



DRAFT

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Permit No. ST6215

Issuance Date: September 26, 2013

Effective Date: October 1, 2013

Expiration Date: September 30, 2018

Modification Date: _____

STATE WASTE DISCHARGE PERMIT NUMBER ST 6215

**STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
SOUTHWEST REGIONAL OFFICE**

In compliance with the provisions of the
State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington, as amended,
authorizes

**Pierce County Public Works & Utilities
9850 64th Street West
University Place, WA 98467**

**Ovivo
2404 Rutland Drive
Austin, TX 78758**

**Water and Wastewater Services, LLC
14263 Calhoun Road
Mount Vernon, WA 98273**

to discharge wastewater in accordance with the special and general conditions which follow.

Plant Location:

Cascadia Wastewater Treatment System
17300 Cascadia Boulevard East
Bonney Lake, WA 98391

Legal Description: SE ¼ of the SW ¼ of Sec 17
Township 19 Range 5 E W.M.

Stage I Treatment: Large On-Site Septic System
(LOSS) with intermittent coarse-sand biological
filter drainfield

Interim Stage II Treatment: Advanced secondary
treatment with nitrogen removal, disinfection, and
discharge to same drainfield as Stage I Treatment
System

Drainfield Location:

Latitude: 47.12833 N
Longitude: -122.20028W

Rich Doenges
Southwest Regional Manager
Water Quality Program
Washington State Department of Ecology

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SUMMARY OF PERMIT REPORT SUBMITTALS

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

Permit Section	Submittal	Frequency	First Submittal Date
S1.B.	Notice of Completion of Construction for Stage II (Interim) Treatment System	1/permit	
S3.A.	Discharge Monitoring Report	Monthly	November 1, 2013
S3.A.	Discharge Monitoring Report	Quarterly	January 15, 2014
S3.A.	Discharge Monitoring Report	Annual	January 15, 2015
S3.E.	Noncompliance Notification	As Necessary	
S4.B.	Plans for Maintaining Adequate Capacity	As Necessary	
S4.C.	Wasteload Assessment	Annually	June 15, 2014
S4.D.2	Infiltration and Inflow Evaluation	Annually	June 15, 2014
S5.G.	Operations and Maintenance Manual for Final Facility	1/permit cycle	Prior to Operating Final Treatment System
S6.	Residual Solids Management Plan	1/permit cycle	Prior to Operating Final Treatment System
S7.A.	Pretreatment Report	Annual	February 15, 2014
S8.	Application for Permit Renewal	1/permit cycle	April 1, 2018

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SPECIAL CONDITIONS

In this permit the word must denotes an action that is mandatory and is equivalent to the word shall used in previous permits. The terms interim and final are generally used throughout this permit to indicate the stage I and stage II of wastewater treatment within the scope of this permit. These terms are not meant to indicate that another stage of treatment will not occur beyond this permit.

S1. DISCHARGE LIMITS

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 concentration in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

A. Stage I Permit Limits

Beginning on the effective date and lasting through the end of the calendar month in which the Department of Ecology (Ecology) receives the first Interim Stage II “Notice of Completion of Construction,” the Permittee is authorized to discharge municipal wastewater from a large on-site septic system (LOSS) to the drainfield, subject to the following effluent limitations. The flow to the LOSS shall not exceed 0.1 million gallons per day (mgd) and the Permittee shall have the Interim Stage II Wastewater Treatment Plant operational prior to wastewater flow exceeding 0.1 mgd.

Parameter	Maximum Average Monthly Value
Flow	0.1 mgd

Ground Water Enforcement Limits that apply at existing monitoring wells down gradient from the drainfield:

Parameter	Ground Water Enforcement Limit
Total Coliform Bacteria	1 col/100 mL
Total Nitrogen ¹	10 mg/L
Nitrate as N	10 mg/L
Total Dissolved Solids	500 mg/L
Chloride	250 mg/L
Sulfate	250 mg/L
Toxics	No toxics in toxic amounts
¹ Total Nitrogen = Total Kjeldahl Nitrogen (TKN) + Nitrate + Nitrite	

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B. Interim Stage II Limits for the Cascadia Wastewater Treatment Plant (Advanced Secondary Treatment and Drainfield)

Beginning on the first day of the month following receipt by Ecology of any “Notice of Completion of Construction,” for any unit of the Interim Stage II treatment plant and lasting through the expiration date of this permit, the Permittee is authorized to discharge wastewater to the active and reserve drainfield locations and is subject to the following limitations:

INTERIM (STAGE II) EFFLUENT LIMITATIONS		
Parameter	Average Monthly ^a	Average Weekly
BOD ₅	30 mg/L 30 lbs/day/Unit	45 mg/L 45 lbs/day/Unit
	May not exceed 15% of the average influent concentration	
TSS	30 mg/L 30 lbs/day/Unit	45 mg/L 45 lbs/day/Unit
	May not exceed 15% of the average influent concentration	
Flow	0.1 mgd/Unit	---
Fecal coliform	200 org/100 ml	400 org/100 ml
Total Nitrogen as N ^b	10 mg/L	
pH	Shall not be outside the range of 6.0 to 9.0 Standard Units	
^a The average monthly effluent limitation is defined as the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.		
^b The limitations on Total Nitrogen becomes effective upon notice by Ecology.		

C. Final Groundwater Enforcement Limitations becomes effective upon notice by Ecology, apply to monitoring wells immediately down gradient from and adjacent to the drainfield are:

Parameter	Groundwater Enforcement Limit
Total Coliform Bacteria	1 col/100 mL
Total Nitrogen as N ¹	10 mg/L
Nitrate as N	10 mg/L
Total Dissolved Solids	500 mg/L

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Parameter	Groundwater Enforcement Limit
Chloride	250 mg/L
Sulfate	250 mg/L
Toxics	No toxics in toxic amounts
¹ Total Nitrogen = TKN + Nitrate + Nitrite	

S2. MONITORING REQUIREMENTS**A. Stage I Wastewater Monitoring**

The sampling point for the influent will be after influent screening.

The Permittee must monitor the wastewater according to the following schedule:

Parameter	Units	Sample Point	Sampling Frequency	Sample Type
Flow	MGD	Effluent	Continuous	Calculated from Pump Run Time

B. Interim Stage II Wastewater Monitoring

The sampling point for the influent will be after influent screening.

The sampling point for the effluent from the above ground treatment works will be at the end of pipe prior to discharging to the drainfield.

The Permittee must monitor the wastewater according to the following schedule:

Parameter	Units	Sample Point	Sampling Frequency	Sample Type
Flow	MGD	Influent	Continuous*	24-Hour Recording
BOD	mg/L	Influent	2/week	24-Hour Composite
	lbs/day	Influent	2/week	24-Hour Composite
TSS	mg/L	Influent	2/week	24-Hour Composite
	lbs/day	Influent	2/week	24-Hour Composite
Flow	MGD	Effluent	Continuous	24-Hour Recording

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Parameter	Units	Sample Point	Sampling Frequency	Sample Type
BOD	mg/L	Effluent	2/week	24-Hour Composite
BOD	lbs/day	Effluent	2/week	24-Hour Composite
	% removal	Effluent	2/week	Calculation
TSS	mg/L	Effluent	2/week	24-Hour Composite
	lbs/day	Effluent	2/week	24-Hour Composite
TSS	% removal	Effluent	2/week	Calculation
Fecal Coliform	col/100 mL	Effluent	2/week	Grab
Total Nitrogen	mg/L	Effluent	1/week	24-Hour Composite
	lbs/day	Effluent	1/week	24-Hour Composite
TKN (as N)	mg/L	Effluent	1/week	24-Hour Composite
	lbs/day	Effluent	1/week	24-Hour Composite
Total Ammonia-N	mg/L	Effluent	1/week	24-Hour Composite
	lbs/day	Effluent	1/week	24-Hour Composite
Nitrite	mg/L	Effluent	1/week	24-Hour Composite
	lbs/day	Effluent	1/week	24-Hour Composite
Nitrate	mg/L	Effluent	1/week	24-Hour Composite
	lbs/day	Effluent	1/week	24-Hour Composite
pH	Standard Units	Effluent	Daily	Grab

Parameter	Units	Sample Point	Sampling Frequency	Sample Type
* Continuous means uninterrupted except for brief lengths of time for calibration, for power failure, or for unanticipated equipment repair or maintenance. Samples must be taken daily when continuous monitoring is not possible.				

C. Receiving Water Quality Monitoring Plan

The Permittee will submit a Water Quality Monitoring Plan as describe in Section S9.B. The Permittee must monitor the ground water and Canyon Falls Creek according to the following schedule:

Parameter	Units	Sampling Frequency	Sample Type
Measured Depth to Groundwater (Report to 0.01 feet)	Feet	Quarterly ¹	Field Test
Flow (Creek Only)	Cubic Feet per Second	Quarterly ¹	Field Test
Conductivity	Micromhos/cm	Quarterly ¹	Field Test
pH	Standard Units	Quarterly ¹	Field Test
Temperature	°C	Continuous in creek, Quarterly in groundwater ¹	Continuous recording in creek, Field Test in groundwater
Ferrous Iron	Present /Absent	Quarterly ¹	Field Test
Dissolved Oxygen	mg/L	Quarterly ¹	Field Test
Total Organic Carbon	mg/L	Quarterly ¹	Grab
Total Coliform	org/100 ml	Quarterly ¹	Grab
Chloride	mg/L	Quarterly ¹	Grab
Total Nitrogen (as N)	mg/L	Quarterly ¹	Grab
NO ₃ (as N) (nitrate)	mg/L	Quarterly ¹	Grab
NO ₂ (as N) (nitrite)	mg/L	Quarterly ¹	Grab
TKN (as N)	mg/L	Quarterly ¹	Grab
Ammonia as N	mg/L	Quarterly ¹	Grab
Dissolved Iron	mg/L	Quarterly ¹	Grab
Total Dissolved Solids	mg/L	Quarterly ¹	Grab
Bicarbonate	mg/L	Annually ²	Grab

Parameter	Units	Sampling Frequency	Sample Type
Carbonate	mg/L	Annually ²	Grab
Fluoride	mg/L	Annually ²	Grab
Sulfate	mg/L	Annually ²	Grab
Calcium	mg/L	Annually ²	Grab
Magnesium	mg/L	Annually ²	Grab
Potassium	mg/L	Annually ²	Grab
Sodium	mg/L	Annually ²	Grab
Iron (Total)	mg/L	Annually ²	Grab
Manganese	mg/L	Annually ²	Grab
¹ Quarterly is defined as: January – March April – June July – September October – December			
² Annually is defined as a Calendar Year			

The following subsections (D through F) apply to both the Stage I and Stage II permit conditions:

D. Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this permit must be representative of 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.

Ground water sampling must conform to the latest protocols in the *Implementation Guidance for the Ground Water Quality Standards*, (Ecology 1996). The Permittee shall follow the groundwater monitoring plan title, “Water Quality Monitoring SOW-QAPP,” dated July 2011. The Permittee shall review the monitoring plan as a part of the next permit application and shall: 1) include a statement that the plan is accurate, or 2) submit an updated plan for Ecology to review and approval.

Sampling and analytical methods used to meet the water and wastewater monitoring requirements specified in this permit must conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 Code of Federal Regulations (CFR) Part 136 or to the latest revision of *Standard Methods for the Examination of Water and Wastewater* (APHA), unless otherwise specified in this permit or approved in writing by Ecology.

All soil analysis and reporting will be in accordance with *Laboratory Procedures*, Soil Testing Laboratory, Washington State University, November 1981.

Sludge monitoring requirements specified in this permit must be conducted according to test procedures specified in 40 CFR Part 503.

E. Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices must be selected and used to ensure the accuracy and reliability of measurements of the quantity of monitored flows. The devices must be installed, calibrated, and maintained to ensure that the accuracy of the measurements are consistent with the accepted industry standard for that type of device. Frequency of calibration must be in conformance with manufacturer's recommendations and at a minimum frequency of at least one calibration per year. Calibration records must be maintained for at least three years.

F. Laboratory Accreditation

All monitoring data required by Ecology must be prepared by a laboratory registered or accredited under the provisions of, *Accreditation of Environmental Laboratories*, Chapter 173-50 Washington Administrative Code (WAC). Flow, temperature, settleable solids, conductivity, pH, and internal process control parameters are exempt from this requirement. Conductivity and pH must be accredited if the laboratory must otherwise be registered or accredited. Crops, soils, and hazardous waste testing has not been included in the accreditation program. Crops, soils, and hazardous waste data must be provided by a lab accredited for similar parameters in water media.

S3. REPORTING AND RECORDKEEPING 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.

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 WAWebDMR. 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 WAWebDMR go to:
<http://www.ecy.wa.gov/programs/wq/permits/paris/webdmr.html>

If unable to submit electronically (for example, if you do not have an internet connection), the Permittee must contact Ecology to request a waiver and obtain instructions on how to obtain a paper copy DMR.

2. Summarize, report, and submit monitoring data obtained during each monitoring period on a Discharge Monitoring Report (DMR) form provided, or otherwise approved, by Ecology. Include a summary listing daily results for the parameters tabulated in Special Condition S2, including MDLs and QLs (when applicable).

3. 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.
4. 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.
5. Report the test method used for analysis in the comments if the laboratory used an alternative method not specified in the permit and as allowed in Appendix A OR S2.
6. Calculate average values (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.
7. Report single-sample grouped parameters (for example priority pollutants, PAHs, pulp and paper chlorophenolics, TTOs) on the WAWebDMR form and include: sample date, concentration detected, detection limit (DL) (as necessary), and laboratory quantitation level (QL) (as necessary). The Permittee must also submit an electronic PDF copy of the laboratory report using WAWebDMR.

If the Permittee has obtained a waiver from electronic reporting or if submitting prior to the compliance date, the Permittee must submit a paper copy of the laboratory report providing 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 contract laboratory reports must also include information on the chain of custody, QA/QC results, and documentation of accreditation for the parameter.

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

If the Permittee has obtained a waiver, it 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. Ensure that DMR forms are postmarked or received by Ecology no later than the dates specified below, unless otherwise specified in this permit.

10. Submit DMRs for parameters with the monitoring frequencies specified in S2 (monthly, quarterly, annual, etc.) at the reporting schedule identified below. The Permittee must:
- Submit **monthly** DMRs by the 15th day of the following month.
 - Submit **quarterly DMRs**, unless otherwise specified in the permit, by the 15th day of the month following the monitoring period. Quarterly sampling periods are January through March, April through June, July through September, and October through December.
 - Submit **annual DMRs**, unless otherwise specified in the permit, by January 15 for the previous calendar year. The annual sampling period is the calendar year.
11. Submit reports to Ecology online using Ecology's electronic WAWebDMR submittal forms (electronic DMRs) as required above or send paper reports to Ecology at:

Water Quality Permit Coordinator
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

B. Records Retention

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

The Permittee must retain all records pertaining to the monitoring of sludge for a minimum of five years.

C. Recording of Results

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

1. The date, exact place and time of sampling
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

D. 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.

E. 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 30 days of sampling.

a. Immediate Reporting

The Permittee must immediately report to Ecology and the Tacoma-Pierce County Health Department (at the numbers listed below), all:

- Failures of the disinfection system.
- Collection system overflows.
- Plant bypasses resulting in a discharge.
- Any other failures of the sewage system (pipe breaks, etc).
- Overflows or leaks of transmission or irrigation pipelines that discharge to a waterbody used as a source of drinking or irrigation water.

Department of Ecology
Southwest Regional Office 360-407-6300

Tacoma-Pierce County
Health Department 253-798-6500

b. Twenty-Four-Hour Reporting

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

- i. Any noncompliance that may endanger health or the environment, unless previously reported under immediate reporting requirements.
- ii. Any unanticipated bypass that causes an exceedance of an effluent limit in the permit (See Part S5.F., “Bypass Procedures”).
- iii. Any upset that causes an exceedance of an effluent limit in the permit. 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.
- iv. Any violation of a maximum daily or instantaneous maximum discharge limit for any of the pollutants in Section S1.A of this permit.
- v. 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.

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:

- i. A description of the noncompliance and its cause.
- ii. Maps, drawings, aerial photographs, or pictures to show the location and cause(s) of the non-compliance.
- iii. The period of noncompliance, including exact dates and times.
- iv. The estimated time the Permittee expects the noncompliance to continue if not yet corrected.
- v. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
- vi. 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.A.

F. Other Reporting

1. Spills of Oil or Hazardous Materials

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

2. Failure to Submit Relevant or Correct Facts

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

G. 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. FACILITY LOADING

A. Design Criteria

Flows or wasteloadings of the following design criteria for the permitted treatment facility must not be exceeded:

Stage I Design Criteria:

Average flow for the maximum month: 0.1 mgd

BOD₅ Influent loading for maximum month: 234 lbs/day

TSS Influent loading for maximum month: 117 lbs/day

Interim Stage II Design Criteria:

Average flow for the maximum month:	0.1 mgd/Unit (up to 4 Units)
BOD ₅ Influent loading for maximum month:	200 lbs/day/Unit (up to 4 Units)
TSS Influent loading for maximum month:	200 lbs/day/Unit (up to 4 Units)
Ammonia Influent loading for maximum month:	33 lbs/day/Unit (up to 4 Units)

B. Plans for Maintaining Adequate Capacity

When the actual flow or wasteload reaches 85 percent of any one of the Interim Stage II design criteria in S4.A for three consecutive months, or when the projected increases would reach design capacity within two years, whichever occurs first, the Permittee must submit to Ecology, a plan and a schedule for continuing to maintain capacity at the facility sufficient to achieve the effluent limitations and other conditions of this permit. This plan must address any of the following actions or any others necessary to meet this objective.

1. Analysis of the present design including the introduction of any process modifications that would establish the ability of the existing facility to achieve the effluent limits and other requirements of this permit at specific levels in excess of the existing design criteria specified in paragraph A above.
2. Reduction or elimination of excessive infiltration and inflow of uncontaminated ground and surface water into the sewer system.
3. Limitation on future sewer extensions or connections or additional wasteloads.
4. Modification or expansion of facilities necessary to accommodate increased flow or wasteload.
5. Reduction of industrial or commercial flows or waste loads to allow for increasing sanitary flow or wasteload.
6. The ability of the aquifer to assimilate flows and pollutant discharges beyond 0.5 mgd, based upon a hydrogeological study of the aquifer. The permittee must submit a scope of work to Ecology prior to commencing the study.

Engineering documents associated with the plan must meet the requirements of WAC 173-240-060, "Engineering Report," and be approved by Ecology prior to any construction. The plan must specify any contracts, ordinances, methods for financing, or other arrangements necessary to achieve this objective.

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C. Wasteload Assessment

The Permittee must conduct an annual assessment of their flow and waste load and submit a report to Ecology by **June 15, 2014**, and **annually** thereafter. The report must contain the following: an indication of compliance or noncompliance with the permit effluent limitations; a comparison between the existing and design monthly average dry weather and wet weather flows, peak flows, BOD, total suspended solids, and nitrogen loadings; and (except for the first report) the percentage increase in these parameters since the last annual report. The report must also state the present and design population or population equivalent, projected population growth rate, and the estimated date upon which the design capacity is projected to be reached, according to the most restrictive of the parameters above. The interval for review and reporting may be modified if Ecology determines that a different frequency is sufficient.

D. Infiltration and Inflow Evaluation

1. The Permittee must conduct an infiltration and inflow evaluation. Refer to the U.S. EPA publication, *I/I Analysis and Project Certification*, available as Publication No. 97-03 at: Publications Office, Department of Ecology, P.O. Box 47600, Olympia, Washington 98504-7600 or at <http://www.ecy.wa.gov/programs/wq/permits/guidance.html>. The Permittee may use plant monitoring records to assess measurable infiltration and inflow.
2. The Permittee must prepare a report which summarizes any measurable infiltration and inflow. The Permittee must submit a report to Ecology due by **June 15, 2014**, and **annually** thereafter. If infiltration and inflow have increased by more than 15 percent from that found in a previous report based on equivalent rainfall, the report must contain a plan and a schedule for:
 - a. locating the sources of infiltration and inflow; and
 - b. correcting the problem.

S5. OPERATION AND MAINTENANCE

The Permittee must at all times be responsible for the proper operation and maintenance of any facilities or systems of control installed to achieve compliance with the terms and conditions of the permit.

A. Certified Operator

The Stage I plant requires an operator certified for at least a Class I plant by the state of Washington who must be in responsible charge of the operation of the wastewater treatment plant. An operator certified for at least a Class I plant must be in responsible charge and available to respond to emergencies at the plant.

The Interim Stage II plant will require an operator certified for at least a Class III plant by the state of Washington who must be in responsible charge of the day-to-day operation of the wastewater treatment plant. An operator certified for at least a Class II plant must be in charge during all regularly scheduled shifts.

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B. O & M Program

The Permittee must institute an adequate operation and maintenance program for their entire sewage system. Maintenance records must be maintained on all major electrical and mechanical components of the treatment plant, as well as the sewage system and pumping stations. Such records must clearly specify the frequency and type of maintenance recommended by the manufacturer and must show the frequency and type of maintenance performed. These maintenance records must be available for inspection at all times.

C. Short-term Reduction

If a Permittee contemplates a reduction in the level of treatment that would cause a violation of permit discharge limitations on a short-term basis for any reason, and such reduction cannot be avoided, the Permittee must give written notification to Ecology, if possible, 30 days prior to such activities, detailing the reasons for, length of time of, and the potential effects of the reduced level of treatment. This notification does not relieve the Permittee of their obligations under this permit.

D. Electrical Power Failure

The Permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated wastes or wastes not treated in accordance with the requirements of this permit during electrical power failure at the treatment plant and/or sewage lift stations either by means of alternate power sources, standby generator, or retention of inadequately treated wastes. The Permittee must maintain Reliability Class II (EPA 430-99-74-001) at the wastewater treatment plant, which requires primary sedimentation and disinfection.

E. Prevent Connection of Inflow

The Permittee must strictly enforce their sewer ordinances and not allow the connection of inflow (roof drains, foundation drains, etc.) to the sanitary sewer system.

F. Bypass Procedures

The Permittee must immediately notify Ecology of any spill, overflow, or bypass from any portion of the collection or treatment system according to S3.E.

The bypass of wastes from any portion of the collection or treatment system is prohibited unless one of the following conditions (1, 2, or 3) applies:

1. Unavoidable Bypass -- 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.

If the resulting bypass from any portion of the treatment system results in noncompliance with this permit the Permittee must notify Ecology in accordance with condition S3.E "Noncompliance Notification."

2. Anticipated Bypass That Has the Potential to Violate Permit Limits or Conditions -- Bypass is authorized by an administrative order issued by Ecology. The Permittee must notify Ecology at least 30 days before the planned date of bypass. The notice must contain a description of the bypass and its cause; the duration of the bypass, including exact dates and times; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass. Ecology will consider the following prior to issuing an administrative order:
 - a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of the permit.
 - b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.
 - c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, Ecology will approve or deny the request. The public must be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by Ecology under Revised Code of Washington (RCW) 90.48.120.

3. Bypass For Essential Maintenance Without the Potential to Cause Violation of Permit Limits or Conditions -- Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of the permit, or adversely impact public health as determined by Ecology prior to the bypass.

G. Operations and Maintenance Manual

An Operations and Maintenance (O&M) Manual for the Stage II system must be prepared by the Permittee in accordance with WAC 173-240-080 and be submitted to Ecology for approval prior to operating the system. The O&M Manual must be reviewed by the Permittee at least annually. All manual changes or updates must be submitted to Ecology whenever they are incorporated into the manual. The approved operation and maintenance manual must be kept available at the treatment plant.

The operation and maintenance manual must contain the treatment plant process control monitoring schedule. All operators must follow the instructions and procedures of this manual.

The manual must include:

1. Emergency procedures for plant shutdown and cleanup in event of wastewater system upset or failure;
2. Irrigation system operational controls and procedures;

3. Protocols and procedures for ground water monitoring network sampling and testing; and
4. Plant maintenance procedures.

S6. RESIDUAL SOLIDS

Residual solids include screenings, grit, scum, primary sludge, waste activated sludge and other solid waste. The Permittee must store and handle all residual solids in such a manner so as to prevent their entry into state ground or surface waters. The Permittee must not discharge leachate from residual solids to state surface or ground waters. The Permittee must submit a Residual Solids Management Plan prior to operating the final treatment system.

S7. PRETREATMENT

The Permittee must work cooperatively with Ecology to ensure that all commercial and industrial users of the wastewater treatment system are in compliance with pretreatment regulations.

The Permittee shall implement the Industrial Pretreatment Program in accordance with the legal authorities, policies, procedures and financial provisions described in the Permittee's approved pretreatment program submittal entitled "Industrial Pretreatment Program" and dated March 11, 1998; any approved revisions thereto; and the General Pretreatment Regulations (40 CFR Part 403). At minimum, the pretreatment implementation activities undertaken by the Permittee shall include those set forth in Sections S6.A-D of NPDES permit number WA0039624 issued to Pierce County.

A. Pretreatment Report

The Permittee shall provide to Ecology a report that briefly describes its program activities during the previous calendar year by **February 15, 2014**, and **annually** thereafter. This report may be included as part of the annual report submitted under section S6.A.5 of NPDES permit number WA0039624 issued to Pierce County.

S8. DUTY TO REAPPLY

The Permittee must apply for permit renewal by **April 1, 2018**.

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to Ecology must be signed as follows:

- A. All permit applications must be signed by either a principal executive officer or ranking elected official.
- B. 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:
 - 1. The authorization is made in writing by the person described above and is submitted to Ecology at the time of authorization, and
 - 2. The authorization specifies either a named individual or any individual occupying a named position.
- C. Changes to authorization. If an authorization under paragraph B.2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.
- D. 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 ENTRY

Representatives of Ecology must have the right to enter at all reasonable times in or upon any property, public or for the purpose of inspecting and investigating conditions relating to the pollution or the possible pollution of any waters of the state. Reasonable times must include normal business hours; hours during which production, treatment, or discharge occurs; or times when Ecology suspects a violation requiring immediate inspection. Representatives of Ecology must be allowed to have access to, and copy at reasonable cost, any records required to be kept under terms and conditions of the permit; to inspect any monitoring equipment or method required in the permit; and to sample the discharge, waste treatment processes, or internal waste streams.

G3. PERMIT ACTIONS

This permit shall be subject to modification, suspension, or termination, in whole or in part by Ecology for any of the following causes:

- 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 material change in the condition of the waters of the state; or
- E. Nonpayment of fees assessed pursuant to RCW 90.48.465.

Ecology may also modify this permit, including the schedule of compliance or other conditions, if it determines good and valid cause exists, including promulgation or revisions of regulations or new information.

G4. REPORTING A CAUSE FOR MODIFICATION

The Permittee must submit a new application at least 60 days before it wants to discharge more of any pollutant, a new pollutant, or more flow than allowed under this permit. The Permittee should use the State Waste Discharge Permit application, and submit required plans at the same time. Required plans include an Engineering Report, Plans and Specifications, and an Operations and Maintenance manual, (see Chapter 173-240 WAC). Ecology may waive these plan requirements for small changes, so contact Ecology if they do not appear necessary. The Permittee must obtain the written concurrence of the receiving POTW on the application before submitting it to Ecology. The Permittee must continue to comply with the existing permit until it is modified or reissued. Submitting a notice of dangerous waste discharge (to comply with Pretreatment or Dangerous Waste rules) triggers this requirement as well.

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 should be submitted at least 180 days prior to the planned start of construction. 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

This permit is automatically transferred to a new owner or operator if:

- A. A written agreement between the old and new owner or operator containing a specific date for transfer of permit responsibility, coverage, and liability is submitted to Ecology;
- B. A copy of the permit is provided to the new owner and;

C. Ecology does not notify the Permittee of the need to modify the permit.

Unless this permit is automatically transferred according to Section A. above, this permit may be transferred only if it is modified to identify the new Permittee and to incorporate such other requirements as determined necessary by Ecology.

G8. PAYMENT OF FEES

The Permittee must submit payment of fees associated with this permit as assessed by Ecology. Ecology may revoke this permit if the permit fees established under Chapter 173-224 WAC are not paid.

G9. PENALTIES FOR VIOLATING PERMIT CONDITIONS

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

Any person who violates the terms and conditions of a waste discharge permit incurs, in addition to any other penalty as provided by law, a civil penalty in the amount of up to \$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 considered a separate and distinct violation.

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. DUTY TO COMPLY

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of chapter 90.48 RCW and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G12. CONTRACT REVIEW

The Permittee must submit to Ecology any proposed contract for the operation of any wastewater treatment facility covered by this permit. The review is to ensure consistency with chapters 90.46 and 90.48 RCW. In the event that Ecology does not comment within a 30-day period, the Permittee may assume consistency and proceed with the contract.

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
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-NH ₃ -B and C/D/E/G/H		20
Flow	Calibrated device		
Dissolved oxygen	SM4500-OC/OG		0.2 mg/L
Temperature (max. 7-day avg.)	Analog recorder or Use micro-recording devices known as thermistors		0.2° C

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
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 CaCO ₃
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-NO ₃ - E/F/H		100
Nitrogen, Total Kjeldahl (as N)	SM4500-N _{org} B/C and SM4500NH ₃ -B/C/D/EF/G/H		300
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)	1664 A or B	1,400	5,000
Salinity	SM2520-B		3 practical salinity units or scale (PSU or PSS)
Settleable Solids	SM2540 -F		100
Sulfate (as mg/L SO ₄)	SM4110-B		200
Sulfide (as mg/L S)	SM4500-S ² F/D/E/G		200
Sulfite (as mg/L SO ₃)	SM4500-SO ₃ B		2000
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 CaCO ₃
Aluminum, Total (7429-90-5)	200.8	2.0	10
Barium Total (7440-39-3)	200.8	0.5	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
BTEX (benzene +toluene + ethylbenzene + m,o,p xylenes)	EPA SW 846 8021/8260	1	2
Boron Total (7440-42-8)	200.8	2.0	10.0
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	Ecology NWTPH Dx	250	250
NWTPH Gx	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

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
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
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
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

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL) ¹ µg/L unless specified	Quantitation Level (QL) ² µg/L unless specified
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
1,3-dichloropropene (mixed isomers) (1,2-dichloropropylene) (542-75-6) ³	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
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) ⁴	610/625	0.8	1.6
Benzo(j)fluoranthene (205-82-3)⁴	625	0.5	1.0
Benzo(k)fluoranthene	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
(11,12-benzofluoranthene) (207-08-9) ⁴			
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
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

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
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
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
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) ⁵	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 ¹⁰
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

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
Heptachlor (76-44-8)	608	0.025	0.05
Heptachlor Epoxide (1024-57-3)	608	0.025	0.05
PCB-1242 (53469-21-9) ⁶	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) ⁶	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 10ⁿ, 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. NWTPH Dx - Northwest Total Petroleum Hydrocarbons Diesel Extended Range – see <http://www.ecy.wa.gov/biblio/97602.html>
4. NWTPH Gx - Northwest Total Petroleum Hydrocarbons Gasoline Extended Range – see <http://www.ecy.wa.gov/biblio/97602.html>
5. 1, 3-dichloroproylene (mixed isomers) You may report this parameter as two separate parameters: cis-1, 3-dichloropropene (10061-01-5) and trans-1, 3-dichloropropene (10061-02-6).
6. Total Benzo(a)fluoranthenes - Because Benzo(b)fluoranthene, Benzo(j)fluoranthene and Benzo(k)fluoranthene co-elute you may report these three isomers as total benzo(a)fluoranthenes.
7. 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.

8. PCB 1016 & PCB 1242 – You may report these two PCB compounds as one parameter called PCB 1016/1242.