



Issuance Date: __?__

Effective Date: __?__

Expiration Date: __?__

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTE DISCHARGE PERMIT WA0031291**

**State of Washington
DEPARTMENT OF ECOLOGY**

Industrial Section
PO Box 47600
Olympia WA 98504-7775

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

**Puget Sound Energy Ferndale Generating Station
5105 Lake Terrell Road
Ferndale, WA 98248**

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

Facility Location:
5105 Lake Terrell Road
Ferndale WA 98248
Industry Type: Electricity and Steam
Production
Treatment Type: Primary and Secondary
Receiving Water: Strait of Georgia
SIC Code: 4911
NAICS Code: 4931

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Ecology

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM WASTE DISCHARGE PERMIT WA0031294	1
SUMMARY OF PERMIT SUBMITTALS	5
SPECIAL CONDITIONS	7
S1. Discharge limits	7
S1.A. Process wastewater and stormwater discharges	7
S1.B. Corrective Action Requirements for Benchmark Exceedances	8
S1.C. Mixing zone authorization	11
S2. Monitoring requirements	12
S2.A. Monitoring schedule	12
S2.B. Sampling and analytical procedures	14
S2.C. Flow measurement, field measurement, and continuous monitoring devices	14
S2.D. Laboratory accreditation	15
S3. Reporting and recording requirements	15
S3.A. Discharge Monitoring Reports	15
S3.B. Permit submittals and schedules	17
S3.C. Records retention	17
S3.D. Recording of results	17
S3.E. Additional monitoring by the Permittee	17
S3.F. Reporting permit violations	17
S3.G. Other reporting	20
S3.H. Maintaining a copy of this permit	20
S4. Operation and maintenance	20
S4.A. Operation and Maintenance (O&M) Manual	20
S4.B. Bypass procedures	22
S5. Solid waste	24
S5.A. Solid waste handling	24
S5.B. Leachate	24
S5.C. Solid Waste Control Plan	24
S6. Application for permit renewal or modification for facility changes	24
S7. Facility loading	24
S7.A. Design criteria	24
S8. Non-routine and unanticipated wastewater	25
S8.A. Notification requirements	25
S8.B. Chemical analysis	25
S8.C. Flow limitation	25
S8.D. Approval requirements	25
S9. Spill Control Plan	25
S9.A. Spill Control Plan submittals and requirements	25

S9.B.	Spill Control Plan components	26
S10.	Stormwater Pollution Prevention Plan	26
S11.	Best Management Practices	26
S11.A.	Bio-Filtration Swale	26
S11.B.	Stormwater Pond	26
S11.C.	Oil/Water Separator	27
S12.	Acute toxicity	27
S12.A.	Testing when there is no permit limit for acute toxicity	27
S12.B.	Sampling and reporting requirements	27
S13.	Chronic toxicity	28
S13.A.	Testing when there is no permit limit for chronic toxicity	28
S13.B.	Sampling and reporting requirements	29
S14.	Cooling Water Maintenance Chemical Reporting	30
S15.	Biocides and Slimicides	30
S15.A.	Biocide/Slimicides Usage Analysis Report	30
S15.B.	Biocide/Slimicides Annual Report	31
REFERENCES		32
GENERAL CONDITIONS		34
G1.	SIGNATORY REQUIREMENTS	34
G2.	RIGHT OF INSPECTION AND ENTRY	35
G3.	PERMIT ACTIONS	35
G4.	REPORTING PLANNED CHANGES	37
G5.	PLAN REVIEW REQUIRED	37
G6.	COMPLIANCE WITH OTHER LAWS AND STATUTES	37
G7.	TRANSFER OF THIS PERMIT	37
G8.	REDUCED PRODUCTION FOR COMPLIANCE	38
G9.	REMOVED SUBSTANCES	38
G10.	DUTY TO PROVIDE INFORMATION	38
G11.	OTHER REQUIREMENTS OF 40 CFR	38
G12.	ADDITIONAL MONITORING	38
G13.	PAYMENT OF FEES	38
G14.	PENALTIES FOR VIOLATION OF PERMIT CONDITIONS	38
G15.	UPSET	39
G16.	PROPERTY RIGHTS	39
G17.	DUTY TO COMPLY	39
G18.	TOXIC POLLUTANTS	40
G19.	PENALTIES FOR TAMPERING	40
G20.	REPORTING REQUIREMENTS APPLICABLE TO EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL DISCHARGES	40
G21.	COMPLIANCE SCHEDULES	41

APPENDIX A – List of Pollutants, Analytical Methods, Detection Levels and Quantitation Levels	42
TABLE 1 – SUMMARY OF PERMIT SUBMITTALS.....	5
TABLE 2 – PROCESS WASTEWATER EFFLUENT LIMITS: OUTFALL 001	7
TABLE 3 – STORMWATER LIMITS: OUTFALL 002.....	7
TABLE 4 – DILUTION FACTORS	12
TABLE 5 – WASTEWATER EFFLUENT OUTFALL 001	12
TABLE 6 – STORMWATER EFFLUENT OUTFALL 002.....	12
TABLE 7 – PERMIT RENEWAL APPLICATION REQUIREMENTS, FINAL EFFLUENT OUTFALL 001	13
TABLE 8 – PRODUCTION	13
TABLE 9 – WHOLE EFFLUENT TOXICITY TESTING – FINAL WASTEWATER EFFLUENT	13
TABLE 10 - DESIGN CRITERIA	24
TABLE 11 - ACUTE TOXICITY TESTS.....	27
TABLE 12 – SALTWATER CHRONIC TOXICITY TESTS	29

SUMMARY OF PERMIT SUBMITTALS

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

Table 1 – Summary of permit submittals

Permit Section	Submittal	Frequency	First submittal date
S1.4.B	Stormwater Inspection Report – Outfall 002	Annually	March 15, 20--
S3.A	Discharge Monitoring Report (DMR)	Monthly	Month 15 th , 20--
S3.A	Discharge Monitoring Report (DMR)	Quarterly	
S3.A	Discharge Monitoring Report (DMR)	Annually	January 15 th , 20--
S3.A	Permit renewal application monitoring data	Last year of the permit term	Enter a specific date
S3.A	DMR - Priority pollutant data - Single sample data for Outfall 001	Annually	Enter a specific date
S3.A	DMR - Priority pollutant data - Single sample data for Outfall 002	Annually	Enter a specific date
S3.F	Reporting permit violations	As necessary	
S4.A	Operations and Maintenance Manual update or review confirmation letter	Annually	January 1, 2027
S4.A	Treatment System Operating Plan	1/permit cycle	With Permit Renewal Application
S4.B	Reporting bypasses	As necessary	
S5.C	Solid Waste Control Plan Update	1/permit cycle	With Permit Renewal Application
S5.C	Modification to Solid Waste Control Plan	As necessary	
S6	Application for permit renewal	1/permit cycle	Month --, 20--
S8	Non-routine and unanticipated discharges	As necessary	
S9.A	Spill Control Plan Update	1/permit cycle,	With Permit Renewal Application
S10	Stormwater Pollution Prevention Plan	1/permit cycle	Month --, 2027
S12	Acute toxicity test results	Twice per permit cycle	With Permit Renewal Application
S13	Chronic toxicity test results	Twice per permit cycle	With Permit Renewal Application
S14	Cooling Water Maintenance Chemical Reporting Letter	Annually	February 15, 20--
S15.A	Biocide/Slimicide Usage Analysis Report	1/permit cycle	Month --, 2027
S15.B	Biocide/Slimicide Annual Report	Annually	January 15, 20--
G1	Notice of change in authorization	As necessary	

Permit Section	Submittal	Frequency	First submittal date
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	
G21	Compliance schedules	As necessary	

SPECIAL CONDITIONS

S1. Discharge limits

S1.A. Process 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 treated process wastewater (Outfall 001) to the Strait of Georgia and discharge treated stormwater (Outfall 002) to unnamed tributary of the Lummi Bay at the permitted location subject to complying with the following limits:

Table 2 – Process Wastewater Effluent Limits: Outfall 001

Latitude: 48.82667 Longitude: -122.71583

Parameter	Average Monthly ^a	Maximum Daily ^b
Total Suspended Solids (TSS)	20 milligrams/liter (mg/L)	35 mg/L
Oil and Grease ^c	10 mg/L	15 mg/L
Total Residual Chlorine	0.2 mg/L	0.2 mg/L
Chromium, Total	0.2 mg/L	0.2 mg/L
Zinc, Total	1.0 mg/L	1.0 mg/L
Priority Pollutants (except Chromium and Zinc, see Appendix A)	N/A	Non-detect ^d

Parameter	Minimum	Maximum
pH ^e	6.0 standard units (SU)	9.0 SU

Table 3 – Stormwater Limits: Outfall 002

Latitude: 48.82833 Longitude: -122.68111

Parameter	Average Monthly ^a	Maximum Daily ^b
Total Suspended Solids (TSS)	15 mg/L	25 mg/L
Oil and Grease ^c	10 mg/L	15 mg/L

Parameter	Minimum	Maximum
pH	6.0 SU	9.0 SU

Parameter	Benchmark Values ^f
Copper	14 µg/L
Zinc	117 µg/L

Footnotes:

- ^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. The average daily measurement does not apply to pH or temperature.
- ^c The oil and grease concentration must not exceed 10 mg/L more than three days each month.
- ^d 126 Priority pollutants (except chromium and zinc) contained in chemicals added for cooling tower maintenance, see Special Condition S14.
- ^e When pH is continuously monitored, excursions between 5.0 and 6.0, or 9.0 and 10.0 are not 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.
- ^f Benchmark values are not numeric effluent limitations. Discharges that fail to meet benchmark values are not automatically considered permit violations or violations of water quality standards; however, if the Permittee fails to meet benchmarks that trigger a corrective action but does not comply with the specific corrective action requirements, it would be a permit violation.

S1.B. Corrective Action Requirements for Benchmark Exceedances

Each time a sampling result is above a benchmark value, the Permittee must take the corrective action specified below. Corrective actions must be included in the DMR that includes the benchmark exceedance(s). The Permittee must submit an Annual Stormwater Report summarizing corrective actions taken in accordance with Special Condition S1.B.4.

1. Level 1 Corrective Actions – Operational Source Control Best Management Practices (BMPs)

If the Permittee exceeds any applicable benchmark value in Table 3 for any monitoring period during a calendar year, the Permittee shall complete a Level 1 Corrective Action in accordance with the following:

- a. Conduct an inspection to investigate the cause within three (3) days of receipt of sampling results or observation for each parameter exceeded.
- b. Review the Stormwater Pollution Prevention Plan/Pollution Prevention Plan and ensure that it fully complies with Special Condition S10 and

contains the correct BMPs within fourteen (14) days of receipt of sampling results or observation for each parameter exceeded.

- c. Make appropriate revisions to the Stormwater Pollution Prevention Plan/Pollution Prevention Plan to include additional Operational Source Control BMPs with the goal of achieving the applicable benchmark value(s) in future discharges within fourteen (14) days of receipt of sampling results or observation for each parameter exceeded.
- d. Summarize the Level 1 Corrective Actions in the Annual Report (Special Condition S1.B.4).
- e. Level 1 Deadline: The Permittee must fully implement the revised Stormwater Pollution Prevention Plan/Pollution Prevention Plan according to Special Condition S10. as soon as possible, but no later than the discharge monitoring report due date (Special Condition S3) for the subsequent monitoring period.

2. Level 2 Corrective Actions – Structural Source Control BMPs

If the Permittee exceeds any applicable benchmark value in Table 3 for any two quarters during a calendar year, the Permittee shall complete a Level 2 Corrective Action as described below. Alternatively, the Permittee may skip Level 2 and complete a Level 3 Corrective Action as described below.

- a. Review the Stormwater Pollution Prevention Plan/Pollution Prevention Plan and ensure that it fully complies with Special Condition S10.
- b. Make appropriate revisions to the Stormwater Pollution Prevention Plan/Pollution Prevention Plan to include additional Structural Source Control BMPs with the goal of achieving the applicable benchmark value(s) in future discharges.
- c. Summarize the Level 2 Corrective Actions in the Annual Report (Special Condition S1.B.4).
- d. Level 2 Deadline: The Permittee shall fully implement the revised Stormwater Pollution Prevention Plan/Pollution Prevention Plan according to Special Condition S10. as soon as possible, but no later than August 31st of the following year.
 - (i) If installation of necessary Structural Source Control BMPs is not feasible by August 31st of the following year, Ecology may approve additional time.
 - (ii) If installation of Structural Source Control BMPs is not feasible or not necessary to prevent discharges that may cause or contribute to a violation of a water quality standard, Ecology may waive the requirement.
 - (iii) While a time extension is in effect and during the following calendar year, benchmark exceedances for the same parameter do not count towards additional Level 2 or 3 Corrective Actions.

3. Level Three Corrective Actions – Treatment BMPs

If the Permittee exceeds any applicable benchmark value in Table 3 for any three quarters during a calendar year, the Permittee shall complete a Level 3 Corrective Action in accordance with the following:

- a. Review the Stormwater Pollution Prevention Plan/Pollution Prevention Plan and ensure that it fully complies with Special Condition S10.
- b. Make appropriate revisions to the Stormwater Pollution Prevention Plan/Pollution Prevention Plan to include additional Treatment BMPs with the goal of achieving the applicable benchmark value(s) in future discharges. Revisions shall include additional operational and/or structural source control BMPs if necessary for proper performance and maintenance of Treatment BMPs.
- c. Before installing treatment BMPs that require the site-specific design or sizing of structures, equipment, or processes to collect, convey, treat, reclaim, or dispose of industrial stormwater, the Permittee must submit an engineering report and plans and specifications to Ecology for review and approval as per General Condition G5. The engineering report and plans and specifications must be submitted no later than the June 30th prior to the Level 3 deadline, unless an alternate due date is specified in an order. The engineering report must include:
 - (i) Brief summary of the treatment alternatives considered and why the proposed option was selected. Include cost estimates of ongoing operation and maintenance, including disposal of any spent media;
 - (ii) The basic design data, including characterization of stormwater influent, and sizing calculations of the treatment units;
 - (iii) A description of the treatment process and operation, including a flow diagram;
 - (iv) The amount and kind of chemicals used in the treatment process, if any;
 - (v) Results to be expected from the treatment process including the predicted stormwater discharge characteristics;
 - (vi) A statement, expressing sound engineering justification using pilot plant data, results from similar installations, and/or scientific evidence that the proposed treatment is reasonably expected to meet the permit benchmarks; and
 - (vii) Certification by a licensed professional engineer.
- d. An Operation and Maintenance Manual (O&M Manual) must be submitted to Ecology no later than 30 days after construction/installation is complete; unless an alternative due date is specified in an order.
- e. Summarize the Level 3 Corrective Actions (planned or taken) in the Annual Report (S1.B.4). Include information on how monitoring, assessment, or evaluation information was (or will be) used to determine

whether existing treatment BMPs will be modified/enhanced, or if new/additional treatment BMPs will be installed.

- f. Level 3 Deadline: The Permittee must fully implement the revised Stormwater Pollution Prevention Plan/Pollution Prevention Plan according to Special Condition S10. as soon as possible, but no later than September 30th of the following year.
 - (i) If installation of necessary treatment BMPs is not feasible by the Level 3 Deadline; Ecology may approve additional time.
 - (ii) If installation of treatment BMPs is not feasible or not necessary to prevent discharges that may cause or contribute to violation of a water quality standard, Ecology may waive the requirement.
 - (iii) While a time extension is in effect, benchmark exceedances for the same parameter do not count towards additional Level 2 or 3 Corrective Actions.

4. Annual Stormwater Report

The Permittee must submit an Annual Stormwater Report for Outfall 002 no later than March 15th of each year which summarizes the benchmark exceedances and corrective actions taken for the previous year. The Annual Stormwater Report must:

- a. List all benchmark exceedances.
- b. Include corrective action documentation as required in Special Condition S1.B. If corrective action is not yet completed at the time of submission of the Annual Stormwater Report, the Permittee must describe the status of any outstanding corrective action(s).
- c. Identify the condition triggering the need for corrective action review.
- d. Describe the problem(s) and identify the dates they were discovered.
- e. Summarize any Level 1, 2 or 3 corrective actions completed during the previous calendar year and include the dates it completed the corrective actions.
- f. Describe the status of any Level 2 or 3 corrective actions triggered during the previous calendar year and identify the date it expects to complete corrective actions.

If the Permittee did not exceed benchmarks and did not perform corrective actions, the Annual Stormwater Report must still be submitted and state that the Permittee did not exceed benchmarks and did not perform corrective actions during the previous year.

S1.C. Mixing zone authorization

Mixing zone for Outfall 001

The following paragraphs define the maximum boundaries of the mixing zones:

Chronic mixing zone

The mixing zone is a circle with radius of 231 feet (70.4 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 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 23 feet (7.0 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.

Table 4 – Dilution factors

Criteria	Dilution factor
Acute Aquatic Life Criteria	27
Chronic Aquatic Life Criteria	94
Human Health Criteria - Carcinogen	103
Human Health Criteria - Non-carcinogen	103

S2. Monitoring requirements

S2.A. Monitoring schedule

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

Table 5 – Wastewater effluent Outfall 001

Parameter	Units & speciation	Minimum sampling frequency	Sample type
Total Suspended Solids (TSS)	mg/L	Twice a month ^a	24-Hour Composite ^b
Oil and Grease	mg/L	Twice a month ^a	Grab ^c
Total Residual Chlorine (TRC)	mg/L	Weekly	Grab ^c
Chromium, Total	mg/L	Once per year	24-Hour Composite
Zinc, Total	mg/L	Once per year	24-Hour Composite
Priority Pollutants (PP) ^d – Total Metals, except Cyanides and Phenols	µg/L	Once per year	24-Hour Composite
pH ^e	SU	Continuous ^f	Metered/Recorded
Flow	Million gallons/day (MGD)	Continuous	Metered/Recorded
Temperature ^g	°C	Continuous	Metered/Recorded

Table 6 – Stormwater effluent Outfall 002

Parameter	Units & speciation	Minimum sampling frequency	Sample type
Total Suspended Solids (TSS)	mg/L	Twice a month ^a	24-Hour Composite
Oil and Grease	mg/L	Twice a month	Grab
pH	SU	Once per discharge	Grab
Priority Pollutants (PP) – Total Metals, except Cyanides and Phenols	µg/L	Every two years	24-Hour Composite
Copper	µg/L	Quarterly	24-Hour Composite
Zinc	µg/L	Quarterly	24-Hour Composite

Table 7 – Permit renewal application requirements, final effluent Outfall 001

Parameter	Units & speciation	Minimum sampling frequency	Sample type
PP – Volatile Organic Compounds	µg/L	Once during last year of permit term	Grab ^c
PP – Acid-extractable Compounds	µg/L	Once during last year of permit term	Grab
PP – Base-neutral Compounds	µg/L	Once during last year of permit term	Grab

Table 8 – Production

Parameter	Units & speciation	Minimum sampling frequency	Report value
Electricity	Megawatts	--	Monthly Average
Steam	Pounds per hours	--	Monthly Average

Table 9 – Whole Effluent Toxicity Testing – Final wastewater effluent

Monitoring type	Description
Acute Whole Effluent Toxicity Testing	As specified in condition S11
Chronic Whole Effluent Toxicity Testing	As specified in condition S12

Footnotes:

^a Minimum 14-days apart.

^b Twenty-four (24)-hour composite means a series of individual samples collected over a 24-hour period into a single container, and analyzed as one sample.

^c Grab means an individual sample collected over a fifteen (15) minute, or less, period.

^d Priority pollutant scans for total metals must use total recoverable metal laboratory methods for all parameters except for hexavalent chromium. The 40 Code of Federal Regulations (CFR) 136 method for hexavalent chromium measures only its dissolved form.

^e Report the instantaneous maximum and minimum pH monthly. Do not average pH values.

^f Continuous means uninterrupted except for brief lengths of time for calibration, power failure, or unanticipated equipment repair or maintenance. The time interval for the associated data logger must be no greater than 30 minutes. The Permittee must sample every 4 hours when continuous monitoring is not possible.

^g If measuring temperature continuously, report a daily maximum from half-hour measurements over a 24-hour period. Continuous monitoring instruments must achieve an accuracy of 0.2 degrees C and the Permittee must verify accuracy annually.

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 Code of Federal Regulations (CFR) Part 136 [or as applicable in 40 CFR subchapter N (Parts 400-471) or 40 CFR Subchapter O (Parts 501-503)] unless otherwise specified in this permit. Ecology may specify alternative methods only 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 the devices to ensure the accuracy of the measurements is consistent with the accepted industry standard, the manufacturer's recommendation, and approved Operation and Maintenance (O&M) Manual procedures for the device and the wastestream.
3. Calibrate continuous monitoring instruments weekly unless it can demonstrate a longer period is sufficient based on monitoring reports. The Permittee:
 - a. Must calibrate continuous pH measurement instruments according to the manufacturer's requirements.
4. Calibrate micro-recording Temperature devices, known as thermistors, using protocols from *Standard Operating Procedure EAP080, Version 2.2, Continuous Temperature Monitoring of Freshwater Rivers and Streams*

- (Ecology, 2022). Calibration as specified in this document is not required if the Permittee uses recording devices certified by the manufacturer.
5. Use field measurement devices as directed by the manufacturer and do not use reagents beyond their expiration dates.
 6. Establish a calibration frequency for each device or instrument in the O&M Manual that conforms to the frequency recommended by the manufacturer.
 7. Calibrate flow monitoring devices at a minimum frequency of at least one calibration per year.
 8. Maintain calibration records for at least three years.

S2.D. Laboratory accreditation

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

S3. Reporting and recording requirements

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

S3.A. Discharge Monitoring Reports

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

1. Summarize, report, and submit monitoring data obtained during each monitoring period on the electronic Discharge Monitoring Report (DMR) form provided by Ecology within the [Water Quality Permitting Portal](https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance/WQWebPortal-guidance)¹. Include data for each of the parameters tabulated in Special Conditions 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.
2. Submit DMRs no later than the dates specified below, unless otherwise specified in this permit.
3. Submit DMRs for parameters with the monitoring frequencies specified in S2 (monthly, quarterly, annual, etc.) at the reporting schedule identified below.
The Permittee must:
 - a. Submit **monthly** DMRs by the 15th day of the following month.

¹ <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance/WQWebPortal-guidance>

- b. Submit **quarterly** DMRs, unless otherwise specified in the permit, by the 15th day of the month following the monitoring period. Quarterly sampling periods are January through March, April through June, July through September, and October through December. The Permittee must submit the first quarterly DMR by _____ for the quarter beginning on _____.
- c. Submit **annual** DMRs, unless otherwise specified in the permit, by January 15th for the previous calendar year. The annual sampling period is a calendar year, starting January 1st.
- d. Submit **permit renewal application** monitoring data in WQWebDMR, as required in Special Condition S2, by **Month --, 20--**.
4. Enter the "No Discharge" reporting code for an entire DMR, for a specific monitoring point, or a specific parameter as appropriate, if the Permittee did not discharge wastewater or a specific pollutant during a given monitoring period.
5. Report single analytical values below detection as "less than the Detection Level (DL)" by entering the < 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.
6. Report single analytical values between the DL and the QL by entering the estimated value, the code for estimated value/below quantitation limit (J) and any additional information in the comments.
7. Submit a copy of the laboratory report as an attachment using WQWebDMR. Laboratory reports must include the chain of custody and QA/QC results.
8. 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.
9. Calculate average values and calculated total values (unless otherwise specified in the permit) using:
 - a. The reported numeric value for all parameters measured between the detection value and the quantitation value for the sample analysis.
 - b. One-half (1/2) the detection value (for values reported below detection) if the lab detected the parameter in another sample from the same monitoring point for the reporting period.
 - c. Zero (for values reported below detection) if the lab did not detect the parameter in another sample for reporting period.
10. Report single-sample grouped parameters (for example: priority pollutants, PAHs, TTOs) on the WQWebDMR form and include: sample date, concentration detection, DL (as necessary), and laboratory QL (as necessary).

S3.B. Permit submittals and schedules

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

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

Water Quality Permit Coordinator
Department of Ecology
Industrial Section
PO Box 47706
Olympia, WA 98504-7600

S3.C. Records retention

The Permittee must retain records of all monitoring information for a minimum of three 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 date and time the analysis was performed.
4. The individual who performed the analysis.
5. The analytical technique or method 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. The permittee must make reasonable attempts to collect a sample of any unusual discharge or discharge condition including prohibited bypasses, upsets, and maintenance-related conditions affecting effluent quality. The sample must be representative of the volume and nature of the uncharacteristic discharge. The additional monitoring results must be reported on the monthly DMR or follow-up report, along with a note of explanation.
3. Immediate reporting

The Permittee must **immediately** report (see definition of “immediate reporting” in Appendix C of the fact sheet) to Ecology and the local health jurisdiction at the numbers listed below, all:

- Plant bypasses resulting in a discharge to a waterbody. This requirement does not include industrial process wastewater overflows to impermeable surfaces which are collected and routed to the treatment works.

Ecology Industrial Section Permit Manager (phone or email)

Whenever an event listed in permit section S3.F.3. impacts marine waters, the Permittee must also **immediately** report to the Department of Health, Shellfish Program at the number listed below:

Department of Health, Shellfish Program

- 360-789-8962

4. Twenty-four (24) hour reporting

The Permittee must report the following to the Ecology Section Permit Manager via phone and email, within 24 hours from the time the Permittee becomes aware of any of the following:

- Any noncompliance that may endanger health or the environment, unless previously reported under immediate reporting requirements.
- Any unanticipated bypass that causes an exceedance of any effluent limit in the permit (See Part S4.B., Bypass Procedures).
- Any upset that causes an exceedance of an effluent limit in the permit (See G.15, "Upset").
- Any violation of a maximum daily or instantaneous maximum discharge limit for any of the pollutants in Special Condition S1.A of this permit.
- 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.

5. Five-day follow-up report

The Permittee must also submit a written report within five days of the time that the Permittee becomes aware of any reportable event under S3.F.3 or S3.F.4. (See definition of “Days (compliance period interval)” in Appendix C of the Fact Sheet.)

Submit the written report electronically using the Water Quality Permitting Portal – Permit Submittals application.

The report must contain:

- a. A description of the noncompliance and its cause.
- b. The period of noncompliance, including exact dates and times.
- c. The estimated time the Permittee expects the noncompliance to continue if not yet corrected.
- d. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
- e. If the noncompliance involves an overflow prior to the treatment works, an estimate of the quantity (in gallons) of untreated overflow.
- f. Include a description of actions taken to stop, contain, and cleanup unauthorized discharges and to mitigate any associated environmental impacts.
- g. If samples were taken to characterize the event, provide any analytical results that are available with the five-day report. If the data was collected at the same monitoring points and for parameters specified on the DMR, the sample results must also be reported on the DMR.

6. Waiver of written reports

Ecology may waive the report required in S3.F.5, above, on a case-by-case basis if the Permittee has submitted a timely oral report. If a waiver is requested, the Permittee must obtain written confirmation of the waiver from Ecology.

7. All other permit violation reporting

The Permittee must report all other permit violations when they submit monitoring reports under Special Condition S3.A. (Reporting). The reports must contain the information listed in S3.F.5.

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

S3.G. Other reporting

1. Spills of oil or hazardous materials

In addition to the requirements in S3.F, the Permittee must report a spill of oil or hazardous materials in accordance with the requirements of Revised Code of Washington (RCW) 90.56.280 and WAC 173-303-145. Visit the website [How to Report a Spill](#)² for further instructions.

2. 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 interrupting of wastewater treatment and degrade effluent equality, 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. Operation and Maintenance (O&M) Manual

1. O&M Manual submittal and requirements

The Permittee must:

- a. Update the O&M Manual to meet the requirements of WAC 173-240-150.
- b. Review the O&M Manual at least annually and confirm this review by letter to Ecology by January 1st of each year.
- c. Submit to Ecology for review substantial changes or updates to the O&M Manual.
- d. Keep the approved O&M Manual at the permitted facility.
- e. Follow the instructions and procedures of this manual.

² <https://ecology.wa.gov/About-us/Get-involved/Report-an-environmental-issue/Report-a-spill>

2. O&M Manual components

In addition to the requirements of WAC 173-240-150, the O&M Manual must include the following: (See Section G1-4.4 in the *Criteria for Sewage Works Design* (Orange Book) (Ecology, 2023) for additional guidance).

- a. Emergency procedures for plant shutdown and cleanup in the event of a wastewater system upset or failure.
- b. A review of system components which, if failed, could pollute surface water or could impact human health. Provide a procedure for a routine schedule of checking the function of these components.
- c. Wastewater system maintenance procedures that contribute to the generation of process wastewater.
- d. Any directions to maintenance staff when cleaning or maintaining other equipment or performing other tasks which are necessary to protect the operation of the wastewater system (for example, defining maximum allowable discharge rate for draining a tank, blocking all floor drains before beginning the overhaul of a stationary engine).
- e. Wastewater sampling protocols and procedures for compliance with the sampling and reporting requirements in the wastewater discharge permit.
- f. Minimum staffing adequate to operate and maintain the treatment processes and carry out compliance monitoring required by the permit.
- g. Treatment plant process control monitoring schedule.
- h. Other items on case-by-case basis such as O&M for pump stations, lagoon liners, etc.

3. 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 by **Insert Date (with application renewal)**. The Permittee must update and submit 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:

- a. A baseline operating condition, which describes the operating parameters and procedures, used to meet the effluent limits of S1 at the production levels used in developing these limits.
- b. In the event of production rates, 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. The monitoring and reporting must be described in the Plan.

- c. In the event of an upset, due to plant maintenance activities, severe stormwater events, startups 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.
- d. 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.).

S4.B. Bypass procedures

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

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

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

2. Anticipated bypass for non-essential maintenance.

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

- a. If a bypass is for non-essential maintenance, the Permittee must notify Ecology, if possible, at least 10 days before the planned date of bypass. The notice must contain:
 - A description of the bypass and the reason the bypass is necessary.
 - An analysis of all known alternatives which would eliminate, reduce, or mitigate the potential impacts from the proposed bypass.
 - A cost-effectiveness analysis of alternatives.
 - The minimum and maximum duration of bypass under each alternative.

- A recommendation as to the preferred alternative for conducting the bypass.
 - The projected date of bypass initiation.
 - A statement of compliance with State Environmental Policy Act (SEPA).
 - A request for modification of Water Quality Standards as provided in WAC 173-201A-410, if an exceedance of any Water Quality Standard is anticipated.
 - Details of the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.
- b. For probable construction bypasses, the Permittee must notify Ecology of the need to bypass as early in the planning process as possible. The Permittee must consider the analysis required above during the project planning and design process. The project-specific engineering report as well as the plans and specifications must include details of probable construction bypasses to the extent practical. In cases where the Permittee determines the probable need to bypass early, the Permittee must continue to analyze conditions up to and including the construction period in an effort to minimize or eliminate the bypass.
- c. Ecology will determine if the Permittee has met the conditions of Special Condition S4.B.2.a and b, and consider the following prior to issuing a determination letter, an Administrative Order, or a permit modification as appropriate for an anticipated bypass:
- If the Permittee planned and scheduled the bypass to minimize adverse effects on the public and the environment.
 - If the bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to the property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
 - If feasible alternatives to the bypass exist, such as:
 - The use of auxiliary treatment facilities
 - Retention of untreated wastes
 - Stopping production
 - Maintenance during normal periods of equipment downtime, but not if the Permittee should have installed adequate backup equipment in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal

periods of equipment downtime or preventative maintenance.

- Transport of untreated wastes to another treatment facility.

S5. Solid waste

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 (AKART), nor allow such leachate to cause violation of 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 water.

S5.C. Solid Waste Control Plan

The Permittee must submit all proposed revisions or modifications to the Solid Waste Control Plan to Ecology for review and approval at least 30 days prior to implementation. The Permittee must comply with the approved Solid Waste Control Plan and any modifications once approved. The Permittee must submit an update of the Solid Waste Control Plan by **Insert Date (application for permit renewal)**.

S6. Application for permit renewal or modification for facility changes

The Permittee must submit an application for renewal of this permit by **Insert Date (at least one year prior to expiration date)**.

The Permittee must also submit a new application or addendum at least 180 days prior to commencement of discharges resulting from 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

S7.A. Design criteria

The flows or wasteloads for the permitted facility must not exceed the following design criteria:

Table 10 - Design criteria

Flow	Maximum
Maximum Influent Flow of Clarifier	300 gallon per minute / 432,000 gallon per day
Wastewater Filter	300 gallon per minute / 432,000 gallon per day

S8. Non-routine and unanticipated wastewater

S8.A. Notification requirements

Beginning on the effective date of this permit, the Permittee is authorized to discharge non-routine wastewater or unanticipated wastewater, and therefore not listed on the permit application, on a case-by-case basis if approved by Ecology. Prior to any such discharge, the Permittee must contact Ecology, and at a minimum, provide the following information:

1. The proposed discharge location;
2. The nature of the activity that will generate the discharge;
3. Any alternatives to the discharge, such as reuse, storage, or recycling of the water;
4. The total volume of water it expects to discharge;
5. The results of the chemical analysis of the water;
6. The date of proposed discharge; and
7. The expected rate of discharge discharged, in gallons per minute.

S8.B. Chemical analysis

The Permittee must analyze the water for constituents limited for the discharge and report them as required by subpart A.5 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.

S8.C. Flow limitation

The Permittee must limit the discharge rate, as referenced in subpart A.7 above, so it will not cause erosion of ditches or structural damage to culverts and their entrances or exits.

S8.D. Approval requirements

The discharge cannot proceed until Ecology has reviewed the information provided and has authorized the discharge by letter to the Permittee or by an Administrative Order. Once approved, and if the proposed discharge 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. Submit to Ecology an update to the existing Spill Control Plan by **Insert Date**.
2. Review the Plan at least annually and update the Spill Plan as needed.
3. Send changes to the Plan to Ecology.
4. Follow the Plan and any supplements throughout the term of the permit.

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

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. Approval of the Spill Control Plan with respect to this requirement does not constitute approval of the plans and manuals with respect to the underlying requirement.

S10. Stormwater Pollution Prevention Plan

PSE Ferndale must develop and submit a Stormwater Pollution Prevention Plan (SWPPP) via WQWebPortal by **Month --, 2027** in accordance with the requirements defined in Special Condition S3 of Ecology's *Industrial Stormwater General Permit* (2025) with the following exception. The Permittee is not required to complete the Special Condition S.3.B.4.(b)(4) Spill Prevention and Emergency Cleanup Plan (SPECPP) because a Spill Control Plan is already a requirement in Special Condition S9 of this permit.

S11. Best Management Practices

S11.A. Bio-Filtration Swale

Debris must be screened to prevent the clogging of the treatment soil and/or growth of the vegetation. Remove any dead vegetation annually prior to the winter wet season since decomposing vegetation can release pollutants captured in the bio-swale, especially nutrients.

S11.B. Stormwater Pond

Periodic cleaning and inspection of stormwater system components must be performed and recorded. Storm drain inlets and manholes, oil water separators, and the retention pond liner above the low water line must be cleaned and inspected annually. The retention pond and the stormwater drain piping must be inspected if damage is noted or suspected (per letter from the Department of Ecology dated April 4, 2003). The entire retention pond and the stormwater drain

pipng must be cleaned and repaired as indicated by the inspection results. Retention pond sediment depth must be checked and recorded annually.

Retention pond cleaning must be conducted when sediment accumulation exceeds an average depth of six inches or when the total suspended solids content of released stormwater indicates that the pond is not capable of retaining settled solids.

S11.C. Oil/Water Separator

The depth of oil accumulated in the oil/water separator must be measured and recorded each month. Any unusual or substantial accumulation of oil must be investigated and the source of oil identified and corrected. Oil and sludge must be removed from the oil/water separator as experience dictates. Waste oil and sludge must be removed and disposed of by an approved waste disposal operator. Waste disposal and inspections must be recorded.

S12. Acute toxicity

S12.A. Testing when there is no permit limit for acute toxicity

The Permittee must:

1. Conduct acute toxicity testing on the final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal. If no discharge occurs during the required period, the Permittee must notify Ecology and conduct sampling on the next representative discharge that occurs.
2. Conduct acute toxicity testing on a series of at least five concentrations of effluent, including 100 percent effluent and a control.
3. Use each of the following species and protocols for each acute toxicity test:

Table 11 - Acute toxicity tests

Acute Toxicity Test	Species	Method
Fathead Minnow 96-Hour Static-Renewal Test	Pimephales Promelas	EPA-821-R-02-012, Method EPA 2000.0
Daphnid 48-Hour Static Test	Ceriodaphnia Dubia, Daphnia Pulex, OR Daphnia Magna	EPA-821-R-02-012, Method EPA 2002.0 or Method EPA 2021.0
Rainbow Trout 96-Hour Static-Renewal Test	Oncorhynchus Mykiss	EPA-821-R-02-012, Method EPA 2019.0

4. Submit the results to Ecology by Insert Date (with permit renewal application).

S12.B. Sampling and reporting requirements

1. The Permittee must submit all reports for toxicity testing in accordance with the *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, Publication 95-80 (Ecology, 2016). Reports must contain toxicity data, bench sheets, and reference toxicant results for test methods. In addition, the

- Permittee must submit toxicity test data in electronic format (CETIS export file preferred) for entry into Ecology's database.
2. The Permittee must collect 24-hour composite effluent samples for toxicity testing. The Permittee must cool the samples to 0 – 6 degrees Celsius during collection and send them to the lab immediately upon completion. The lab must begin the toxicity testing as soon as possible but no later than 36 hours after sampling was completed.
 3. The laboratory must conduct water quality measurements on all samples and test solutions for toxicity testing, as specified in the *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, Publication WQ-R-95-80 (Ecology, 2016).
 4. All toxicity tests must meet quality assurance criteria and test conditions specified in the EPA methods listed in Subsection C and the *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, Publication WQ-R-95-80 (Ecology, 2016). 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 the 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 ACEC. The ACEC equals 3.7 percent 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 percent as defined in WAC 173-205-020. If the test does not meet the power standard, the Permittee must repeat the test on a fresh sample with an increased number of replicates to increase the power.

S13. Chronic toxicity

S13.A. Testing when there is no permit limit for chronic toxicity

The Permittee must:

1. Conduct chronic toxicity testing on the final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal. If no discharge occurs during the required period, the Permittee must notify Ecology and conduct sampling on the next representative discharge that occurs.

2. Conduct chronic toxicity testing on a series of at least five concentrations of effluent and a control. This series of dilutions must include the ACEC. The ACEC equals 3.7 effluent. The series of dilutions should also contain the CCEC of 1.1 percent effluent.
3. Compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.
4. Submit the results to Ecology by Insert Date and Insert Date (with permit renewal application).
5. Perform chronic toxicity tests with all of the following species and the most recent version of the following protocols:

Table 12 – Saltwater chronic toxicity tests

Saltwater Chronic Test	Species	Method
Topsmelt Survival and Growth	Atherinops Affinis	EPA/600/R-95-136
Mysid Shrimp Survival and Growth	Americamysis Bahía (Formerly Mysidopsis Bahía)	EPA-821-R-02-014

S13.B. Sampling and reporting requirements

1. The Permittee must submit all reports for toxicity testing in accordance with the *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, Publication WQ-R-95-80 (Ecology, 2016). Reports must contain toxicity data, bench sheets, and reference toxicant results for test methods. In addition, the Permittee must submit toxicity test data in electronic format (CETIS export file preferred) for entry into Ecology's database.
2. The Permittee must collect 24-hour composite effluent samples for toxicity testing. The Permittee must cool the samples to 0 – 6 degrees Celsius during collection and send them to the lab immediately upon completion. The lab must begin the toxicity testing as soon as possible but no later than 36 hours after sampling was completed.
3. The laboratory must conduct water quality measurements on all samples and test solutions for toxicity testing, as specified in the *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, Publication WQ-R-95-80 (Ecology, 2016).
4. All toxicity tests must meet quality assurance criteria and test conditions specified in the most recent versions of the EPA methods listed in Subsection C and the *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, Publication WQ-R-95-80 (Ecology, 2016). 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 the 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 1.1 percent effluent. The ACEC equals 3.7 percent effluent.
8. All Whole Effluent Toxicity tests that involve hypothesis testing must comply with the chronic statistical power standard of 39 percent 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. Cooling Water Maintenance Chemical Reporting

The Permittee must submit to Ecology an annual confirmation letter by February 15th verifying that the chemicals used for cooling water maintenance do not contain priority pollutants listed in 40 CFR 423, Appendix A in amounts that would cause detectable quantities in the effluent. Cooling tower maintenance chemicals used, the annual quantity used, the priority pollutant content of each chemical, and (if applicable) a mass balance demonstrating “no resultant priority pollutants in detectable amounts” must be reported. Monitoring for priority pollutants is required in accordance with Special Conditions S2. Annual priority pollutant results must be reported to Ecology in accordance with Special Condition S3.A by February 15th for the preceding year.

S15. Biocides and Slimicides

S15.A. Biocide/Slimicides Usage Analysis Report

The Permittee must prepare and submit a Biocide/Slimicide Usage Analysis Report to Ecology for review by Month --, 2027.

1. A compilation of a list of current biocides/slimicides used by the Permittee that may be discharged to the receiving wastewater treatment plant as well as reasonable alternative biocides/slimicides. This list should also include non-biocide/slimicide alternatives.
 - (a) Reasonable alternatives should include other biocides/slimicides used at similar facilities or other biocides/slimicides as specified by vendors or alternatives identified by other means.
2. Review the compiled list of biocides/slimicides and alternatives based on efficacy, chronic toxicity, biodegradability, cost, and other factors (as applicable and feasible).
3. Select biocides/slimicides or alternatives to be used by the Permittee that meet the operational goals and minimize environmental impacts. Selection should be based on the criteria listed above with reasoning provided for the inclusion and exclusion of biocides/slimicides alternatives.

4. Review/update of procedures and BMPs for the use/dosing of selected biocides/slimicides or alternatives to minimize environmental impacts while maintaining operational goals.
 - (a) Include procedures and BMPs for biocides/slimicides or alternative use in the O&M manual in Special Condition S4.
 - (b) Provide training to staff in the procedures and BMPs identified.

S15.B. Biocide/Slimicides Annual Report

The Permittee must report the following to Ecology by the **January 15** of each calendar year:

- The types of biocides, slimicides, and herbicides used for each process water stream in each process unit during the preceding calendar year.
- Estimated quantity of each biocide, slimicide, and herbicide used during the preceding calendar year.
- The average and maximum concentration of biocides, slimicides, and herbicides, by types, added to process waters in each process unit during the preceding calendar year.
- Updates on any changes in biocide, slimicide, and herbicide products used, or amounts used that are anticipated over the next calendar year.

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GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

1. All applications 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 the other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 - b. In the case of a partnership, by a general partner.
 - c. In the case of sole proprietorship, by the proprietor.
 - d. In the case of municipal, state, or other public facility, by either a principal executive officer or ranking elected official.

Applications for permit 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 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 a 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 Part 122.62, 40 CFR Part 122.64, or WAC 173-220-150 according to the procedures of 40 CFR Part 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. 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 modification or termination.
 - e. A change in any condition 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 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. The permitted facility being determined to be a new source pursuant to 40 CFR Part 122.29(b).
 - b. A significant change in the nature or an increase in quantity of pollutants discharged.
 - c. 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 Part 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 the permit constitutes a violation.

G4. REPORTING PLANNED CHANGES

The Permittee must, as soon as possible, but no later than 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 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, a 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 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 approval 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. Transfer by Modification

Except as provided in paragraph B 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 Part 122.62(b)(2), or a minor modification made under 40 CFR Part 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 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 or its intent to modify or revoke and reissue this permit. A modification under this subparagraph may also be minor modification under 40 CFR Part 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 re-suspended 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

The other requirements of 40 CFR Part 122.41 and 40 CFR Part 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 VIOLATION OF 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 up to \$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 \$10,000 for each 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 exception 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 operation error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

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

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

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

If 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 ground for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal.

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 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 years, or by both.

G20. REPORTING REQUIREMENTS APPLICABLE TO EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL DISCHARGES

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; 500 µg/L for 2,4-Dinitrophenol and 2-Methyl-4,6-Dinitrophenol; and 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 Part 122.21(g)(7).
 - d. The level established by the Director in accordance with 40 CFR Part 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 (500) µg/L
 - b. One (1) mg/L for Antimony
 - c. Ten times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR Part 122.21(g)(7).
 - d. The level established by the Director in accordance with 40 CFR Part 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 14 days following each schedule date.

APPENDIX A – List of Pollutants, Analytical Methods, Detection Levels and Quantitation Levels

The Permittee must use the specified analytical methods, detection levels (DLs) ¹ and quantitation levels (QLs) ² 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 due to matrix effects, the Permittee must submit a matrix-specific detection level (MDL) and a quantitation level (QL) to Ecology with appropriate laboratory documentation when the detection levels are too high to provide results near or below criteria (or applicable permit limits).

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.

Dioxin and furan congeners identified using EPA Method 1613.

Per- and polyfluoroalkyl substances (PFAS) identified using EPA Method 1633.

Appendix A Table 1 – Conventional pollutants

Pollutant	CAS number (if available)	Recommended analytical protocol	Detection level (DL) ¹ µg/L unless specified	Quantitation level (QL) ² µg/L unless specified
Biochemical Oxygen Demand		SM5210-B		2 mg/L
Biochemical Oxygen Demand, Soluble		SM5210-B ³		2 mg/L

Fecal Coliform		SM 9221E, 9221F SM 9222D	N/A	Specified in method sample aliquot dependent
Oil and Grease (HEM) (Hexane Extractable Material)		1664 A or B	1,400	5,000
pH		SM4500-H+ B	N/A	N/A
Total Suspended Solids		SM2540-D		5 mg/L

Appendix A Table 2 - Nonconventional pollutants

Pollutant	CAS number (if available)	Recommended analytical protocol	Detection level (DL) ¹ µg/L unless specified	Quantitation level (QL) ² µg/L unless specified
Alkalinity, Total		SM2320-B		5 mg/L as CaCO ₃
Aluminum, Total	7429-90-5	200.8	2.0	10
Ammonia, Total (as N)		SM4500-NH3-B and C/D/E/G/H		20
Barium Total	7440-39-3	200.8	0.5	2.0
BTEX (benzene +toluene + ethylbenzene + m,o,p xylenes)		EPA SW 846 8021/8260	1	2
Boron, Total	7440-42-8	200.8	2.0	10.0
Chemical Oxygen Demand		SM5220-D		10 mg/L
Chloride		SM4500-Cl B/C/D/E and SM4110 B		Sample and limit dependent
Chlorine, Total Residual		SM4500 Cl G	10	50
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
E.coli		SM 9221B, 9221F, 9223B	N/A	Specified in method; sample aliquot dependent
Enterococci		EPA 1600 SM 9230B, 9230C, 9230D,	N/A	Specified in method; sample aliquot dependent
Flow		Calibrated device		

Fluoride	16984-48-8	SM4500-F E	25	100
Hardness, Total		SM2340B		200 as CaCO ₃
Iron, Total	7439-89-6	200.7	12.5	50
Magnesium, Total	7439-95-4	200.7	10	50
Manganese, Total	7439-96-5	200.8	0.1	0.5
Molybdenum, Total	7439-98-7	200.8	0.1	0.5
Nitrate + Nitrite Nitrogen (as N)		SM4500-NO ₃ - E/F/H		100
Nitrogen, Total Kjeldahl (as N)		SM4500-N _{org} B/C and SM4500NH ₃ - B/C/D/EF/G/H		300
NWTPH Dx ⁴		Ecology NWTPH Dx	250	250
NWTPH Gx ⁵		Ecology NWTPH Gx	250	250
Phosphorus, Total (as P)		SM 4500 PB followed by SM4500-PE/PF	3	10
Salinity		SM2520-B		3 practical salinity units or scale (PSU or PSS)
Settleable Solids		SM2540 -F		Sample and limit dependent
Soluble Reactive Phosphorus (as P)		SM4500-P E/F/G	3	10
Sulfate (as mg/L SO ₄)		SM4110-B		0.2 mg/L
Sulfide (as mg/L S)		SM4500-S2F/D/G		0.2 mg/L
Sulfite (as mg/L SO ₃)		SM4500-SO3B		2 mg/L
Temperature		Analog recorder or micro-recording devices (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 SM 9222B	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

Appendix A Table 3 - Priority pollutants: Metals, chromium (hex), cyanide & total phenols

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

Appendix A Table 4 - Priority pollutants: Acid compounds

Priority pollutants	PP #	CAS number (if available)	Recommended analytical protocol	Detection level (DL) ¹ µg/L unless specified	Quantitation level (QL) ² µg/L unless specified
2-Chlorophenol	24	95-57-8	625.1	3.3	9.9
2,4-Dichlorophenol	31	120-83-2	625.1	2.7	8.1
2,4-Dimethylphenol	34	105-67-9	625.1	2.7	8.1

4,6-dinitro-o-cresol (2-methyl-4,6,-dinitrophenol)	60	534-52-1	625.1/1625B	24	72
2,4 dinitrophenol	59	51-28-5	625.1	42	126
2-Nitrophenol	57	88-75-5	625.1	3.6	10.8
4-Nitrophenol	58	100-02-7	625.1	2.4	7.2
Parachlorometa cresol (4-chloro-3-methylphenol)	22	59-50-7	625.1	3.0	9.0
Pentachlorophenol	64	87-86-5	625.1	3.6	10.8
Phenol	65	108-95-2	625.1	1.5	4.5
2,4,6-Trichlorophenol	21	88-06-2	625.1	2.7	8.1

Appendix A Table 5 - Priority pollutants: Volatile compounds

Priority pollutants	PP #	CAS number (if available)	Recommended analytical protocol	Detection level (DL) ¹ µg/L unless specified	Quantitation level (QL) ² µg/L unless specified
Acrolein	2	107-02-8	624.1	5	10
Acrylonitrile	3	107-13-1	624.1	1.0	2.0
Benzene	4	71-43-2	624.1	4.4	13.2
Bromoform	47	75-25-2	624.1	4.7	14.1
Carbon tetrachloride	6	56-23-5	624.1/601 or SM6230B	2.8	8.4
Chlorobenzene	7	108-90-7	624.1	6.0	18.0
Chloroethane	16	75-00-3	624/601	1.0	2.0
2-Chloroethylvinyl Ether	19	110-75-8	624.1	1.0	2.0
Chloroform	23	67-66-3	624.1 or SM6210B	1.6	4.8
Dibromochloromethane (chlordibromomethane)	51	124-48-1	624.1	3.1	9.3
1,2-Dichlorobenzene	25	95-50-1	624.1	1.9	7.6
1,3-Dichlorobenzene	26	541-73-1	624.1	1.9	7.6
1,4-Dichlorobenzene	27	106-46-7	624.1	4.4	17.6
Dichlorobromomethane	48	75-27-4	624.1	2.2	6.6
1,1-Dichloroethane	13	75-34-3	624.1	4.7	14.1
1,2-Dichloroethane	10	107-06-2	624.1	2.8	8.4

1,1-Dichloroethylene	29	75-35-4	624.1	2.8	8.4
1,2-Dichloropropane	32	78-87-5	624.1	6.0	18.0
1,3-dichloropropene (mixed isomers) (1,2-dichloropropylene)6	33	542-75-6	624.1	5.0	15.0
Ethylbenzene	38	100-41-4	624.1	7.2	21.6
Methyl bromide (Bromomethane)	46	74-83-9	624/601	5.0	10.0
Methyl chloride (Chloromethane)	45	74-87-3	624.1	1.0	2.0
Methylene chloride	44	75-09-2	624.1	2.8	8.4
1,1,2,2-Tetrachloroethane	15	79-34-5	624.1	6.9	20.7
Tetrachloroethylene	85	127-18-4	624.1	4.1	12.3
Toluene	86	108-88-3	624.1	6.0	18.0
1,2-Trans-Dichloroethylene (Ethylene dichloride)	30	156-60-5	624.1	1.6	4.8
1,1,1-Trichloroethane	11	71-55-6	624.1	3.8	11.4
1,1,2-Trichloroethane	14	79-00-5	624.1	5.0	15.0
Trichloroethylene	87	79-01-6	624.1	1.9	5.7
Vinyl chloride	88	75-01-4	624/SM6200B	1.0	2.0

Appendix A Table 6 - Priority pollutants: Base/neutral compounds

Priority pollutants	PP #	CAS number (if available)	Recommended analytical Protocol	Detection level (DL) ¹ µg/L unless specified	Quantitation level (QL) ² µg/L unless specified
Acenaphthene	1	83-32-9	625.1	1.9	5.7
Acenaphthylene	77	208-96-8	625.1	3.5	10.5
Anthracene	78	120-12-7	625.1	1.9	5.7
Benzidine	5	92-87-5	625.1	44	132
Benzyl butyl phthalate	67	85-68-7	625.1	2.5	7.5
Benzo(a)anthracene	72	56-55-3	625.1	7.8	23.4
Benzo(b)fluoranthene (3,4- benzofluoranthene) ⁷	74	205-99-2	610/625.1	4.8	14.4
Benzo(k)fluoranthene (11,12- benzofluoranthene) ⁷	75	207-08-9	610/625.1	2.5	7.5

Benzo(a)pyrene	73	50-32-8	610/625.1	2.5	7.5
Benzo(ghi)Perylene	79	191-24-2	610/625.1	4.1	12.3
Bis(2-chloroethoxy)methane	43	111-91-1	625.1	5.3	15.9
Bis(2-chloroethyl)ether	18	111-44-4	611/625.1	5.7	17.1
Bis(2-chloro-1-methylethyl)Ether (Bis(2-chloroisopropyl)ether) ⁸	42	108-60-1	625.1	5.7	17.1
Bis(2-ethylhexyl)phthalate	66	117-81-7	625.1	2.5	7.5
4-Bromophenyl phenyl ether	41	101-55-3	625.1	1.9	5.7
2-Chloronaphthalene	20	91-58-7	625.1	1.9	5.7
4-Chlorophenyl phenyl ether	40	7005-72-3	625.1	4.2	12.6
Chrysene	76	218-01-9	610/625.1	2.5	7.5
Dibenzo(a-h)anthracene (1,2,5,6- dibenzanthracene)	82	53-70-3	625.1	2.5	7.5
3,3-Dichlorobenzidine	28	91-94-1	605/625.1	16.5	49.5
Diethyl phthalate	70	84-66-2	625.1	1.9	5.7
Dimethyl phthalate	71	131-11-3	625.1	1.6	4.8
Di-n-butyl phthalate	68	84-74-2	625.1	2.5	7.5
2,4-dinitrotoluene	35	121-14-2	609/625.1	5.7	17.1
2,6-dinitrotoluene	36	606-20-2	609/625.1	1.9	5.7
Di-n-octyl phthalate	69	117-84-0	625.1	2.5	7.5
1,2-Diphenylhydrazine (as Azobenzene)	37	122-66-7	1625B/625.1	5.0	20
Fluoranthene	39	206-44-0	625.1	2.2	6.6
Fluorene	80	86-73-7	625.1	1.9	5.7
Hexachlorobenzene	9	118-74-1	612/625.1	1.9	5.7
Hexachlorobutadiene	52	87-68-3	625.1	0.9	2.7
Hexachlorocyclopentadiene	53	77-47-4	1625B/625.1	2.0	4.0
Hexachloroethane	12	67-72-1	625.1	1.6	4.8
Indeno(1,2,3-cd)Pyrene	83	193-39-5	610/625.1	3.7	11.1
Isophorone	54	78-59-1	625.1	2.2	6.6
Naphthalene	55	91-20-3	625.1	1.6	4.8
Nitrobenzene	56	98-95-3	625.1	1.9	5.7
N-Nitrosodimethylamine	61	62-75-9	607/625.1	2.0	4.0

N-Nitrosodi-n-propylamine	63	621-64-7	607/625.1	0.5	1.0
N-Nitrosodiphenylamine	62	86-30-6	625.1	1.0	2.0
Phenanthrene	81	85-01-8	625.1	5.4	16.2
Pyrene	84	129-00-0	625.1	1.9	5.7
1,2,4-Trichlorobenzene	8	120-82-1	625.1	1.9	5.7

Appendix A Table 7 - Base/neutral compounds – Ecology PBTs

Pollutant	CAS number (if available)	Recommended analytical protocol	Detection level (DL) ¹ µg/L unless specified	Quantitation level (QL) ² µg/L unless specified
Benzo(j)fluoranthene ⁷	205-82-3	625	0.5	1.0
Benzo(r,s,t)pentaphene	189-55-9	625	1.3	5.0
Dibenzo (a,h)acridine	226-36-8	610M/625M	2.5	10.0
Dibenzo (a,j)acridine	224-42-0	610M/625M	2.5	10.0
Dibenzo(a,e)pyrene	192-65-4	610M/625M	2.5	10.0
Dibenzo(a,h)pyrene	189-64-0	625M	2.5	10.0
3-Methyl cholanthrene	56-49-5	625	2.0	8.0
Perylene	198-55-0	625	1.9	7.6

Appendix A Table 8 - Dioxin

Priority pollutant	PP #	CAS number (if available)	Recommended analytical protocol	Detection level (DL) ¹ µg/L unless specified	Quantitation level (QL) ² µg/L unless specified
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

Appendix A Table 9 - Pesticides and PCBs

Priority pollutants	PP #	CAS number (if available)	Recommended analytical protocol	Detection level (DL) ¹ µg/L unless specified	Quantitation level (QL) ² µg/L unless specified
Aldrin	89	309-00-2	608.3	4.0 ng/L	12 ng/L

alpha-BHC	102	319-84-6	608.3	3.0 ng/L	9.0 ng/L
beta-BHC	103	319-85-7	608.3	6.0 ng/L	18 ng/L
gamma-BHC (Lindane)	104	58-89-9	608.3	4.0 ng/L	12 ng/L
delta-BHC	105	319-86-8	608.3	9.0 ng/L	27 ng/L
Chlordane ⁹	91	57-74-9	608.3	14 ng/L	42 ng/L
4,4'-DDT	92	50-29-3	608.3	12 ng/L	36 ng/L
4,4'-DDE	93	72-55-9	608.3	4.0 ng/L	12 ng/L
4,4' DDD	94	72-54-8	608.3	11ng/L	33 ng/L
Dieldrin	90	60-57-1	608.3	2.0 ng/L	6.0 ng/L
alpha-Endosulfan	95	959-98-8	608.3	14 ng/L	42 ng/L
beta-Endosulfan	96	33213-65-9	608.3	4.0 ng/L	12 ng/L
Endosulfan Sulfate	97	1031-07-8	608.3	66 ng/L	198 ng/L
Endrin	98	72-20-8	608.3	6.0 ng/L	18 ng/L
Endrin Aldehyde	99	7421-93-4	608.3	23 ng/L	70 ng/L
Heptachlor	100	76-44-8	608.3	3.0 ng/L	9.0 ng/L
Heptachlor Epoxide	101	1024-57-3	608.3	83 ng/L	249 ng/L
PCB-1242 ¹⁰	106	53469-21-9	608.3	0.065	0.195
PCB-1254	107	11097-69-1	608.3	0.065	0.195
PCB-1221	108	11104-28-2	608.3	0.065	0.195
PCB-1232	109	11141-16-5	608.3	0.065	0.195
PCB-1248	110	12672-29-6	608.3	0.065	0.195
PCB-1260	111	11096-82-5	608.3	0.065	0.195
PCB-1016 ¹⁰	112	12674-11-2	608.3	0.065	0.195
Toxaphene	113	8001-35-2	608.3	240 ng/L	720 ng/L

Appendix A Table 10 - Per- and polyfluoroalkyl substances (PFAS) ¹¹

Pollutant	CAS number (if available)	Recommended analytical protocol	Detection level (DL) ¹ µg/L unless specified	Quantitation level (QL) ² µg/L unless specified
Perfluorobutanoic acid (PFBA)	375-22-4	1633	0.330 ng/L	6.4 ng/L
Perfluoropentanoic acid (PFPeA)	2706-90-3	1633	0.196 ng/L	3.2 ng/L
Perfluorohexanoic acid (PFHxA)	307-24-4	1633	0.318 ng/L	1.6 ng/L

Perfluoroheptanoic acid (PFHpA)	375-85-9	1633	0.221 ng/L	1.6 ng/L
Perfluorooctanoic acid (PFOA)	335-67-1	1633	0.302 ng/L	1.6 ng/L
Perfluorononanoic acid (PFNA)	375-95-1	1633	0.221 ng/L	1.6 ng/L
Perfluorodecanoic acid (PFDA)	335-76-2	1633	0.333 ng/L	1.6 ng/L
Perfluoroundecanoic acid (PFUnA)	2058-94-8	1633	0.264 ng/L	1.6 ng/L
Perfluorododecanoic acid (PFDoA)	307-55-1	1633	0.379 ng/L	1.6 ng/L
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	1633	0.238 ng/L	1.6 ng/L
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	1633	0.264 ng/L	1.6 ng/L
Perfluorobutanesulfonic acid (PFBS)	375-73-5	1633	0.245 ng/L	1.6 ng/L
Perfluoropentanesulfonic acid (PFPeS)	2706-91-4	1633	0.204 ng/L	1.6 ng/L
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	1633	0.217 ng/L	1.6 ng/L
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	1633	0.137 ng/L	1.6 ng/L
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	1633	0.327 ng/L	1.6 ng/L
Perfluorononanesulfonic acid (PFNS)	68259-12-1	1633	0.303 ng/L	1.6 ng/L
Perfluorodecanesulfonic acid (PFDS)	335-77-3	1633	0.334 ng/L	1.6 ng/L
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	1633	0.179 ng/L	1.6 ng/L
1H,1H,2H,2H-Perfluorohexanesulfonic acid (4:2FTS)	757124-72-4	1633	2.281 ng/L	6.4 ng/L
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2FTS)	27619-97-2	1633	3.973 ng/L	6.4 ng/L
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2FTS)	39108-34-4	1633	1.566 ng/L	6.4 ng/L
Perfluorooctanesulfonamide (PFOSA)	754-91-6	1633	0.227 ng/L	1.6 ng/L
N-methyl perfluorooctanesulfonamide (NMeFOSA)	31506-32-8	1633	0.196 ng/L	1.6 ng/L
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	4151-50-2	1633	0.585 ng/L	1.6 ng/L
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	1633	0.586 ng/L	1.6 ng/L
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	1633	0.324 ng/L	1.6 ng/L
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	24448-09-7	1633	1.191 ng/L	16 ng/L

N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	1691-99-2	1633	1.022 ng/L	16 ng/L
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	1633	0.406 ng/L	6.4 ng/L
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	1633	0.779 ng/L	6.4 ng/L
Perfluoro(2-ethoxyethane) sulfonic acid (PFEEESA)	113507-82-7	1633	0.137 ng/L	3.2 ng/L
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	1633	0.177 ng/L	3.2 ng/L
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	1633	0.117 ng/L	3.2 ng/L
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	1633	1.384 ng/L	3.2 ng/L
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9CL-PF3ONS)	756426-58-1	1633	0.871 ng/L	6.4 ng/L
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CL-PF3OUDS)	763051-92-9	1633	0.819 ng/L	6.4 ng/L
3-Perfluoropropyl propanoic acid (3:3FTCA)	356-02-5	1633	0.721 ng/L	8.0 ng/L
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	914637-49-3	1633	5.066 ng/L	40 ng/L
3-Perfluoroheptyl propanoic acid (7:3FTCA)	812-70-4	1633	5.942 ng/L	40 ng/L

Footnotes

- ¹ Detection level (DL) – or method detection limit means the minimum concentration of an analyte (substance) that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results as determined by the procedure given in 40 CFR part 136, Appendix B.
- ² Quantitation Level (QL) – also known as Minimum Level (ML) – The term “minimum level” refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (DL), whichever is higher. Minimum levels may be obtained in several ways: They may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the DL in a method, or the DL determined by a laboratory, by a factor of 3. For the purposes of NPDES compliance monitoring, EPA considers the following terms to be synonymous: “quantitation limit,” “reporting limit,” and “minimum level”.
- ³ Soluble Biochemical Oxygen Demand – method note: First, filter the sample through a Millipore Nylon filter (or equivalent) - pore size of 0.45-0.50 um (prep all filters by filtering 250 ml of laboratory grade deionized water through the filter and discard). Then, analyze sample as per method 5210-B.
- ⁴ Northwest Total Petroleum Hydrocarbons Diesel Extended Range OR NWTPH Dx – Analytical Methods for Petroleum Hydrocarbons <https://apps.ecology.wa.gov/publications/documents/97602.pdf>
- ⁵ Northwest Total Petroleum Hydrocarbons Gasoline Extended Range OR NWTPH Gx – Analytical Methods for Petroleum Hydrocarbons <https://apps.ecology.wa.gov/publications/documents/97602.pdf>
- 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 Bis(2-Chloro-1-Methylethyl) Ether – This compound was previously listed as Bis(2-Chloroisopropyl) Ether (39638-32-9)
- ⁹ 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 14/42 ng/L.
- ¹⁰ PCB 1016 & PCB 1242 – You may report these two PCB compounds as one parameter called PCB 1016/1242.

¹¹ Prior to approval of analytical methods for PFAS chemicals under 40 CFR 136, the permittee must use the latest revision of EPA Method 1633. After analytical methods for PFAS chemicals are approved under 40 CFR 136, the permittee may use any sufficiently sensitive approved analytical method. If a laboratory that can analyze PFAS chemicals via Method 1633 is not reasonably available, the permittee may request use of an alternate method and Ecology can approve the alternative method by email.