHENOLS</b>					
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 EC	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

Priority Pollutant	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> <i>µg/L unless specified</i>	Quantitation Level (QL) <sup>2</sup> <i>µg/L unless specified</i>
<b>METALS, CYANIDE &amp; TOTAL PHENOLS</b>					
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

Priority Pollutant	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> <i>µg/L unless specified</i>	Quantitation Level (QL) <sup>2</sup> <i>µg/L unless specified</i>
<b>ACID COMPOUNDS</b>					
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	1.0	2.0
2,4 dinitrophenol	59	51-28-5	625	1.0	2.0
2-Nitrophenol	57	88-75-5	625	0.5	1.0
4-Nitrophenol	58	100-02-7	625	0.5	1.0

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<b>ACID COMPOUNDS</b>					
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

Priority Pollutant	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> <i>µg/L unless specified</i>	Quantitation Level (QL) <sup>2</sup> <i>µg/L unless specified</i>
<b>VOLATILE COMPOUNDS</b>					
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

<b>Priority Pollutant</b>	<b>PP #</b>	<b>CAS Number (if available)</b>	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> <i>µg/L unless specified</i></b>	<b>Quantitation Level (QL)<sup>2</sup> <i>µg/L unless specified</i></b>
<b>VOLATILE COMPOUNDS</b>					
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
1,3-dichloropropene (mixed isomers) (1,2-dichloropropylene) <sup>6</sup>	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



Priority Pollutant	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> <i>µg/L unless specified</i>	Quantitation Level (QL) <sup>2</sup> <i>µg/L unless specified</i>
<b>BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)</b>					
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	12	24
Benzyl butyl phthalate	67	85-68-7	625	0.3	0.6
Benzo( <i>a</i> )anthracene	72	56-55-3	625	0.3	0.6
Benzo( <i>b</i> )fluoranthene (3,4-benzofluoranthene) <sup>7</sup>	74	205-99-2	610/625	0.8	1.6
<b>Benzo(<i>j</i>)fluoranthene</b> <sup>7</sup>		<b>205-82-3</b>	625	0.5	1.0
Benzo( <i>k</i> )fluoranthene (11,12-benzofluoranthene) <sup>7</sup>	75	207-08-9	610/625	0.8	1.6
<b>Benzo(<i>r,s,t</i>)pentaphene</b>		<b>189-55-9</b>	625	0.5	1.0
Benzo( <i>a</i> )pyrene	73	50-32-8	610/625	0.5	1.0
Benzo( <i>ghi</i> )Perylene	79	191-24-2	610/625	0.5	1.0
Bis(2- <i>chloroethoxy</i> )methane	43	111-91-1	625	5.3	21.2
Bis(2- <i>chloroethyl</i> )ether	18	111-44-4	611/625	0.3	1.0
Bis(2- <i>chloroisopropyl</i> )ether	42	39638-32-9	625	0.3	0.6
Bis(2- <i>ethylhexyl</i> )phthalate	66	117-81-7	625	0.1	0.5
4-Bromophenyl phenyl ether	41	101-55-3	625	0.2	0.4
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
<b>Dibenzo (<i>a,h</i>)acridine</b>		<b>226-36-8</b>	610M/625M	2.5	10.0
<b>Dibenzo (<i>a,j</i>)acridine</b>		<b>224-42-0</b>	610M/625M	2.5	10.0
Dibenzo( <i>a-h</i> )anthracene (1,2,5,6-dibenzanthracene)	82	53-70-3	625	0.8	1.6
<b>Dibenzo(<i>a,e</i>)pyrene</b>		192-65-4	610M/625M	2.5	10.0

Priority Pollutant	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> <i>µg/L unless specified</i>	Quantitation Level (QL) <sup>2</sup> <i>µg/L unless specified</i>
<b>BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)</b>					
<b>Dibenzo(a,h)pyrene</b>		189-64-0	625M	2.5	10.0
3,3-Dichlorobenzidine	28	91-94-1	605/625	0.5	1.0
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	0.2	0.4
2,6-dinitrotoluene	36	606-20-2	609/625	0.2	0.4
Di-n-octyl phthalate	69	117-84-0	625	0.3	0.6
1,2-Diphenylhydrazine ( <i>as Azobenzene</i> )	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	0.5	1.0
Hexachloroethane	12	67-72-1	625	0.5	1.0
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
<b>3-Methyl cholanthrene</b>		<b>56-49-5</b>	625	2.0	8.0
Naphthalene	55	91-20-3	625	0.3	0.6
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	0.5	1.0
<b>Perylene</b>		<b>198-55-0</b>	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

Priority Pollutant	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> <i>µg/L unless specified</i>	Quantitation Level (QL) <sup>2</sup> <i>µg/L unless specified</i>
<b>DIOXIN</b>					
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

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<b>PESTICIDES/PCBs</b>					
Aldrin	89	309-00-2	608	0.025	0.05
alpha-BHC	102	319-84-6	608	0.025	0.05
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 <sup>8</sup>	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 <sup>9</sup>	106	53469-21-9	608	0.25	0.5
PCB-1254	107	11097-69-1	608	0.25	0.5
PCB-1221	108	11104-28-2	608	0.25	0.5
PCB-1232	109	11141-16-5	608	0.25	0.5
PCB-1248	110	12672-29-6	608	0.25	0.5

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<b>PESTICIDES/PCBs</b>					
PCB-1260	111	11096-82-5	608	0.13	0.5
PCB-1016 <sup>9</sup>	112	12674-11-2	608	0.13	0.5
Toxaphene	113	8001-35-2	608	0.24	0.5

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, or 5) x 10<sup>n</sup>, 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 µm (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.