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|---|---|
| Issuance Date: | November 2, 2015 |
| Effective Date: | December 1, 2015 |
| Expiration Date: | November 30, 2020 |
| Modification Date | March 25, 2016 |

# National Pollutant Discharge Elimination System
# Waste Discharge Permit No. WA0000256

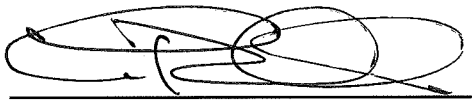
State of Washington
Department of Ecology
Olympia, Washington 98504-7600
Industrial Section
PO Box 47600
Olympia, WA 98504-7600

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

**Georgia-Pacific Consumer Products (Camas), L.L.C.**
**401 NE Adams Street**
**Camas, WA 98607**

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

| | |
|---|---|
| Facility Location:<br>Camas, Washington | Receiving Water:<br>Columbia River |
| Treatment Type:<br>Primary and secondary | SIC Code:<br>2611, 2621, and 2679 |
| Industry Type:<br>Kraft Pulp and Paper Mill | NAICS Code:<br>322110, 322121, 322299 |



Garin Schrieve, P.E.
Industrial Section Manager
Waste 2 Resources Program

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# Summary of Permit Report Submittals

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

| Permit Section | Submittal | Frequency | First Submittal Date |
|---|---|---|---|
| S2.A | Priority Pollutant Scan | First, third, and fifth year of the permit | December 15, 2016 |
| S3.A | Discharge Monitoring Report | Monthly | January 15, 2016 |
| S3.A | Discharge Monitoring Report | Quarterly | April 15, 2016 |
| S3.A | Discharge Monitoring Report | Annual | January 15, 2017 |
| S3.F | Reporting Permit Violations | As necessary | |
| S3.G | Other Reporting | As necessary | |
| S4.A | Operations and Maintenance Manual Update | 1/permit cycle, updates submitted as necessary | January 1, 2017 |
| S4.A | Treatment System Operating Plan | 1/permit cycle | June 1, 2020 |
| S4.B | Reporting Bypasses | As necessary | |
| S5 | Application for Permit Renewal | 1/permit cycle | June 1, 2020 |
| S7 | Non-Routine and Unanticipated Discharges | As necessary | |
| S8 | Spill Plan | 1/permit cycle, updates submitted as necessary | June 1, 2016 |
| S9 | Best Management Practices Plan Update | As necessary | |
| S10.A | Acute Toxicity Effluent Test Results - Submit with Permit Renewal Application | Once in the last winter and once in the last summer | June 1, 2020 |
| S11.A | Chronic Toxicity Effluent Test Results with Permit Renewal Application | Once in the last winter and once in the last summer | June 1, 2020 |
| S12.A | Sediment Baseline Sampling and Analysis Plan | 1/permit cycle | December 1, 2016 |
| S12.B | Sediment Chemistry Analyses | 1/permit cycle | Within 6 months of the end of the sediment sampling period |
| S13 | Outfall Evaluation | Once in the fourth year of permit cycle | Within 60 days of inspection completion and no later than January 30, 2020 |

| Permit Section | Submittal | Frequency | First Submittal Date |
|---|---|---|---|
| S14 | Stormwater Monitoring Plan Update | 1/permit cycle | June 1, 2016 |
| S14 | Stormwater Final Report | 1/permit cycle | Within 180 days of monitoring completion |
| S13 | Cooling Water Intake Structure Information and Compliance Report | 1/permit cycle | June 1, 2020 |
| G1 | Notice of Change in Authorization | As necessary | |
| G4 | Permit Application for Substantive Changes to the Discharge | As necessary | |
| G5 | Engineering Report for Construction or Modification Activities | As necessary | |
| G7 | Notice of Permit Transfer | As necessary | |
| G10 | Duty to Provide Information | As necessary | |
| G13 | Payment of Fees | As assessed | |
| G21 | Compliance Schedules | As necessary | |

# Special Conditions

## S1. Discharge Limits

### S1.A. Process Wastewater 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 the treated process wastewater and treated stormwater to the Columbia River via the permitted location (Outfall 001) subject to complying with the following limits:

| **Effluent Limits: Outfall # 001<br>Latitude 45.570833 Longitude 122.4125** | | |
|---|---|---|
| **Parameter** | **Average Monthly [a]** | **Maximum Daily [b]** |
| Biochemical Oxygen Demand (5-day) ($BOD_5$) | 9,307 lbs/day | 17,948 lbs/day |
| Total Suspended Solids (TSS) | 19,638 lbs/day | 36,575 lbs/day |
| Adsorbable Organic Halides (AOX) [d] | 852 lbs/day | 1,301 lbs/day |
| | **Annual Average** | **Maximum Daily [b]** |
| 2,3,7,8-TCDD [c] | 0.42 mg/day | 0.62 mg/day |
| | **Minimum** | **Maximum** |
| pH [e] | 6.0 standard units | 9.0 standard units |
| | **The effluent limit for toxicity is:** | |
| Acute toxicity | No acute toxicity detected in a test concentration representing the acute critical effluent concentration (ACEC).<br>The ACEC means the maximum concentration of effluent during critical conditions at the boundary of the acute mixing zone, defined in Section of this permit. The ACEC equals 11.5% effluent. See S10 for more information. | |
| Chronic toxicity | No toxicity detected in a test concentration representing the chronic critical effluent concentration (CCEC).<br>The CCEC means the maximum concentration of effluent during critical conditions at the boundary of the mixing zone, defined in | |

| Effluent Limits: Outfall # 001<br>Latitude 45.570833 Longitude 122.4125 | |
|---|---|
| | Section 11 of this permit. The CCEC equals 1.4% effluent. See S11 for more information. |

[a] Average monthly effluent limit means the highest allowable average of daily discharges over a calendar month. To calculate the discharge value to compare to the limit, you add the value of each daily discharge measured during a calendar month and divide this sum by the total number of daily discharges measured.

[b] Maximum daily effluent limit is the highest allowable daily discharge. The daily discharge is the average discharge of a pollutant measured during a calendar day. For pollutants with limits expressed in units of mass, calculate the daily discharge as the total mass of the pollutant discharged over the day. This does not apply to pH or temperature.

[c] 2,3,7,8-TCDD is 2,3,7,8-tetrachlorodibenzo-p-dioxin. Analysis including sample containers and QA/QC must be conducted in accordance *with Method 1613: Tetra- through Octa- chlorinated Dioxin and Furans by Isotopic Dilution HRGC/HRMS*, USEPA Office of Water, Engineering and Analysis Division, Revision B or an approved equivalent method. Compliance with the mass loading 2,3,7,8 TCDD daily limit is demonstrated if the 2,3,7,8 TCDD concentration is 5 parts per quadrillion (ppq) or less, or non-detect at a detection limit of 5 ppq or less. In the event that the sample is non-detect at a detection limit greater than 5 ppq but less than 10 ppq due to sample matrix effects, the Permittee must submit a matrix-specific DL and a quantitation limit (QL) to Ecology with appropriate laboratory documentation. In the event that the sample is non-detect at a DL greater than 10 ppq due to matrix effects, the Permittee must re-initiate sample collection and analyze for permit compliance as defined above. The original sample(s) must be discarded.

[d] AOX is defined as adsorbable organic halides. Analysis must be conducted in accordance with Method 1650. Adsorbable Organic Halides by Adsorption and Coulometric Titration, Revision B, October 1993, or equivalent method approved by the permitting authority. The Permittee must report date sampled, AOX concentration (mg/L), effluent flow (MGD), AOX kg/day, and daily unbleached pulp production (ADT) to first stage bleaching.

[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.

### S1.B. Bleach Plant Effluent

Beginning on the effective date of this permit, the bleach plant effluent is subject to the following limits:

| Effluent Limits: Bleach Plant Discharge | | |
|---|---|---|
| **Parameter** | **Average Monthly [a]** | **Maximum Daily [b]** |
| 2,3,7,8-TCDD [c] | NA | < 10 pg/L[d] |
| 2,3,7,8-TCDF [e] | NA | < 31.9 pg/L[d] |
| Trichlorosyringol | NA | < 2.5 µg/L[d] |
| 3,4,5-Trichlorocatechol | NA | < 5.0 µg/L[d] |

| Effluent Limits: Bleach Plant Discharge | | |
|---|---|---|
| **Parameter** | **Average Monthly [a]** | **Maximum Daily [b]** |
| 3,4,6-Trichlorocatechol | NA | < 5.0 µg/L[d] |
| 3,4,5-Trichloroguaiacol | NA | < 2.5 µg/L[d] |
| 3,4,6-Trichloroguaiacol | NA | < 2.5 µg/L[d] |
| 4,5,6-Trichloroguaiacol | NA | < 2.5 µg/L[d] |
| 2,4,5-Trichlorophenol | NA | < 2.5 µg/L[d] |
| 2,4,6-Trichlorophenol | NA | < 2.5 µg/L[d] |
| Tetrachlorocatechol | NA | < 5.0 µg/L[d] |
| Tetrachloroguaiacol | NA | < 5.0 µg/L[d] |
| 2,3,4,6-Tetrachlorophenol | NA | < 2.5 µg/L[d] |
| Pentachlorophenol | NA | < 5.0 µg/L[d] |
| Chloroform [f,g] | 5.66 lbs/day | 9.47 lbs/day |

[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 24-hour period. For pollutants with limits expressed in units of mass, calculate the daily discharge as the total mass of the pollutant discharged over the day.

[c] 2,3,7,8-TCDD is 2,3,7,8-tetrachlorodibenzo-p-dioxin. Analysis including sample containers and QA/QC must be conducted in accordance *with Method 1613: Tetra- through Octa- chlorinated Dioxin and Furans by Isotopic Dilution HRGC/HRMS*, USEPA Office of Water, Engineering and Analysis Division, Revision B or an approved equivalent method. The Permittee must achieve a detection level less than or equal to 5 pg/L at secondary effluent. In the event that the sample is non-detect at a detection limit greater than 5 ppq but less than 10 ppq due to sample matrix effects, the Permittee must submit a matrix-specific MDL and a quantitation limit (QL) to Ecology with appropriate laboratory documentation. In the event that the sample is non-detect at a MDL greater than 10 ppq due to matrix effects, the Permittee must re-initiate sample collection and analyze for permit compliance as defined above. The original sample(s) must be discarded.

[d] The limit is based on minimum level as defined is 40 CFR 430.01(i) for the parameter. For the purpose of reporting, if a value is less than the minimum level (ML), the Permittee must report the ML for the parameter.

| Effluent Limits: Bleach Plant Discharge | | |
|---|---|---|
| **Parameter** | **Average Monthly [a]** | **Maximum Daily [b]** |

[e] 2,3,7,8-TCDF is 2,3,7,8-tetrachlorodibenzofuran. Analysis including sample containers and QA/QC must be conducted in accordance with Method 1613: Tetra- through Octa- chlorinated Dioxin and Furans by Isotopic Dilution HRGC/HRMS, USEPA Office of Water, Engineering and Analysis Division, Revision B or an approved equivalent method. The Permittee must achieve a detection level less than or equal to 5 ppq. In the event that the sample is non-detect at a detection limit greater than 5 ppq but less than 10 ppq due to sample matrix effects, the Permittee must submit a matrix-specific MDL and a quantitation limit (QL) to Ecology with appropriate laboratory documentation. In the event that the sample is non-detect at a MDL greater than 10 ppq due to matrix effects, the Permittee must re-initiate sample collection and analyze for permit compliance as defined above. The original sample(s) must be discarded.

[f] Analysis for chloroform must be conducted in accordance with EPA Method 624 or equivalent. The Permittee must report date sampled, chloroform concentration (mg/L), bleach plant effluent flow (MGD), lbs/day chloroform, and daily unbleached pulp production (ADT) to first stage bleaching.

[g] The twenty-four hour composite sampling for chloroform must consist of a minimum of four individual samples collected during a twenty-four hour period and quantitatively composited in the laboratory. The Permittee must include a detailed description of the method used to composite the samples with the first report and with subsequent reports where there is a modification of the compositing method. If an automated continuous or grab compositing device is used, the report must include a description of the system and the name of the manufacturer.

### S1.C. Outfall 002 Discharge

Beginning on the effective date of this permit, the Permittee is authorized to discharge filter plant backwash to the Columbia River via the permitted location (Outfall 002) subject to complying with the following limits:

| Effluent Limits: Outfall # 002<br>Latitude 45.5833 Longitude 122.40833 | | |
|---|---|---|
| **Parameter** | **Minimum** | **Maximum** |
| pH [a] | 6.0 standard units | 9.5 standard units |

[a] Indicates the range of permitted values. When pH is continuously monitored, excursions between 5.0 and 6.0 or 9.5 and 10.5 must not be considered violations provided no single excursions exceeds 60 minutes in length and total excursions do not exceed 7 hours and 30 minutes per month. Any excursions below 5.0 and above 10.5 are violations. The instantaneous maximum and minimum pH must be reported monthly. Continuous means uninterrupted except for brief periods for calibration, power failure, or for unanticipated equipment repairs or maintenance.

### S1.D. Mixing Zone Authorization

**Mixing Zone for Outfall 001**

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

**Acute Mixing Zone**

The width of the acute mixing zone is limited to a distance of 35 feet (11 meters) in any horizontal direction from the discharge port. The mixing zone extends from the discharge port to the top of the water surface. The concentration of pollutants at the edge of the acute zone must meet acute aquatic life criteria.

**Chronic Mixing Zone**

The width of the chronic mixing zone is limited to a distance of 50 feet (15 meters). The length of the chronic mixing zone extends 100 feet (30 meters) upstream and 345 feet (105 meters) downstream of the outfall. The mixing zone extends from the discharge port to the top of the water surface. The concentration of pollutants at the edge of the chronic zone must meet chronic aquatic life criteria and human health criteria.

| Available Dilution (dilution factor) | |
|---|---|
| Acute Aquatic Life Criteria | 8.7 |
| Chronic Aquatic Life Criteria | 70.2 |
| Human Health Criteria - Carcinogen | 70.2 |
| Human Health Criteria - Non-carcinogen | 70.2 |

## S2. Monitoring Requirements

### S2.A. Monitoring Schedule

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

| Parameter | Units & Speciation | Minimum Sampling Frequency | Sample Type |
|---|---|---|---|
| **(1) Wastewater Effluent, Point of Compliance at Outfall 001** | | | |
| Flow | MGD | Daily [a] | Continuous recording [b] |
| pH [c,d] | Standard unit | Daily | Continuous recording [b] |
| Temperature [e] | °C | Daily [a] | Continuous recording [b] |
| $BOD_5$ [f] | mg/L | 3/week [g] | 24-hour composite [g] |
| $BOD_5$ | lbs/day | 3/week [g] | Calculated [i] |
| TSS | mg/L | 3/week [g] | 24-hour composite [g] |
| TSS | lbs/day | 3/week [g] | Calculated [i] |
| AOX | mg/L | Monthly [j] | 24-hour composite [g] |
| AOX | lbs/day | Monthly [j] | Calculated [i] |
| 2,3,7,8-TCDD [k] | pg/L | Annual | 24-hour composite [g] |
| 2,3,7,8-TCDF [k] | pg/L | Annual | 24-hour composite [g] |
| **(2) Bleach Plant Effluent** | | | |
| 2,3,7,8-TCDD [k] | pg/L | Quarterly [l] | 24-hour composite [g] |

| Parameter | Units & Speciation | Minimum Sampling Frequency | Sample Type |
|---|---|---|---|
| 2,3,7,8-TCDF [k] | pg/L | Quarterly [l] | 24-hour composite [g] |
| Chloroform | µg/L | 1/permit cycle [m] | 24-hour composite [g] |
| Chloroform | lbs/day | 1/permit cycle [m] | Calculated [i] |
| Trichlorosyringol | µg/L | 1/permit cycle [m] | 24-hour composite [g] |
| 3,4,5-Trichlorocatechol | µg/L | 1/permit cycle [m] | 24-hour composite [g] |
| 3,4,6-Trichlorocatechol | µg/L | 1/permit cycle [m] | 24-hour composite [g] |
| 3,4,5-Trichloroguaiacol | µg/L | 1/permit cycle [m] | 24-hour composite [g] |
| 3,4,6-Trichloroguaiacol | µg/L | 1/permit cycle [m] | 24-hour composite [g] |
| 4,5,6-Trichloroguaiacol | µg/L | 1/permit cycle [m] | 24-hour composite [g] |
| 2,4,5-Trichlorophenol | µg/L | 1/permit cycle [m] | 24-hour composite [g] |
| 2,4,6-Trichlorophenol | µg/L | 1/permit cycle [m] | 24-hour composite [g] |
| Tetrachlorocatechol | µg/L | 1/permit cycle [m] | 24-hour composite [g] |
| Tetrachloroguaiacol | µg/L | 1/permit cycle [m] | 24-hour composite [g] |
| 2,3,4,6-Tetrachlorophenol | µg/L | 1/permit cycle [m] | 24-hour composite [g] |
| Pentachlorophenol | µg/L | 1/permit cycle [m] | 24-hour composite [g] |
| **(3) Outfall 002** | | | |
| Flow | MGD | Daily [a] | Continuous recording [b] |
| pH [c,h] | Standard unit | Daily | Continuous recording [b] |
| **(4) Priority Pollutant Scan and Effluent Characterization – Final Wastewater Effluent [n]** | | | |
| *Note: See Appendix A to identify the specific pollutants in the priority pollutant groups listed below. The Permittee must sample in the first, third, and fifth year of the permit.* | | | |
| Cyanide | µg/L | See above note | Grab |
| Total Phenolic Compounds | µg/L | See above note | Grab |
| Priority Pollutants (PP) – Total Metals | µg/L; ng/L for mercury | See above note | 24-hour composite [g] Grab for mercury |
| PP – Volatile Organic Compounds | µg/L | See above note | Grab |
| PP – Acid-extractable Compounds | µg/L | See above note | 24-hour composite [g] |
| PP – Base-neutral Compounds | µg/L | See above note | 24-hour composite [g] |
| PP - Dioxin | pg/L | See above note | 24-hour composite [g] |
| PP – Pesticides/PCBs | µg/L | See above note | 24-hour composite [g] |
| **(5) Production** | | | |
| Unbleached pulp production, to the bleach plant | ADT/day | Daily [a] | Recording |
| Paper production, at the reel | MDT/day | Daily [a] | Recording |
| **(6) Primary and Secondary Sludge** | | | |
| 2,3,7,8-TCDD | ng/kg | 1/permit cycle | Grab |
| 2,3,7,8-TCDF | ng/kg | 1/permit cycle | Grab |

| Parameter | Units & Speciation | Minimum Sampling Frequency | Sample Type |
|---|---|---|---|
| **(7) Studies and Reports** | | | |
| Acute Toxicity Test | As specified in Special Condition S10 | | |
| Chronic Toxicity Test | As specified in Special Condition S11 | | |
| Sampling Analysis Plan | As specified in Special Condition S12 | | |
| Sediment Data Report | As specified in Special Condition S12 | | |
| Stormwater Monitoring Plan Update | As specified in Special Condition S14 | | |
| Stormwater Report Update | As specified in Special Condition S14 | | |
| Cooling Water Intake Structure Information and Compliance Report | As specified in Special Condition S16 | | |

[a] Daily data are recorded but not reported.

[b] Continuous means uninterrupted except for brief lengths of time for calibration, power failure, or unanticipated equipment repair or maintenance.

[c] The Permittee must report the instantaneous maximum and minimum pH monthly. Do not average pH values.

[d] The Permittee must record and report the:

- Number of minutes the pH value measured between 5.0 and 6.0 and between 9.0 and 10.0 for each day.
- Total minutes for the month.
- Monthly instantaneous maximum and minimum pH.

If multiple excursions occur during the day, note the duration for each excursion. If submitting electronic DMRs, include this additional information in the parameter notes.

[e] The Permittee must determine and report a daily maximum from half-hour measurements in a 24-hour period. Continuous monitoring instruments must achieve an accuracy of 0.2 ºC and the Permittee must verify accuracy annually. When the Permittee is unable to comply with the continuous monitoring requirement, the Permittee must conduct daily grab sampling when the effluent is at or near its daily maximum temperature, which usually occurs in the late afternoon.

[f] $BOD_5$ composite sample must be refrigerated in the dark at 0-6ºC. Changes to existing sampling system must be reviewed and approved by Ecology prior to implementation.

[g] 24-hour composite means a series of individual samples collected over a 24-hour period into a single container, and analyzed as one sample.

[h] The Permittee must record and report the:

- Number of minutes the pH value measured between 5.0 and 6.0 and between 9.5 and 10.5 for each day.
- Total minutes for the month.

If multiple excursions occur during the day, note the duration for each excursion. If submitting electronic DMRs, include this additional information in the parameter notes.

[i] Calculated means figured concurrently with the respective sample, using the following formula: Concentration (in mg/L) X Flow (in MGD) X Conversion Factor (8.34) = lbs/day

| Parameter | Units & Speciation | Minimum Sampling Frequency | Sample Type |
|---|---|---|---|

[j] Monthly means once every calendar month.

[k] 2,3,7,8-TCDD is 2,3,7,8-tetrachlorodibenzo-p-dioxin and 2,3,7,8-TCDF is 2,3,7,8-tetrachlorodibenzofuran. Analysis including sample containers and QA/QC must be conducted in accordance with Method 1613: Tetra- through Octa- chlorinated Dioxin and Furans by Isotopic Dilution HRGC/HRMS, USEPA Office of Water, Engineering and Analysis Division, Revision B or an approved equivalent method.

[l] Quarterly sampling periods are January through March, April through June, July through September, and October through December

[m] Upon satisfactory demonstration of compliance the chloroform and chlorinated phenolics compounds standards and upon certification of 100 percent $ClO_2$ substitution for $Cl_2$ in bleaching process. Monthly certification must be submitted in the monthly DMR submittal.

[n] Final effluent means wastewater exiting, or that has exited, the last treatment process or operation.

### S2.B. Sampling and Analytical Procedures

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

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

### S2.C. Flow Measurement and Continuous Monitoring Devices

The Permittee must:

1. Select and use appropriate flow measurement, field measurement, and continuous monitoring devices and methods consistent with accepted scientific practices.
2. Install, calibrate, and maintain these devices to ensure the accuracy of the measurements is consistent with the accepted industry standard and the manufacturer's recommendation for that type of device.
3. Calibrate continuous monitoring instruments (for pH, dissolved oxygen, and chlorine) weekly unless it can demonstrate a longer period is sufficient based on monitoring records. For other continuous monitoring instruments, see condition S2.C.6 below. The Permittee:

a. May calibrate apparatus for continuous monitoring of dissolved oxygen by air calibration.

b. Must calibrate continuous pH measurement instruments using a grab sample analyzed in the lab with a pH meter calibrated with standard buffers and analyzed within 15 minutes of sampling.

c. Must calibrate continuous chlorine measurement instruments using a grab sample analyzed in the laboratory within 15 minutes of sampling.

4. Calibrate micro-recording temperature devices, known as thermistors, using protocols from Ecology's Quality Assurance Project Plan Development Tool (*Standard Operating Procedures for Continuous Temperature Monitoring of Fresh Water Rivers and Streams Version 1.0 10/26/2011*). This document is available online at:
http://www.ecy.wa.gov/programs/eap/qa/docs/ECY_EAP_SOP_Cont_Temp_Mon_Ambient_v1_0EAP080.pdf
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. Maintain calibration records for at least three years.

**S2.D. Laboratory Accreditation**

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

**S2.E. Request for Reduction in Monitoring**

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

The Permittee must:

1. Provide a written request.

2. Clearly state the parameters for which it is requesting reduced monitoring.

3. Clearly state the justification for the reduction.

## S3. Reporting and Recording Requirements

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

### S3.A. Reporting

The first monitoring period begins on the effective date of the permit. The Permittee must:

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

   To find out more information and to sign up for the Water Quality Permitting Portal go to: http://www.ecy.wa.gov/programs/wq/permits/paris/webdmr.html

   The Permittee may submit DMRs on the paper form provided by Ecology until January 15, 2016.

2. Enter the "no discharge" reporting code for an entire DMR, for a specific monitoring point, or for a specific parameter as appropriate if the Permittee did not discharge wastewater or a specific pollutant during a given monitoring period.

3. Report single analytical values below detection as "less than the detection level (DL)" by entering < followed by the numeric value of the detection level (e.g. < 2.0) on the DMR. If the method used did not meet the minimum DL and quantitation level (QL) identified in the permit, report the actual QL and DL in the comments or in the location provided.

4. Report the test method used for analysis in the comments if the laboratory used an alternative method not specified in the permit and as allowed in Appendix A.

5. Calculate average values (unless otherwise specified in the permit) using:

   a. The reported numeric value for all parameters measured between the agency-required detection value and the agency-required quantitation value.

   b. One-half the detection value (for values reported below detection) if the lab detected the parameter in another sample for the reporting period.

   c. Zero (for values reported below detection) if the lab did not detect the parameter in another sample for the reporting period.

6. Report single-sample grouped parameters (for example priority pollutants, PAHs, pulp and paper chlorophenolics, TTOs) on the WQWebDMR form and

include: sample date, concentration detected, detection limit (DL) (as necessary), and laboratory quantitation level (QL) (as necessary).

The Permittee must also submit a copy of the laboratory report which must provide the following information: date sampled, sample location, date of analysis, parameter name, CAS number, analytical method/number, detection limit (DL), laboratory quantitation level (QL), reporting units, and concentration detected. The laboratory report must also include information on the chain of custody, QA/QC results, and documentation of accreditation for the parameter.

7. Ensure that DMRs are electronically submitted no later than the dates specified below, unless otherwise specified in this permit.
8. Until the compliance date identified in S3.A.1, the Permittee must ensure that paper forms are postmarked or received by Ecology no later than the dates specified below, unless otherwise specified in this permit.
9. Submit DMRs for parameters with the monitoring frequencies specified in S2 (monthly, quarterly, annual, etc.) at the reporting schedule identified below. The Permittee must:
    a. Submit **monthly** DMRs by the 15th day of the following month.
    b. Submit **quarterly** DMRs, unless otherwise specified in the permit, by the 15th day of the month following the monitoring period. Quarterly sampling period are January through March, April through June, July through September, and October through December. The Permit must submit the first quarterly DMR on 15th for the quarter beginning on January 1, 2016.
    c. Submit **annual** DMRs by January 15th for the previous calendar year. The annual sampling period is the calendar year.
    d. Submit the first year priority polllutant scan no later than December 15, 2016 for the first year, the third year priority pollutant scan no later than December 15, 2018, and the third year priority pollutant scan no later than the permit expiration date of November 30, 2020.
    e. Submit permit renewal application monitoring data in WQWebDMR as required by Condition S2 by June 1, 2020.
10. Submit reports to Ecology online using Ecology's electronic WQWebDMR submittal forms (electronic DMRs) as required above. Send paper reports to Ecology at:

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

### S3.B. Permit Submittals and Schedules

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

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

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

### S3.C. Records Retention

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

### S3.D. Recording of Results

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

1. The date, exact place, method, and time of sampling or measurement
2. The individual who performed the sampling or measurement
3. The dates the analyses were performed
4. The individual who performed the analyses
5. The analytical techniques or methods used
6. The results of all analyses

### S3.E. Additional Monitoring by the Permittee

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

### S3.F. Reporting Permit Violations

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

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

**a. Immediate Reporting**

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

- Collection system overflows discharging to a water body used as a source of drinking water.
- Plant bypasses discharging to a waterbody used as a source of drinking water.

| | | |
|---|---|---|
| Southwest Regional Office | 360-407-6300 | |
| Department of Health, | 800-521-0323 | (business hours) |
| Drinking Water Program | 877-481-4901 | (after business hours) |
| Clark County Public Health | 888-727-6230 | |

**b. Twenty-Four-Hour Reporting**

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

1. Any noncompliance that may endanger health or the environment, unless previously reported under immediate reporting requirements.
2. Any unanticipated bypass that causes an exceedance of any effluent limit in the permit (See Part S4.B., "Bypass Procedures").
3. Any upset that causes an exceedance of an effluent limit in the permit (See G.15, "Upset").
4. Any violation of a maximum daily or instantaneous maximum discharge limit for any of the pollutants in Section S1.A and S1.C of this permit.
5. Any overflow prior to the treatment works, whether or not such overflow endangers health or the environment or exceeds any effluent limit in the permit. This requirement does not include industrial process wastewater overflows to impermeable surfaces which are collected and routed to the treatment system.
6. Any significant aquatic life impingement or entrainment events associated with the Permittee's water intake structures.

**c. Report within Five Days**

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

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

**d. Waiver of Written Reports**

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

**e. All other Permit Violation Reporting**

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

**f. Report Submittal**

The Permittee must submit reports to the address listed in S3.

**S3.G. Other Reporting**

**a. Spills of Oil or Hazardous Materials**

The Permittee must report a spill of oil or hazardous materials in accordance with the requirements of RCW 90.56.280 and chapter 173-303-145 WAC. You can obtain further instructions at the following website: http://www.ecy.wa.gov/programs/spills/other/reportaspill.htm.

**b. Failure to Submit Relevant or Correct Facts**

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

### S3.H. Maintaining a Copy of this Permit

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

## S4. Operation and Maintenance

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

The Permittee must schedule any facility maintenance, which might require interruption of wastewater treatment and degrade effluent quality, during non-critical water quality periods and carry this maintenance out in a manner approved by Ecology.

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

#### a. O&M Manual Submittal and Requirements

The Permittee must:

1. Update the O&M Manual that meets the requirements of 173-240-150 WAC and submit it to Ecology for approval by January 1, 2017. The Permittee must submit a paper copy and an electronic copy (preferably in a portable document format (PDF)).
2. Submit to Ecology for review and approval substantial changes or updates to the O&M Manual whenever it incorporates them into the manual. The Permittee must submit a paper copy and an electronic copy (preferably as a PDF).
3. Keep the approved O&M Manual at the permitted facility.
4. Follow the instructions and procedures of this manual.

#### b. O&M Manual Components

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

1. Emergency procedures for plant shutdown and cleanup in the event of a wastewater system upset or failure.
2. A review of system components which if failed could pollute surface water or could impact human health. Provide a procedure for a routine schedule for checking the function of these components.
3. Wastewater system maintenance procedures that contribute to the generation of process wastewater.

4. Any directions to maintenance staff for 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.)
5. Wastewater sampling protocols and procedures for compliance with the sampling and reporting requirements in the wastewater discharge permit.
6. Minimum staffing adequate to operate and maintain the treatment processes and carry out compliance monitoring required by the permit.
7. Treatment plant process control monitoring schedule.
8. Specify other O&M items on case-by-case basis such as any pump stations, lagoon maintenance, etc.

**c. Treatment System Operating Plan**

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

The Permittee must submit an updated Treatment System Operating Plan to Ecology with the application for permit renewal (due June 1, 2020). 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:

1. 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.
2. 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.
3. In the event of an upset, due to plant maintenance activities, severe stormwater events, start ups or shut downs, or other causes, the plan must describe the operating procedures and conditions employed to mitigate the upset. The monitoring and reporting must be described in the plan.
4. A description of any regularly scheduled maintenance or repair activities at the facility which would affect the volume or character of the wastes discharged to the wastewater treatment system and a plan for monitoring and treating/controlling the discharge of maintenance-related materials (such as cleaners, degreasers, solvents, etc.).

## S4.B. Bypass Procedures

A bypass is the intentional diversion of waste streams from any portion of a treatment facility. Diversion of uncommingled stormwater is not considered a bypass. The Permittee may bypass for essential maintenance to ensure efficient operation provided it does not cause violations of limits or other conditions of this permit, or adversely impact public health. The Permittee is not required to notify Ecology for bypasses for essential maintenance that meet the above conditions. For any other type of anticipated bypass, the Permittee must submit prior notice, if possible, at least thirty (30) days before the date of the anticipated bypass.

### 1. Prohibited bypasses

This permit prohibits all bypasses except for bypasses for essential maintenance as defined above and for those bypasses determined to meet the requirements of special condition S4.B.2. Ecology may take enforcement action against a Permittee for a prohibited bypass, unless all three of the following circumstances apply:

a. The bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. No feasible alternatives to the bypass exist, such as:

   i. The use of auxiliary treatment facilities.
   ii. Retention of untreated wastes.
   iii. Stopping production.
   iv. 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.
   v. Transport of untreated wastes to another treatment facility.

c. The Permittee has properly notified Ecology of the bypass as required in Special Condition S3.F or Special Condition S4.B of this permit.

### 2. Anticipated bypasses for non-essential maintenance and bypasses which may cause permit violations

a. If a bypass for non-essential maintenance or a bypass which may cause violations of limits or other conditions of this permit, or adversely impact public health is anticipated, the Permittee must notify Ecology, if possible,

at least thirty (30) days before the planned date of bypass. The notice must contain:

- A description of the bypass and its cause.
- An analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing.
- A cost-effectiveness analysis of alternatives including comparative resource damage assessment.
- The minimum and maximum duration of bypass under each alternative.
- A recommendation as to the preferred alternative for conducting the bypass.
- The projected date of bypass initiation.
- A statement of compliance with SEPA.
- A request for modification of water quality standards as provided for in WAC 173-201A-410, if an exceedance of any water quality standard is anticipated.
- Details of the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

b. For probable construction bypasses, the Permittee must notify Ecology of the need to bypass as early in the planning process as possible. The Permittee must consider the analysis required above during the project planning and design process. The project-specific engineering report as well as the plans and specifications must include details of probable construction bypasses to the extent practical. In cases where the Permittee determines the probable need to bypass early, the Permittee must continue to analyze conditions up to and including the construction period in an effort to minimize or eliminate the bypass.

c. Ecology will 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 bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.
- If feasible alternatives to bypass exist, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.
- If the Permittee planned and scheduled the bypass to minimize adverse effects on the public and the environment.

Ecology will give the public an opportunity to comment on bypass incidents of significant duration, to the extent feasible.

### S4.C. Duty to Mitigate

The Permittee is required to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

### S4.D. Tank and Process Vessel Maintenance

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

## S5. Application for Permit Renewal or Modification for Facility Changes

The Permittee must submit an application for renewal of this permit by June 1, 2020. The Permittee must submit a paper copy and an electronic copy (preferably as a PDF).

The Permittee must also submit a new application or supplement at least one hundred eighty (180) days prior to commencing discharges from any facility expansions, production increases, or other planned changes, such as process modifications, which may result in permit violations.

## S6. Solid Wastes

### S6.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.

### S6.B. Leachate

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

## S7. Non-Routine and Unanticipated Discharges

1. Beginning on the effective date of this permit, the Permittee is authorized to discharge non-routine wastewater on a case-by-case basis if approved by Ecology. Prior to any such discharge, the Permittee must contact Ecology and at a minimum provide the following information:
   a. The proposed discharge location
   b. The nature of the activity that will generate the discharge
   c. Any alternatives to the discharge, such as reuse, storage, or recycling of the water
   d. The total volume of water it expects to discharge

e. The results of the chemical analysis of the water

f. The date of proposed discharge

g. The expected rate of discharge discharged, in gallons per minute

2. The Permittee must analyze the water for all constituents limited for the discharge and report them as required by subpart 1.e above. The Permittee must also analyze for: hardness, any metals that are limited by water quality standards, and any other parameters deemed necessary by Ecology. All discharges must comply with the effluent limits as established in Special Condition S1 of this permit, water quality standards, and any other limits imposed by Ecology.

3. The Permittee must limit the discharge rate, as referenced in subpart 1.g above, so it will not cause erosion of ditches or structural damage to culverts and their entrances or exits.

4. The discharge cannot proceed until Ecology has reviewed the information provided and has authorized the discharge by letter to the Permittee or by an Administrative Order. Once approved and if the proposed discharge is to a municipal storm drain, the Permittee must obtain prior approval from the municipality and notify it when it plans to discharge.

## S8. Spill Control Plan

### S8.A. Spill Control Plan Submittals and Requirements

The Permittee must:

1. Submit to Ecology an update to the existing spill control plan by June 1, 2016. The Permittee must submit a paper copy and an electronic copy (preferably as a PDF).

2. Review the plan at least annually and update the spill plan as needed.

3. Send changes to the plan to Ecology.

4. Follow the plan and any supplements throughout the term of the permit.

### S8.B. Spill Control Plan Components

The spill control plan must include the following:

1. A list of all oil and petroleum products and other materials used and/or stored on-site, which when spilled, or otherwise released into the environment, designate as Dangerous Waste (DW) or Extremely Hazardous Waste (EHW) by the procedures set forth in WAC 173-303-070. Include other materials used and/or stored on-site which may become pollutants or cause pollution upon reaching state's waters.

2. A description of preventive measures and facilities (including an overall facility plot showing drainage patterns) which prevent, contain, or treat spills of these materials.

3. A description of the reporting system the Permittee will use to alert responsible managers and legal authorities in the event of a spill.

4. A description of operator training to implement the plan.

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.

## S9. Best Management Practices

The Permittee must develop a plan to comply with the Best Management Practice (BMP) requirements as defined in 40 CFR Part 430.03. This requires the Permittee to develop, implement, and maintain onsite, a plan to prevent spills and leaks of spent pulping liquors, turpentine, and soap which may reach the wastewater treatment system and adversely impact the system's performance. The plan must be in place and updated as necessary and be available upon request.

## S10. Acute Toxicity

### S10.A. Testing when there is no Permit Limit for Acute Toxicity

The Permittee must:

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

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

### S10.B. Sampling and Reporting Requirements

1. The Permittee must submit all reports for toxicity testing in accordance with the most recent version of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. Reports must contain toxicity data, bench sheets, and reference toxicant results for test methods. In addition, the Permittee must submit toxicity test data in electronic format (CETIS export file preferred) for entry into Ecology's database.
2. The Permittee must collect 24-hour composite effluent samples for toxicity testing. The Permittee must cool the samples to 0 - 6 degrees Celsius during collection and send them to the lab immediately upon completion. The lab

must begin the toxicity testing as soon as possible but no later than 36 hours after sampling was completed.

3. The laboratory must conduct water quality measurements on all samples and test solutions for toxicity testing, as specified in the most recent version of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*.
4. All toxicity tests must meet quality assurance criteria and test conditions specified in the most recent versions of the EPA methods listed in Subsection C and the Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If Ecology determines any test results to be invalid or anomalous, the Permittee must repeat the testing with freshly collected effluent.
5. The laboratory must use control water and dilution water meeting the requirements of the EPA methods listed in Section A or pristine natural water of sufficient quality for good control performance.
6. The Permittee must conduct whole effluent toxicity tests on an unmodified sample of final effluent.
7. The Permittee may sample receiving water at the same time as the effluent and instruct the lab to measure the hardness of both and increase the hardness of the effluent sample to match the hardness of the receiving water sample prior to beginning the toxicity test. Otherwise, the Permittee must conduct whole effluent toxicity tests on an unmodified sample of final effluent.
    a. The Permittee may choose to conduct a full dilution series test during compliance testing in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the acute critical effluent concentration (ACEC). The ACEC equals 11.5% effluent.
    b. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing must comply with the acute statistical power standard of 29% as defined in WAC 173-205-020. If the test does not meet the power standard, the Permittee must repeat the test on a fresh sample with an increased number of replicates to increase the power.

## S11. Chronic Toxicity

### S11.A. Testing when there is no Permit Limit for Chronic Toxicity

The Permittee must:

1. Conduct chronic toxicity testing on final effluent once in the last winter and once in the last summer prior to submission of the application for permit renewal.
2. Submit the results to Ecology with the permit renewal application.

3. Conduct chronic toxicity testing on a series of at least five concentrations of effluent and a control. This series of dilutions must include the acute critical effluent concentration (ACEC). The ACEC equals 11.5% effluent. The series of dilutions should also contain the CCEC of 1.4% effluent.
4. Compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.
5. Perform chronic toxicity tests with all of the following species and the most recent version of the following protocols:

| Freshwater Chronic Test | Species | Method |
|---|---|---|
| Fathead minnow survival and growth | *Pimephales promelas* | EPA-821-R-02-013 |
| Water flea survival and reproduction | *Ceriodaphnia dubia* | EPA-821-R-02-013 |

**S11.B. Sampling and Reporting Requirements**

1. The Permittee must submit all reports for toxicity testing in accordance with the most recent version of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. Reports must contain bench sheets and reference toxicant results for test methods. In addition, the Permittee must submit toxicity test data in electronic format (CETIS export file preferred) for entry into Ecology's database.
2. If the lab provides the toxicity test data in electronic format for entry into Ecology's database, then the Permittee must send the data to Ecology along with the test report, bench sheets, and reference toxicant results.
3. 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.
4. The laboratory must conduct water quality measurements on all samples and test solutions for toxicity testing, as specified in the most recent version of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*.
5. All toxicity tests must meet quality assurance criteria and test conditions specified in the most recent versions of the EPA methods listed in Section C. and the Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If Ecology determines any test results to be invalid or anomalous, the Permittee must repeat the testing with freshly collected effluent.
6. The laboratory must use control water and dilution water meeting the requirements of the EPA methods listed in Subsection C. or pristine natural water of sufficient quality for good control performance.

7. The Permittee must conduct whole effluent toxicity tests on an unmodified sample of final effluent.

8. The Permittee may choose to conduct a full dilution series test during compliance testing in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the 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 1.4% effluent. The ACEC equals 11.5% effluent.

9. All whole effluent toxicity tests that involve hypothesis testing must comply with the chronic statistical power standard of 39% as defined in WAC 173-205-020. If the test does not meet the power standard, the Permittee must repeat the test on a fresh sample with an increased number of replicates to increase the power.

## S12. Sediment Monitoring

### S12.A. Sediment Sampling and Analysis Plan

The Permittee is required to sample and analyze sediments in the vicinity of the facility's outfall 001 and outfall 002.

The Permittee must submit to Ecology for review and approval a Sediment Sampling and Analysis Plan for sediment monitoring within one year of the permit effective date. The purpose of the plan is to characterize sediment (the nature and extent of chemical contamination and biological toxicity) quality in the vicinity of the Permittee's discharge location. The Permittee must follow the guidance provided in the Appendix of the *Sediment Source Control Standards User Manual, Appendix B: Sediment Sampling and Analysis Plan* (Sediment Sampling and Analysis Plan Appendix, Ecology 2008).

### S12.B. Sediment Data Report

Following Ecology approval of the sediment sampling and analysis plan, the Permittee must collect sediments in accordance with the schedule in the approved Sediment Sampling and Analysis Plan. The Permittee must submit to Ecology a Sediment Data Report containing the results of the sediment sampling and analysis within six months of the end of the sampling period. The Permittee must submit two paper copies and an electronic copy (preferably as a PDF). The sediment data report must conform to the approved sediment sampling and analysis plan.

In addition to a Sediment Data Report, the Permittee must submit the sediment chemical and biological data to Ecology's EIM database (http://www.ecy.wa.gov/eim/). Data must be submitted to EIM according to the instructions on the EIM website. The data submittal portion of the EIM website (http://www.ecy.wa.gov/eim/submitdata.htm) provides information and help on formats and requirements for submitting tabular data. Ecology's MyEIM tools

must be used to confirm the accuracy of the submitted data (http://www.ecy.wa.gov/eim/MyEIM.htm).

## S13. Outfall Evaluation

The Permittee must inspect outfall 001 in the fourth year of this permit term the submerged portion of the outfall line and diffuser to document its integrity and continued function. If conditions allow for a photographic verification, the Permittee must include such verification in the report. The Permittee must submit the inspection report within 60 days of the inspection completion to Ecology through the Water Quality Permitting Portal – Permit Submittals application. The Permittee must submit a disk of any videos files to Ecology as required by Permit Condition S3.B. The Portal does not support submittal of video files.

## S14. Stormwater Runoff Management

The Permittee will update the Stormwater Monitoring Plan and Report to include stormwater runoff, with potential for contributions from industrial activities that does not receive wastewater treatment.

### S12.A. Stormwater Monitoring Plan Update

The Permittee must submit the stormwater monitoring plan for Ecology's approval by June 1, 2016. The monitoring must include at a minimum the following pollutants: turbidity, pH, oil & grease, total copper, total zinc, total phosphorus, TSS, $BOD_5$, COD, color, nitrogen-kjelddahl, and nitrogen-nitrate+nitrite. The monitoring will be conducted over two years.

### S12.B. Stormwater Report Update

Within 180 days of completion of the monitoring, the Permittee must submit a final report evaluating stormwater monitoring data. The report will identify and evaluate management options for the stormwater. Management options will include, but not limited to, source elimination, secondary treatment, additional BMPs, and offsetting pollution reduction for the City of Camas stormwater.

## S15. Filter Backwash All Known, Available, and Reasonable Technology (AKART) Analysis

The Permittee must implement AKART determination regarding the filter backwash in accordance the January 2013 AKART study and the schedule approved by Ecology.

## S16. Analysis of Cooling Water Intake Structures

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

## S16.A. Operations and Maintenance

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

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

## S16.B. Information and Compliance Report

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

The facility may propose a site-specific alternative for complying with the BTA requirement pursuant to Section 316(b), or propose one of the designated technologies prescribed in 40 CFR Section 125.94(c) to meet the impingement mortality requirement.

## S16.C. Endangered Species Act

Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act per 40 CFR 125.90.

# General Conditions

## G1. Signatory Requirements

1. All applications, reports, or information submitted to Ecology must be signed and certified.

   a. In the case of corporations, by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

      - A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or
      - The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
      - In the case of a partnership, by a general partner.
      - In the case of sole proprietorship, by the proprietor.
      - In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.

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

2. All reports required by this permit and other information requested by Ecology must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described above and submitted to Ecology.

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

3. Changes to authorization. If an authorization under paragraph G1.2, above, is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of

paragraph G1.2, above, must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under this section must make the following certification:

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

## G2. Right of Inspection and Entry

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

1. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit.
2. To have access to and copy, at reasonable times and at reasonable cost, any records required to be kept under the terms and conditions of this permit.
3. To inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.
4. To sample or monitor, at reasonable times, any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

## G3. Permit Actions

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

1. The following are causes for terminating this permit during its term, or for denying a permit renewal application:
   a. Violation of any permit term or condition.
   b. Obtaining a permit by misrepresentation or failure to disclose all relevant facts.
   c. A material change in quantity or type of waste disposal.
   d. A determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations and can only be regulated to acceptable levels by permit modification or termination.

e. A change in any condition that requires either a temporary or permanent reduction, or elimination of any discharge or sludge use or disposal practice controlled by the permit.

f. Nonpayment of fees assessed pursuant to RCW 90.48.465.

g. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.

2. The following are causes for modification but not revocation and reissuance except when the Permittee requests or agrees:

a. A material change in the condition of the waters of the state.

b. New information not available at the time of permit issuance that would have justified the application of different permit conditions.

c. Material and substantial alterations or additions to the permitted facility or activities which occurred after this permit issuance.

d. Promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision.

e. The Permittee has requested a modification based on other rationale meeting the criteria of 40 CFR Part 122.62.

f. Ecology has determined that good cause exists for modification of a compliance schedule, and the modification will not violate statutory deadlines.

g. Incorporation of an approved local pretreatment program into a municipality's permit.

3. The following are causes for modification or alternatively revocation and reissuance:

a. When cause exists for termination for reasons listed in 1.a through 1.g of this section, and Ecology determines that modification or revocation and reissuance is appropriate.

b. When Ecology has received notification of a proposed transfer of the permit. A permit may also be modified to reflect a transfer after the effective date of an automatic transfer (General Condition G7) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new Permittee.

## G4. Reporting Planned Changes

The Permittee must, as soon as possible, but no later than sixty days (60) days prior to the proposed changes, give notice to Ecology of planned physical alterations or additions to the permitted facility, production increases, or process modification which will result in:

1. The permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b)

2. A significant change in the nature or an increase in quantity of pollutants discharged.

3. A significant change in the Permittee's sludge use or disposal practices. Following such notice, and the submittal of a new application or supplement to the existing application, along with required engineering plans and reports, this permit may be

modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.

## G5. Plan Review Required

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

## G6. Compliance with other Laws and Statutes

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

## G7. Transfer of this Permit

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

1. Transfers by Modification
   Except as provided in paragraph (2) below, this permit may be transferred by the Permittee to a new owner or operator only if this permit has been modified or revoked and reissued under 40 CFR 122.62(b)(2), or a minor modification made under 40 CFR 122.63(d), to identify the new Permittee and incorporate such other requirements as may be necessary under the Clean Water Act.
2. Automatic Transfers
   This permit may be automatically transferred to a new Permittee if:
   a. The Permittee notifies Ecology at least thirty (30) days in advance of the proposed transfer date.
   b. The notice includes a written agreement between the existing and new Permittee's containing a specific date transfer of permit responsibility, coverage, and liability between them.
   c. Ecology does not notify the existing Permittee and the proposed new Permittee of its intent to modify or revoke and reissue this permit. A modification under this subparagraph may also be minor modification under 40 CFR 122.63. If this notice is not received, the transfer is effective on the date specified in the written agreement.

## G8. Reduced Production for Compliance

The Permittee, in order to maintain compliance with its permit, must control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until

the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

## G9. Removed Substances

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

## G10. Duty to Provide Information

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

## G11. Other Requirements of 40 CFR

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

## G12. Additional Monitoring

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

## G13. Payment of Fees

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

## G14. Penalties for Violating Permit Conditions

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

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

## G15. Upset

Definition – “Upset” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limits because of

factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

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

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

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

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

## G16. Property Rights

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

## G17. Duty to Comply

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

## G18. Toxic Pollutants

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

## G19. Penalties for Tampering

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

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

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

1. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following "notification levels:"
    a. One hundred micrograms per liter (100 μg/L).
    b. Two hundred micrograms per liter (200 μg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 μg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony.
    c. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
    d. The level established by the Director in accordance with 40 CFR 122.44(f).
2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following "notification levels:"
    a. Five hundred micrograms per liter (500μg/L).
    b. One milligram per liter (1 mg/L) for antimony.
    c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
    d. The level established by the Director in accordance with 40 CFR 122.44(f).

## G21. Compliance Schedules

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

# Appendix A

## *List of Pollutants with Analytical Methods, Detection Limits and Quantitation Levels*

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

- Another permit condition specifies other methods, detection levels, or quantitation levels.
- The method used produces measurable results in the sample and EPA has listed it as an EPA-approved method in 40 CFR Part 136.

If the Permittee uses an alternative method, not specified in the permit and as allowed above, it must report the test method, DL, and QL on the discharge monitoring report or in the required report.

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

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

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

### *CONVENTIONAL PARAMETERS*

| **Pollutant & CAS No.** ***(if available)*** | **Recommended Analytical Protocol** | **Detection (DL)[1]** ***µg/L unless specified*** | **Quantitation Level (QL)** [2] ***µg/L unless specified*** |
|---|---|---|---|
| Biochemical Oxygen Demand | SM5210-B | | 2 mg/L |
| Soluble Biochemical Oxygen Demand | SM5210-B [3] | | 2 mg/L |
| Chemical Oxygen Demand | SM5220-D | | 10 mg/L |
| Total Organic Carbon | SM5310-B/C/D | | 1 mg/L |
| Total Suspended Solids | SM2540-D | | 5 mg/L |
| Total Ammonia (as N) | SM4500-NH3-B and C/D/E/G/H | | 20 |
| Flow | Calibrated device | | |
| Dissolved oxygen | SM4500-OC/OG | | 0.2 mg/L |

| **Pollutant & CAS No.** ***(if available)*** | **Recommended Analytical Protocol** | **Detection (DL)[1]** ***µg/L unless specified*** | **Quantitation Level (QL) [2]** ***µg/L unless specified*** |
|---|---|---|---|
| Temperature (max. 7-day avg.) | Analog recorder or Use micro-recording devices known as thermistors | | 0.2º C |
| pH | SM4500-$H^+$ B | N/A | N/A |

***NONCONVENTIONAL PARAMETERS***

| **Pollutant & CAS No. (if available)** | **Recommended Analytical Protocol** | **Detection (DL)[1] µg/L unless specified** | **Quantitation Level (QL)[2] µg/L unless specified** |
|---|---|---|---|
| Total Alkalinity | SM2320-B | | 5 mg/L as CaCO3 |
| Chlorine, Total Residual | SM4500 Cl G | | 50.0 |
| Color | SM2120 B/C/E | | 10 color units |
| Fecal Coliform | SM 9221E,9222 | N/A | Specified in method - sample aliquot dependent |
| Fluoride (16984-48-8) | SM4500-F E | 25 | 100 |
| Nitrate + Nitrite Nitrogen (as N) | SM4500-NO3- E/F/H | | 100 |
| Nitrogen, Total Kjeldahl (as N) | SM4500-$N_{org}$B/C and SM4500$NH_3$-B/C/D/EF/G/H | | 300 |
| Soluble Reactive Phosphorus (as P) | SM4500- PE/PF | 3 | 10 |
| Phosphorus, Total (as P) | SM 4500 PB followed by SM4500-PE/PF | 3 | 10 |
| Oil and Grease (HEM) (Hexane Extractable Material) | 1664 A or B | 1,400 | 5,000 |
| Salinity | SM2520-B | | 3 practical salinity units or scale (PSU or PSS) |
| Settleable Solids | SM2540 -F | | 500 (or 0.1 mL/L) |
| Sulfate (as mg/L $SO_4$) | SM4110-B | | 0.2 mg/L |
| Sulfide (as mg/L S) | SM4500-$S^2$F/D/E/G | | 0.2 mg/L |
| Sulfite (as mg/L $SO_3$) | SM4500-SO3B | | 2 mg/L |
| Total Coliform | SM 9221B, 9222B, 9223B | N/A | Specified in method - sample aliquot dependent |
| Total dissolved solids | SM2540 C | | 20 mg/L |
| Total Hardness | SM2340B | | 200 as CaCO3 |
| Aluminum, Total (7429-90-5) | 200.8 | 2.0 | 10 |
| 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 |

| Pollutant & CAS No. (if available) | Recommended Analytical Protocol | Detection (DL)[1] µg/L unless specified | Quantitation Level (QL)[2] µg/L unless specified |
|---|---|---|---|
| Boron Total (7440-42-8) | 200.8 | 2.0 | 10.0 |
| Cobalt, Total (7440-48-4) | 200.8 | 0.05 | 0.25 |
| Iron, Total (7439-89-6) | 200.7 | 12.5 | 50 |
| Magnesium, Total (7439-95-4) | 200.7 | 10 | 50 |
| Molybdenum, Total (7439-98-7) | 200.8 | 0.1 | 0.5 |
| Manganese, Total (7439-96-5) | 200.8 | 0.1 | 0.5 |
| NWTPH Dx [4] | Ecology NWTPH Dx | 250 | 250 |
| NWTPH Gx [5] | Ecology NWTPH Gx | 250 | 250 |
| Tin, Total (7440-31-5) | 200.8 | 0.3 | 1.5 |
| Titanium, Total (7440-32-6) | 200.8 | 0.5 | 2.5 |

***PRIORITY POLLUTANTS***

| Pollutant & CAS No. *(if available)* | Recommended Analytical Protocol | Detection (DL)[1] *µg/L unless specified* | Quantitation Level (QL) [2] *µg/L unless specified* |
|---|---|---|---|
| **METALS, CYANIDE & TOTAL PHENOLS** | | | |
| Antimony, Total (7440-36-0) | 200.8 | 0.3 | 1.0 |
| Arsenic, Total (7440-38-2) | 200.8 | 0.1 | 0.5 |
| Beryllium, Total (7440-41-7) | 200.8 | 0.1 | 0.5 |
| Cadmium, Total (7440-43-9) | 200.8 | 0.05 | 0.25 |
| Chromium (hex) dissolved (18540-29-9) | SM3500-Cr EC | 0.3 | 1.2 |
| Chromium, Total (7440-47-3) | 200.8 | 0.2 | 1.0 |
| Copper, Total (7440-50-8) | 200.8 | 0.4 | 2.0 |
| Lead, Total (7439-92-1) | 200.8 | 0.1 | 0.5 |
| Mercury, Total (7439-97-6) | 1631E | 0.0002 | 0.0005 |
| Nickel, Total (7440-02-0) | 200.8 | 0.1 | 0.5 |
| Selenium, Total (7782-49-2) | 200.8 | 1.0 | 1.0 |
| Silver, Total (7440-22-4) | 200.8 | 0.04 | 0.2 |
| Thallium, Total (7440-28-0) | 200.8 | 0.09 | 0.36 |
| Zinc, Total (7440-66-6) | 200.8 | 0.5 | 2.5 |
| Cyanide, Total (57-12-5) | 335.4 | 5 | 10 |
| Cyanide, Weak Acid Dissociable | SM4500-CN I | 5 | 10 |
| Cyanide, Free Amenable to Chlorination (Available Cyanide) | SM4500-CN G | 5 | 10 |
| Phenols, Total | EPA 420.1 | | 50 |

| Pollutant & CAS No. *(if available)* | Recommended Analytical Protocol | Detection (DL)[1] *µg/L unless specified* | Quantitation Level (QL) [2] *µg/L unless specified* |
|---|---|---|---|
| **ACID COMPOUNDS** | | | |
| 2-Chlorophenol (95-57-8) | 625 | 1.0 | 2.0 |

| Pollutant & CAS No. *(if available)* | Recommended Analytical Protocol | Detection (DL)[1] *µg/L unless specified* | Quantitation Level (QL) [2] *µg/L unless specified* |
|---|---|---|---|
| 2,4-Dichlorophenol (120-83-2) | 625 | 0.5 | 1.0 |
| 2,4-Dimethylphenol (105-67-9) | 625 | 0.5 | 1.0 |
| 4,6-dinitro-o-cresol (534-52-1) (2-methyl-4,6,-dinitrophenol) | 625/1625B | 1.0 | 2.0 |
| 2,4 dinitrophenol (51-28-5) | 625 | 1.0 | 2.0 |
| 2-Nitrophenol (88-75-5) | 625 | 0.5 | 1.0 |
| 4-nitrophenol (100-02-7) | 625 | 0.5 | 1.0 |
| Parachlorometa cresol (59-50-7) (4-chloro-3-methylphenol) | 625 | 1.0 | 2.0 |
| Pentachlorophenol (87-86-5) | 625 | 0.5 | 1.0 |
| Phenol (108-95-2) | 625 | 2.0 | 4.0 |
| 2,4,6-Trichlorophenol (88-06-2) | 625 | 2.0 | 4.0 |

***PRIORITY POLLUTANTS (continued)***

| Pollutant & CAS No. *(if available)* | Recommended Analytical Protocol | Detection (DL)[1] *µg/L unless specified* | Quantitation Level (QL) [2] *µg/L unless specified* |
|---|---|---|---|
| **VOLATILE COMPOUNDS** | | | |
| Acrolein (107-02-8) | 624 | 5 | 10 |
| Acrylonitrile (107-13-1) | 624 | 1.0 | 2.0 |
| Benzene (71-43-2) | 624 | 1.0 | 2.0 |
| Bromoform (75-25-2) | 624 | 1.0 | 2.0 |
| Carbon tetrachloride (56-23-5) | 624/601 or SM6230B | 1.0 | 2.0 |
| Chlorobenzene (108-90-7) | 624 | 1.0 | 2.0 |
| Chloroethane (75-00-3) | 624/601 | 1.0 | 2.0 |
| 2-Chloroethylvinyl Ether (110-75-8) | 624 | 1.0 | 2.0 |
| Chloroform (67-66-3) | 624 or SM6210B | 1.0 | 2.0 |
| Dibromochloromethane (124-48-1) | 624 | 1.0 | 2.0 |
| 1,2-Dichlorobenzene (95-50-1) | 624 | 1.9 | 7.6 |
| 1,3-Dichlorobenzene (541-73-1) | 624 | 1.9 | 7.6 |
| 1,4-Dichlorobenzene (106-46-7) | 624 | 4.4 | 17.6 |
| Dichlorobromomethane (75-27-4) | 624 | 1.0 | 2.0 |
| 1,1-Dichloroethane (75-34-3) | 624 | 1.0 | 2.0 |
| 1,2-Dichloroethane (107-06-2) | 624 | 1.0 | 2.0 |
| 1,1-Dichloroethylene (75-35-4) | 624 | 1.0 | 2.0 |
| 1,2-Dichloropropane (78-87-5) | 624 | 1.0 | 2.0 |

| Pollutant & CAS No. *(if available)* | Recommended Analytical Protocol | Detection (DL)[1] *µg/L unless specified* | Quantitation Level (QL)[2] *µg/L unless specified* |
|---|---|---|---|
| **VOLATILE COMPOUNDS** | | | |
| 1,3-dichloropropene (mixed isomers) (1,2-dichloropropylene) (542-75-6) [6] | 624 | 1.0 | 2.0 |
| Ethylbenzene (100-41-4) | 624 | 1.0 | 2.0 |
| Methyl bromide (74-83-9) (Bromomethane) | 624/601 | 5.0 | 10.0 |
| Methyl chloride (74-87-3) (Chloromethane) | 624 | 1.0 | 2.0 |
| Methylene chloride (75-09-2) | 624 | 5.0 | 10.0 |
| 1,1,2,2-Tetrachloroethane (79-34-5) | 624 | 1.9 | 2.0 |
| Tetrachloroethylene (127-18-4) | 624 | 1.0 | 2.0 |
| Toluene (108-88-3) | 624 | 1.0 | 2.0 |
| 1,2-Trans-Dichloroethylene (156-60-5) (Ethylene dichloride) | 624 | 1.0 | 2.0 |
| 1,1,1-Trichloroethane (71-55-6) | 624 | 1.0 | 2.0 |
| 1,1,2-Trichloroethane (79-00-5) | 624 | 1.0 | 2.0 |
| Trichloroethylene (79-01-6) | 624 | 1.0 | 2.0 |
| Vinyl chloride (75-01-4) | 624/SM6200B | 1.0 | 2.0 |

***PRIORITY POLLUTANTS (continued)***

| Pollutant & CAS No. *(if available)* | Recommended Analytical Protocol | Detection (DL)[1] *µg/L unless specified* | Quantitation Level (QL)[2] *µg/L unless specified* |
|---|---|---|---|
| **BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)** | | | |
| Acenaphthene (83-32-9) | 625 | 0.2 | 0.4 |
| Acenaphthylene (208-96-8) | 625 | 0.3 | 0.6 |
| Anthracene (120-12-7) | 625 | 0.3 | 0.6 |
| Benzidine (92-87-5) | 625 | 12 | 24 |
| Benzyl butyl phthalate (85-68-7) | 625 | 0.3 | 0.6 |
| Benzo(*a*)anthracene (56-55-3) | 625 | 0.3 | 0.6 |
| Benzo(b)fluoranthene (3,4-benzofluoranthene) (205-99-2) [7] | 610/625 | 0.8 | 1.6 |
| **Benzo(j)fluoranthene (205-82-3)** [7] | 625 | 0.5 | 1.0 |
| Benzo(k)fluoranthene (11,12-benzofluoranthene) (207-08-9) [7] | 610/625 | 0.8 | 1.6 |

| **Pollutant & CAS No.** ***(if available)*** | **Recommended Analytical Protocol** | **Detection (DL)[1]** ***µg/L unless specified*** | **Quantitation Level (QL)[2]** ***µg/L unless specified*** |
|---|---|---|---|
| **BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)** | | | |
| **Benzo(r,s,t)pentaphene (189-55-9)** | 625 | 0.5 | 1.0 |
| Benzo(*a*)pyrene (50-32-8) | 610/625 | 0.5 | 1.0 |
| Benzo(*ghi*)Perylene (191-24-2) | 610/625 | 0.5 | 1.0 |
| Bis(*2-chloroethoxy)*methane (111-91-1) | 625 | 5.3 | 21.2 |
| Bis(*2-chloroethyl*)ether (111-44-4) | 611/625 | 0.3 | 1.0 |
| Bis(*2-chloroisopropyl*)ether (39638-32-9) | 625 | 0.3 | 0.6 |
| Bis(*2-ethylhexyl*)phthalate (117-81-7) | 625 | 0.1 | 0.5 |
| 4-Bromophenyl phenyl ether (101-55-3) | 625 | 0.2 | 0.4 |
| 2-Chloronaphthalene (91-58-7) | 625 | 0.3 | 0.6 |
| 4-Chlorophenyl phenyl ether (7005-72-3) | 625 | 0.3 | 0.5 |
| Chrysene (218-01-9) | 610/625 | 0.3 | 0.6 |
| **Dibenzo (a,h)acridine (226-36-8)** | 610M/625M | 2.5 | 10.0 |
| **Dibenzo (a,j)acridine (224-42-0)** | 610M/625M | 2.5 | 10.0 |
| Dibenzo(a-*h*)anthracene (53-70-3)(1,2,5,6-dibenzanthracene) | 625 | 0.8 | 1.6 |
| Dibenzo(a,e)pyrene (192-65-4) | 610M/625M | 2.5 | 10.0 |
| Dibenzo(a,h)pyrene (189-64-0) | 625M | 2.5 | 10.0 |
| 3,3-Dichlorobenzidine (91-94-1) | 605/625 | 0.5 | 1.0 |
| Diethyl phthalate (84-66-2) | 625 | 1.9 | 7.6 |
| Dimethyl phthalate (131-11-3) | 625 | 1.6 | 6.4 |
| Di-n-butyl phthalate (84-74-2) | 625 | 0.5 | 1.0 |
| 2,4-dinitrotoluene (121-14-2) | 609/625 | 0.2 | 0.4 |
| 2,6-dinitrotoluene (606-20-2) | 609/625 | 0.2 | 0.4 |

***PRIORITY POLLUTANTS (continued)***

| **Pollutant & CAS No.** ***(if available)*** | **Recommended Analytical Protocol** | **Detection (DL)[1]** ***µg/L unless specified*** | **Quantitation Level (QL)[2]** ***µg/L unless specified*** |
|---|---|---|---|
| **BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)** | | | |
| Di-n-octyl phthalate (117-84-0) | 625 | 0.3 | 0.6 |
| 1,2-Diphenylhydrazine (*as Azobenzene*) (122-66-7) | 1625B | 5.0 | 20 |
| Fluoranthene (206-44-0) | 625 | 0.3 | 0.6 |
| Fluorene (86-73-7) | 625 | 0.3 | 0.6 |
| Hexachlorobenzene (118-74-1) | 612/625 | 0.3 | 0.6 |
| Hexachlorobutadiene (87-68-3) | 625 | 0.5 | 1.0 |
| Hexachlorocyclopentadiene (77-47-4) | 1625B/625 | 0.5 | 1.0 |
| Hexachloroethane (67-72-1) | 625 | 0.5 | 1.0 |
| Indeno(*1,2,3-cd*)Pyrene (193-39-5) | 610/625 | 0.5 | 1.0 |
| Isophorone (78-59-1) | 625 | 0.5 | 1.0 |
| **3-Methyl cholanthrene (56-49-5)** | 625 | 2.0 | 8.0 |
| Naphthalene (91-20-3) | 625 | 0.3 | 0.6 |
| Nitrobenzene (98-95-3) | 625 | 0.5 | 1.0 |
| N-Nitrosodimethylamine (62-75-9) | 607/625 | 2.0 | 4.0 |
| N-Nitrosodi-n-propylamine (621-64-7) | 607/625 | 0.5 | 1.0 |
| N-Nitrosodiphenylamine (86-30-6) | 625 | 0.5 | 1.0 |
| **Perylene (198-55-0)** | 625 | 1.9 | 7.6 |
| Phenanthrene (85-01-8) | 625 | 0.3 | 0.6 |
| Pyrene (129-00-0) | 625 | 0.3 | 0.6 |
| 1,2,4-Trichlorobenzene (120-82-1) | 625 | 0.3 | 0.6 |

| **Pollutant & CAS No.** ***(if available)*** | **Recommended Analytical Protocol** | **Detection (DL)[1]** ***µg/L unless specified*** | **Quantitation Level (QL)[2]** ***µg/L unless specified*** |
|---|---|---|---|
| **DIOXIN** | | | |
| 2,3,7,8-Tetra-Chlorodibenzo-P-Dioxin (176-40-16) (2,3,7,8 TCDD) | 1613B | 1.3 pg/L | 5 pg/L |
| **PESTICIDES/PCBs** | | | |
| Aldrin (309-00-2) | 608 | 0.025 | 0.05 |
| alpha-BHC (319-84-6) | 608 | 0.025 | 0.05 |

| **Pollutant & CAS No.** ***(if available)*** | **Recommended Analytical Protocol** | **Detection (DL)[1]** ***µg/L unless specified*** | **Quantitation Level (QL)[2]** ***µg/L unless specified*** |
|---|---|---|---|
| beta-BHC (319-85-7) | 608 | 0.025 | 0.05 |
| gamma-BHC (58-89-9) | 608 | 0.025 | 0.05 |
| delta-BHC (319-86-8) | 608 | 0.025 | 0.05 |
| Chlordane (57-74-9) [8] | 608 | 0.025 | 0.05 |
| 4,4'-DDT (50-29-3) | 608 | 0.025 | 0.05 |
| 4,4'-DDE (72-55-9) | 608 | 0.025 | 0.05 |
| 4,4' DDD (72-54-8) | 608 | 0.025 | 0.05 |
| Dieldrin (60-57-1) | 608 | 0.025 | 0.05 |
| alpha-Endosulfan (959-98-8) | 608 | 0.025 | 0.05 |
| beta-Endosulfan (33213-65-9) | 608 | 0.025 | 0.05 |
| Endosulfan Sulfate (1031-07-8) | 608 | 0.025 | 0.05 |
| Endrin (72-20-8) | 608 | 0.025 | 0.05 |
| Endrin Aldehyde (7421-93-4) | 608 | 0.025 | 0.05 |
| Heptachlor (76-44-8) | 608 | 0.025 | 0.05 |
| Heptachlor Epoxide (1024-57-3) | 608 | 0.025 | 0.05 |
| PCB-1242 (53469-21-9) [9] | 608 | 0.25 | 0.5 |
| PCB-1254 (11097-69-1) | 608 | 0.25 | 0.5 |
| PCB-1221 (11104-28-2) | 608 | 0.25 | 0.5 |
| PCB-1232 (11141-16-5) | 608 | 0.25 | 0.5 |
| PCB-1248 (12672-29-6) | 608 | 0.25 | 0.5 |
| PCB-1260 (11096-82-5) | 608 | 0.13 | 0.5 |
| PCB-1016 (12674-11-2) [9] | 608 | 0.13 | 0.5 |
| Toxaphene (8001-35-2) | 608 | 0.24 | 0.5 |

1. Detection level (DL) - or detection limit means the minimum concentration of an analyte (substance) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero as determined by the procedure given in 40 CFR part 136, Appendix B.

2. Quantitation Level (QL) also known as Minimum Level of Quantitation (ML) - The lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. It is equivalent to the concentration of the lowest calibration standard, assuming that the lab has used all method-specified sample weights, volumes, and cleanup procedures. The QL is calculated by multiplying the MDL by 3.18 and rounding the result to the number nearest to (1, 2, or 5) x $10^n$, where n is an integer. (64 FR 30417).
   ALSO GIVEN AS:
   The smallest detectable concentration of analyte greater than the Detection Limit (DL) where the accuracy (precision & bias) achieves the objectives of the intended purpose. (Report of the Federal Advisory Committee on Detection and Quantitation Approaches and Uses in Clean Water Act Programs Submitted to the US Environmental Protection Agency December 2007).

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