



Issuance Date: ?

Effective Date: ?

Expiration Date: ?

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTE DISCHARGE PERMIT WA0002491**

**State of Washington
DEPARTMENT OF ECOLOGY**

Industrial Section
PO Box 4700
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

HF Sinclair Puget Sound Refining LLC

8505 S. Texas Road

Anacortes WA 98221

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

Facility Location:
8505 S. Texas Road
Anacortes WA 98221

Industry Type: Petroleum Refinery
Treatment Type: Industrial Wastewater
Receiving Water: Fidalgo Bay and Padilla Bay
SIC Code: 2911

NAICS Code: 324110

James DeMay, P.E.
Industrial Section Manager
Solid Waste Management
Program Washington State
Department of Ecology

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM WASTE DISCHARGE PERMIT WA0002491	1
SUMMARY OF PERMIT SUBMITTALS	6
SPECIAL CONDITIONS	10
S1. Discharge limits	10
S1.A. Process wastewater discharges (Outfall 001)	10
S1.B. Ballast and Stormwater Allocations (Outfall 001)	11
S1.C. Stormwater Benchmarks, Prohibitions, and Corrective Actions	12
S1.D. Emergency Overflow (Outfall 001A)	17
S1.E. Mixing zone authorization for Outfall 001	18
S1.F. Firewater Testing	18
S2. Monitoring requirements	18
S2.A. Monitoring schedule	18
S2.B. Stormwater Monitoring Requirements	24
S2.C. Sampling and analytical procedures	27
S2.D. Flow measurement, field measurement, and continuous monitoring devices	27
S2.E. Laboratory accreditation	28
S2.F. Request for reduction in monitoring	28
S2.G. Monthly Stormwater Outfall Visual Inspection Requirements	29
S3. Reporting and recording requirements	29
S3.A. Discharge Monitoring Reports	29
S3.B. Permit submittals and schedules	31
S3.C. Records retention	31
S3.D. Recording of results	32
S3.E. Additional monitoring by the Permittee	32
S3.F. Reporting permit violations	32
S3.G. Other reporting	34
S3.H. Maintaining a copy of this permit	35
S4. Operation and maintenance	35
S4.A. Operation and Maintenance (O&M) Manual	35
S4.B. Bypass procedures	37
S5. Solid waste	39
S5.A. Solid waste handling	39
S5.B. Leachate	39
S6. Application for permit renewal or modification for facility changes	39
S7. Facility loading	39
S7.A. Design criteria	39
S7.B. Plans for Maintaining Adequate Capacity	40
S8. Compliance schedule	40
S9. Nutrient Study	41

S9.A.	Nutrient Study Plan Requirements	41
S9.B.	Nutrient Study Report Requirements	41
S10.	Non-routine and unanticipated wastewater	41
S10.A.	Notification requirements	41
S10.B.	Chemical analysis	42
S10.C.	Flow limitation	42
S10.D.	Approval requirements	42
S11.	Sediment monitoring	42
S11.A.	Sediment Sampling and Analysis Plan	42
S11.B.	Sediment data report	43
S12.	Wastewater Treatment Efficiency Study	44
S12.A.	Wastewater Treatment Efficiency Study — Sampling Locations	44
S12.B.	Wastewater Treatment Efficiency Study—Sampling Intervals and Sample Analysis	45
S12.C.	Engineering Report	47
S13.	Outfall evaluation	48
S14.	Mixing study	49
S14.A.	General requirements	49
S14.B.	Reporting requirements	49
S14.C.	Protocols	51
S15.	Groundwater Impact Study	51
S16.	Dioxin Study	52
S16.A.	Wastewater Sampling	52
S16.B.	Dioxin Study Report	53
S17.	Per-and Polyfluoroalkyl Substances (PFAS) Study	53
S17.A.	PFAS Sampling and Analysis Plan	53
S17.B.	PFAS Monitoring Data Report	54
S18.	Certified operator	54
S19.	Dangerous wastes – permit by rule requirements	54
S20.	Acute toxicity	55
S20.A.	Effluent limit for acute toxicity	55
S20.B.	Compliance with the effluent limit for acute toxicity	55
S20.C.	Compliance testing for acute toxicity	55
S20.D.	Response to noncompliance with the effluent limit for acute toxicity	56
S20.E.	Sampling and reporting requirements	57
S21.	Chronic toxicity	58
S21.A.	Effluent characterization	58
S21.B.	Sampling and reporting requirements	59
S22.	Pollution Prevention and Stormwater Evaluation	60
S22.A.	Sampling Point Study	60
S22.B.	Pollution Prevention Plan	60
S22.C.	Stormwater AKART Analysis and Engineering Report	63
S23.	Construction Stormwater	67

REFERENCES	73
GENERAL CONDITIONS	75
G1. SIGNATORY REQUIREMENTS	75
G2. RIGHT OF INSPECTION AND ENTRY	76
G3. PERMIT ACTIONS	76
G4. REPORTING PLANNED CHANGES	78
G5. PLAN REVIEW REQUIRED	78
G6. COMPLIANCE WITH OTHER LAWS AND STATUTES	78
G7. TRANSFER OF THIS PERMIT	78
G8. REDUCED PRODUCTION FOR COMPLIANCE	79
G9. REMOVED SUBSTANCES	79
G10. DUTY TO PROVIDE INFORMATION	79
G11. OTHER REQUIREMENTS OF 40 CFR	79
G12. ADDITIONAL MONITORING	79
G13. PAYMENT OF FEES	79
G14. PENALTIES FOR VIOLATION OF PERMIT CONDITIONS	79
G15. UPSET	80
G16. PROPERTY RIGHTS	80
G17. DUTY TO COMPLY	80
G18. TOXIC POLLUTANTS	80
G19. PENALTIES FOR TAMPERING	81
G20. REPORTING REQUIREMENTS APPLICABLE TO EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL DISCHARGES	81
G21. COMPLIANCE SCHEDULES	81
APPENDIX A – List of Pollutants, Analytical Methods, Detection Levels and Quantitation Levels	82
APPENDIX B - Calculating Stormwater and Ballast Water Allocations	96
APPENDIX C - Refinery NPDES Pollution Prevention Plan – General and Specific Requirements	99
APPENDIX D - Construction Stormwater Pollution Prevention Plan Requirements	110
TABLE 1 – SUMMARY OF PERMIT SUBMITTALS.....	6
TABLE 2 – EFFLUENT LIMITS: OUTFALL 001.....	10
TABLE 3 - BALLAST AND STORMWATER ALLOCATIONS: OUTFALL 001.....	12
TABLE 4 – OUTFALLS 002, 003, 006, 011, 014, 015 LOCATIONS.....	13
TABLE 5 – STORMWATER BENCHMARKS FOR OUTFALLS 002, 003, 006, 011, 014, 015.....	13

TABLE 6 – DILUTION FACTORS	18
TABLE 7 – WASTEWATER EFFLUENT AT OUTFALL 001	19
TABLE 8 – NUTRIENT MONITORING ^K AT OUTFALL 001 BEGINNING [MONTH DAY, YEAR] (6 MONTHS AFTER PERMIT EFFECTIVE DATE)	19
TABLE 9 – INTERNAL MONITORING AT INFLUENT FLOW TO THE BIOREACTOR (INBI).....	20
TABLE 10 – FEEDSTOCK RATE (PROD).....	20
TABLE 11 – BALLAST WATER FLOW (OBW)	20
TABLE 12 – RAINFALL (ORF).....	20
TABLE 13 – EMERGENCY OVERFLOW AT OUTFALL 001A	20
TABLE 14 – ANNUAL PRIORITY POLLUTANT ANALYSIS ^S , WASTEWATER EFFLUENT AT OUTFALL 001	21
TABLE 15 – ADDITIONAL MONITORING	22
TABLE 16 – MONITORING FOR OUTFALLS 002 AND 006	24
TABLE 17 – MONITORING FOR OUTFALL 003	24
TABLE 18 – MONITORING FOR OUTFALL 011, 014, AND 015.....	25
TABLE 19 – MONITORING FOR OUTFALL 004, 010, 012, 013	25
TABLE 21 - DESIGN CRITERIA	39
TABLE 22 - COMPLIANCE SCHEDULE.....	41
TABLE 23 - SAMPLING INTERVALS AND ANALYSIS	45
TABLE 24 - ACUTE TOXICITY TESTS.....	56
TABLE 25 – SALTWATER CHRONIC TOXICITY TESTS	58
TABLE 26 - OFF-SITE DISCHARGE REQUIREMENTS	71
TABLE 27 - TURBIDITY MONITORING AND SAMPLING REQUIREMENTS FOR SITES DISTURBING ≥ 1 ACRE.....	72

SUMMARY OF PERMIT SUBMITTALS

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

Table 1 – Summary of permit submittals

Permit Section	Submittal	Frequency	First submittal date
S1.C	Annual Stormwater Report	Annual	[DATE] (May 15th after first year of permit effective date)
S2.G	Monthly Stormwater Outfall Inspection Results	Quarterly	[DATE] (choose April 15, July 15, October 15, or January 15, depending on first quarter after permit effective date)
S3.A	Discharge Monitoring Report (DMR)	Monthly	[DATE] (15th of month after permit effective date)
S3.A	Discharge Monitoring Report (DMR)	Quarterly	
S3.A	Discharge Monitoring Report (DMR)	Semi-Annual	
S3.A	Discharge Monitoring Report (DMR)	Annual	
S3.A	Discharge Monitoring Report (DMR)	Single Sample	
S3.A	DMR – Emergency Overflow at Outfall 001A	Once per defined event	
S3.A	Permit renewal application monitoring data	1/permit cycle	[DATE](1 year before expiration date)
S3.A	DMR - Priority pollutant data - Single sample data	Annual	[DATE] (January 15th after first year of permit effective date)
S3.F	Reporting permit violations	As necessary	
S4	Wastewater Treatment Unit Interruption Notification	As necessary	
S4.A	Operations and Maintenance Manual	1/permit cycle	[DATE](2 years after permit effective date)
S4.A	Operations and Maintenance Manual update or review confirmation letter	As necessary	
S4.A	Treatment System Operating Plan	1/permit cycle	[DATE] (2.5 years after

Permit Section	Submittal	Frequency	First submittal date
			permit effective date)
S4.B	Reporting bypasses	As necessary	
S6	Application for permit renewal	1/permit cycle	[DATE] (1 year before expiration date)
S7.B	Plans for Maintaining Adequate Capacity	As necessary	
S8	Compliance schedule		See Table 21 - Compliance schedule
S9.A	Nutrient Study Plan	1/permit cycle	[DATE] (1 year after the permit effective date)
S9.B	Nutrient Study Report	1/permit cycle	[DATE](1 year before expiration date)
S10	Non-routine and unanticipated discharges	As necessary	
S11.A	Sediment Sampling and Analysis Plan	1/permit cycle	[DATE] (one year after permit effective date)
S11.B	Sediment Data Report	1/permit cycle	
S12	Wastewater Treatment Efficiency Study Plan	1/permit cycle	[DATE] (36 months after the permit effective date).
S12.C	Updated Engineering Report	1/permit cycle	[DATE] (48 months after the permit effective date).
S13	Outfall Evaluation	1/permit cycle	[DATE] (1.5 years past permit effective date)
S14	Effluent Mixing Plan of Study	1/permit cycle	[DATE] (2 years past permit effective date)
S14	Effluent Mixing Report	1/permit cycle	[DATE] (3 years past permit effective date)
S15	Groundwater Impact Study	Once	[DATE] (third year of permit)
S16	Dioxin Study Report	1/permit cycle	[DATE] (1 year before expiration of permit)

Permit Section	Submittal	Frequency	First submittal date
S17.A	PFAS Sampling and Analysis Plan	1/permit cycle	[DATE] (6 months after the permit effective date)
S17.B	PFAS Monitoring Data Report	Quarterly	[DATE] (1 year after the permit effective date, first quarter end date)
S20.A	Acute Toxicity: Effluent Test Results	Quarterly	[DATE] (choose April 30th, July 30th, October 30th, or January 30th, depending on first quarter after permit effective date)
S20.C	Acute Toxicity: Compliance Monitoring Report	As necessary	
S20.E	Acute toxicity: response to noncompliance reporting	As necessary	
S20.E	Acute toxicity: TI/TRE Plan	As necessary	
S21	Chronic toxicity: Effluent test results for permit renewal application	1/permit cycle	[DATE] (with the permit renewal application)
S22.A	Sampling Point Study	Once	[DATE](January 1 after 1.5 years past permit effective date).
S22.B	Pollution Prevention Plan Update	1/permit cycle	[DATE](2 years after permit effective date
S22.B	Biennial Reporting		[DATE] (within 2 years after submittal of the update Pollution Prevention Plan required in Special Condition S22.B)
S22.C	Stormwater AKART Analysis and Engineering Report	Once	[DATE] (2 years after permit effective date).
S23	Construction Stormwater Pollution Prevention Plan	1/permit cycle	[DATE] (1 year after the permit effective date).

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

SPECIAL CONDITIONS

S1. Discharge limits

S1.A. Process wastewater discharges (Outfall 001)

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

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

Beginning on the effective date of this permit, the Permittee is authorized to discharge wastewater treatment plant effluent, stormwater from construction activities¹, and uncontaminated stormwater/runoff² to the Fidalgo Bay at the permitted location subject to complying with the following limits:

Table 2 – Effluent limits: Outfall 001

Latitude: 48°30'34"N Longitude: -122°34'40"W

Parameter	Average Monthly ^a (Units)	Maximum Daily ^b (Units)
Biochemical Oxygen Demand (5-day) (BOD ₅)	739 (lbs/day)	1343 (lbs/day)
Chemical Oxygen Demand	5123 (lbs/day)	9932 (lbs/day)
Total Suspended Solids (TSS)	592 (lbs/day)	934 (lbs/day)
Oil and Grease	217 (lbs/day)	404 (lbs/day)
Phenolic Compounds	4.82 (lbs/day)	9.96 (lbs/day)
Ammonia as N	478 (lbs/day)	1051 (lbs/day)
Total Residual Chlorine	--	0.81 mg/L
Hexavalent Chromium	0.62 (lbs/day)	50 µg/L and 1.40 (lbs/day)
Total Chromium	8.19 (lbs/day)	20.13 (lbs/day)
Sulfide	3.93 (lbs/day)	8.76 (lbs/day)

Parameter	Minimum (Units)	Maximum (Units)
pH ^c	6.0 (Standard Units, SU)	9.0 (Standard Units, SU)

Parameter	Limit
Oil and Grease	The concentration of oil and grease in the discharge must at no time exceed 15 mg/L and must not exceed 10 mg/L more than three days per month.

¹ Construction stormwater must meet the requirements in Special Condition S23.

² Contaminated runoff is defined as "runoff which comes into contact with any raw material, intermediate product, finished product, by-product or waste product located on petroleum refinery property" in 40 CFR Part 419.11(<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-N/part-419/subpart-A/section-419.11>)

Parameter	Monthly Geometric Mean (Units)	Weekly Geometric Mean (Units)
Fecal Coliform Bacteria ^d	200/100 (#/mL)	400/100 (#/mL)

Whole Effluent Toxicity limits
The effluent limit for acute whole effluent toxicity is: No acute toxicity detected in a test concentration representing the acute critical effluent concentration (ACEC). The ACEC means the maximum concentration of effluent during critical conditions at the boundary of the acute mixing zone, defined in Special Condition S1.E of this permit. The ACEC equals 1.6 percent effluent. See Special Condition S20 for more information.

Footnotes:

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

^b Maximum daily effluent limit is the highest allowable daily discharge. The daily discharge is the average discharge of a pollutant measured during a calendar day. For pollutants with limits expressed in units of mass, calculate the daily discharge as the total mass of the pollutant discharged over the 24-hour pump out window for the day. The average daily measurement does not apply to pH or temperature.

^c When pH is continuously monitored, excursions between 5.0 and 6.0, or 9.0 and 10.0 are not 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. If pH data from the continuous monitor is unavailable, pH monitoring must consist of hourly grab samples or other methods approved by Ecology.

^d Ecology provides directions to calculate the monthly and the 7-day geometric mean in the *Information Manual for Treatment Plant Operators* (Ecology, 2004).

S1.B. Ballast and Stormwater Allocations (Outfall 001)

During the period beginning on the effective date of this permit, the Permittee is authorized to discharge additional amounts of the following parameters based on stormwater and ballast water flow through Outfall 001.

The Permittee must determine ballast water volume by gauging the ballast water storage tanks. Report the cumulative monthly ballast water volume with the DMR if the ballast allocation is not used. If the ballast water allocation is used, then the Permittee must submit with the DMR a report showing the daily volume of ballast water released to the wastewater system for treatment.

The Permittee must determine the stormwater flow rate as the difference between total measured effluent flow rate through Outfall 001 and the sum of the ballast water plus the average dry weather flow rate. The average dry weather flow is hereby established as 4.45 MGD. The Permittee may only use the maximum daily storm

water allocation on those stormwater flow days when the base limits from S1 above are exceeded. During the summer months of June through October the Permittee may only claim the stormwater allocation for the maximum daily value when it can demonstrate that measurable rainfall has occurred at the refinery site during the previous 10 calendar days. If rainfall data on-site is unavailable due to equipment malfunction, data from nearby rainfall gauging stations can be used. Report the stormwater allocation for each day it is used for the parameters below.

Table 3 - Ballast and Stormwater Allocations: Outfall 001

Latitude: 48°30'34"N Longitude: -122°34'40"W

Parameter	Ballast Water Average Monthly (lbs/million gallons) ^a	Ballast Water Maximum Daily (lbs/million gallons) ^b	Stormwater Average Monthly (lbs/million gallons) ^a	Stormwater Maximum Daily (lbs/million gallons) ^b
BOD ₅	210	400	220	400
COD	2000	3900	1500	3000
TSS	170	260	180	280
Oil and Grease	67	126	67	130
Phenolic Compounds	-	-	1.4	2.9
Total Chromium	-	-	3.5	6.0

Footnotes:

^a Average monthly effluent limit means the highest allowable average of daily discharges over a calendar month. To calculate the discharge value to compare to the limit, 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.

S1.C. Stormwater Benchmarks, Prohibitions, and Corrective Actions

Authorized Stormwater and General Prohibitions

Beginning on the effective date of this permit, the Permittee is authorized to discharge stormwater from Outfalls 002, 003, 004, 006, and 010-015 to waters of the state at the locations listed in Table 4 below. All discharges and activities authorized by this permit must be consistent with the terms and conditions of this permit.

Table 4 – Outfalls 002, 003, 006, 011, 014, 015 Locations

Stormwater Outfalls	Latitude	Longitude
Outfall 002	48° 28' 01"	-122° 32' 17"
Outfall 003	48° 28' 22"	-122° 32' 31"
Outfall 004	48° 28' 42"	-122° 34' 23"
Outfall 006	48° 28' 09"	-122° 32' 24"
Outfall 010	48° 28' 00"	-122° 34' 15"
Outfall 011	48° 28' 06"	-122° 34' 15"
Outfall 012	48° 28' 08"	-122° 34' 15"
Outfall 013	48° 28' 14"	-122° 34' 16"
Outfall 014	48° 28' 18"	-122° 34' 16"
Outfall 015	48° 28' 37"	-122° 34' 22"

The permittee must manage all stormwater discharges to prevent the discharge of crude, synthetic, or processed oil, or oil containing products as identified by an oil sheen.

Benchmark Requirements

Benchmark values are not effluent limitations. Discharges that fail to meet benchmark values are not automatically considered permit violations or violations of water quality standards; however, if the Permittee fails to meet benchmarks that trigger corrective actions and does not comply with the specific corrective action requirements in Special Condition S1.C it would be a permit violation.

Table 5 – Stormwater Benchmarks for Outfalls 002, 003, 006, 011, 014, 015

Benchmark Parameter	Benchmark Value (units)
TSS	30 (mg/L)
Turbidity	25 (NTU)
Oil and Grease	15 (mg/L)

Benchmark Parameter	Benchmark Value (units)
Total Zinc	117 (µg/L)
Total Copper	14 (µg/L)
pH	6-9 (SU)

Corrective Action Requirements for Benchmark Exceedances

Each time a sampling result (or average of sample results if more than one sample in the quarter) is above the benchmark value or visible sheen is observed in a discharge, the Permittee must take the corrective action specified below. Corrective actions must be included in the DMR that includes the benchmark exceedance(s). The Permittee must submit an Annual Stormwater Report summarizing corrective actions taken in accordance with Special Condition S1.C.

1. Level 1 Corrective Actions – Operational Source Control BMPs

If the Permittee exceeds any applicable benchmark in Table 5 for any monitoring period during the calendar year, the Permittee shall complete a Level 1 Corrective Action in accordance with the following:

- a. Conduct an inspection to investigate the cause within three (3) days of receipt of sampling results or observation for each parameter exceeded.
- b. Review the Pollution Prevention Plan and ensure that it fully complies with Special Condition S22.B and contains the correct BMPs within fourteen (14) days of receipt of sampling results or observation for each parameter exceeded.
- c. Make appropriate revisions to the Pollution Prevention Plan to include additional Operational Source Control BMPs with the goal of achieving the applicable benchmark value(s) in future discharges within fourteen (14) days of receipt of sampling results or observation for each parameter exceeded.
- d. Summarize the Level 1 Corrective Actions in the Annual Stormwater Report.
- e. Level 1 Deadline: The Permittee must fully implement the revised Pollution Prevention Plan according to Special Condition S22.B as soon as possible, but no later than the discharge monitoring report due date (Special Condition S3) for the subsequent monitoring period.

2. Level 2 Corrective Actions – Structural Source Control BMPs

If the Permittee exceeds any applicable benchmark in Table 5 (for a single parameter) for any two quarters during a calendar year, the Permittee shall complete a Level 2 Corrective Action as described below. Alternatively, the Permittee may skip Level 2 and complete a Level 3 Corrective Action.

- a. Review the Pollution Prevention Plan and ensure that it fully complies with Special Condition S22.B.
- b. Make appropriate revisions to the Pollution Prevention Plan to include additional Structural Source Control BMPs with the goal of achieving the applicable benchmark value(s) in future discharges.
- c. Summarize the Level 2 Corrective Actions in the Annual Stormwater Report.
- d. Level 2 Deadline: The Permittee shall fully implement the revised Pollution Prevention Plan according to Special Condition S22.B as soon as possible, but no later than August 31st of the following year.
 - (i) If installation of necessary Structural Source Control BMPs is not feasible by August 31st of the following year, Ecology may approve additional time.
 - (ii) If installation of Structural Source Control BMPs is not feasible or not necessary to prevent discharges that may cause or contribute to a violation of a water quality standard, Ecology may waive the requirement.
 - (iii) While a time extension is in effect, benchmark exceedances for the same parameter do not count towards additional Level 2 or 3 Corrective Actions.
 - (iv) During the period between triggering a Level 2 Corrective Action and the corresponding Level 2 corrective action implementation due date, benchmark exceedances for the same parameter do not count towards additional Level 2 or 3 Corrective Actions.

3. Level Three Corrective Actions – Treatment BMPs

If the Permittee exceeds any applicable benchmark in Table 5 (for a single parameter) for any three quarters during a calendar year, the Permittee shall complete a Level 3 Corrective Action in accordance with the following:

- a. Review the Pollution Prevention Plan and ensure that it fully complies with Special Condition S22.B.
- b. Make appropriate revisions to the Pollution Prevention Plan to include additional Treatment BMPs with the goal of achieving the applicable benchmark value(s) in future discharges. Revisions shall include additional operational and/or structural source control BMPs if necessary for proper performance and maintenance of Treatment BMPs.
- c. Before installing treatment BMPs that require the site-specific design or sizing of structures, equipment, or processes to collect, convey, treat,

reclaim, or dispose of industrial stormwater, the Permittee must submit an engineering report and plans and specifications to Ecology for review and approval as per General Condition G5. The engineering report and plans and specifications must be submitted no later than the June 30th prior to the Level 3 deadline, unless an alternate due date is specified in an order. The engineering report must include:

- (i) Brief summary of the treatment alternatives considered and why the proposed option was selected. Include cost estimates of ongoing operation and maintenance, including disposal of any spent media;
 - (ii) The basic design data, including characterization of stormwater influent, and sizing calculations of the treatment units;
 - (iii) A description of the treatment process and operation, including a flow diagram;
 - (iv) The amount and kind of chemicals used in the treatment process, if any;
 - (v) Results to be expected from the treatment process including the predicted stormwater discharge characteristics;
 - (vi) A statement, expressing sound engineering justification using pilot plant data, results from similar installations, and/or scientific evidence that the proposed treatment is reasonably expected to meet the permit benchmarks; and
 - (vii) Certification by a licensed professional engineer.
- d. An updated Operation and Maintenance Manual must be submitted to Ecology no later than 30 days after construction/installation is complete; unless an alternative due date is specified in an order.
 - e. Summarize the Level 3 Corrective Actions (planned or taken) in the Annual Stormwater Report. Include information on how monitoring, assessment, or evaluation information was (or will be) used to determine whether existing treatment BMPs will be modified/enhanced, or if new/additional treatment BMPs will be installed.
 - f. Level 3 Deadline: The Permittee must fully implement the revised Pollution Prevention Plan according to Special Condition S22.B as soon as possible, but no later than the deadline included in the submitted engineering report and plans and specifications.
 - (i) If installation of necessary treatment BMPs is not feasible by the Level 3 Deadline; Ecology may approve additional time.

- (ii) If installation of treatment BMPs is not feasible or not necessary to prevent discharges that may cause or contribute to violation of a water quality standard, Ecology may waive the requirement.
- (iii) While a time extension is in effect, benchmark exceedances for the same parameter do not count towards additional Level 2 or 3 Corrective Actions.
- (iv) During the period between triggering a Level 3 Corrective Action and the corresponding Level 3 corrective action implementation due date, benchmark exceedances for the same parameter do not count towards additional Level 2 or 3 Corrective Actions.

4. Annual Stormwater Report

The Permittee must submit an Annual Stormwater Report for Outfalls 002, 003, and 006 no later than May 15th of each year which summarizes the benchmark exceedances and corrective actions taken for the previous year. The Annual Stormwater Report must:

- a. List all benchmark exceedances.
- b. Include corrective action documentation as required in Special Condition S2.B. If corrective action is not yet completed at the time of submission of the Annual Stormwater Report, the Permittee must describe the status of any outstanding corrective action(s).
- c. Identify the condition triggering the need for corrective action review.
- d. Describe the problem(s) and identify the dates they were discovered.
- e. Summarize any Level 1, 2 or 3 corrective actions completed during the previous calendar year and include the dates it completed the corrective actions.
- f. Describe the status of any Level 2 or 3 corrective actions triggered during the previous calendar year and identify the date it expects to complete corrective actions.

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

S1.D. Emergency Overflow (Outfall 001A)

Beginning on the effective date of this permit, the Permittee is authorized to discharge treated wastewater from Outfall 001A during extreme rainfall events when the capacity of the retention pond is exceeded. The treated wastewater must be monitored for the parameters at the frequencies listed in Section S2.A.

The Permittee must notify Ecology of any discharges under this subsection within 24 hours of such an event and submit the results of monitoring in the monthly discharge

monitoring report. Outside of normal working hours, voice mail notification of the Industrial Section responsible engineer shall meet the requirement.

The discharge shall not violate Chapter 173-201A WAC Water Quality Standards for Surface Waters of the State of Washington. The sum total of the monitoring results for discharges from Outfall 001 and 001A for any given day or month shall not violate the effluent limits specified in Section S1.A above.

S1.E. Mixing zone authorization for Outfall 001

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

Chronic mixing zone

The mixing zone is a circle with radius of 240 feet (73 meters) measured from the center of each discharge port. The mixing zone extends from the bottom to the top of the water column. The concentration of pollutants at the edge of the chronic zone must meet Chronic Aquatic Life Criteria and Human Health Criteria.

Acute mixing zone

The acute mixing zone is a circle with radius of 24 feet (7.3 meters) measured from the center of each discharge port. The mixing zone extends from the bottom to the top of the water column. The concentration of pollutants at the edge of the acute zone must meet Acute Aquatic Life Criteria.

Table 6 – Dilution factors

Criteria	Dilution factor
Acute Aquatic Life Criteria	62
Chronic Aquatic Life Criteria	127
Human Health Criteria - Carcinogen	152
Human Health Criteria - Non-carcinogen	127

S1.F. Firewater Testing

The Permittee is authorized to discharge treated effluent via the dockside firewater system during the testing of the fire suppression system, and Emergency Response Team (ERT) training. The Permittee must not use foam during firewater testing or ERT training. The Permittee must report any firewater testing in the monthly discharge monitoring report. The permittee must report the incident's duration and an estimated flow volume.

S2. Monitoring requirements

S2.A. Monitoring schedule

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

Table 7 – Wastewater Effluent at Outfall 001

Parameter	Units & speciation	Minimum sampling frequency ^a	Sample type ^{b,c,d}
Final Effluent Flow ^e	MGD	Continuous	Metered/Recorded
pH ^{f,g}	Standard units	Continuous	Metered/Recorded
BOD ₅ ^h	mg/L and lbs/day	Once per week	24 hour composite and calculated
COD	mg/L and lbs/day	Three times per week	24 hour composite and calculated
TSS	mg/L and lbs/day	Once per day	24 hour composite and calculated
Oil and Grease	mg/L and lbs/day	Once per day	Grab and calculated
Phenolic Compounds	mg/L and lbs/day	Once per week	24 hour composite and calculated
Ammonia as N	mg/L and lbs/day	Three times per week	24 hour composite and calculated
Sulfide	mg/L and lbs/day	Once per week	Grab and calculated
Total Chromium	mg/L and lbs/day	Semi-annually	Grab and calculated
Hexavalent Chromium	mg/L and lbs/day	Semi-annually	Grab and calculated
Fecal Coliform ⁱ	#/100 mL	Once per week	Grab
Enterococci	#/100 mL or MPN/mL	Once per week	Grab
Total Residual Chlorine	µg/L	Once per day	Grab
Temperature ^j	°C	Continuous	Metered/Recorded

Table 8 – Nutrient Monitoring ^k at Outfall 001 beginning [Month day, Year] (6 months after permit effective date)

Parameter	Units & speciation	Minimum sampling frequency ^a	Sample type ^b
Particulate Organic Carbon	mg/L	Monthly	24 hour composite
Total Organic Carbon	mg/L	Monthly	24 hour composite
Dissolved Organic Carbon	mg/L	Monthly	24 hour composite
Ammonia as Nitrogen	mg/L	Monthly	24 hour composite
Nitrate as Nitrogen	mg/L	Monthly	24 hour composite
Nitrite as Nitrogen	mg/L	Monthly	24 hour composite
Total Kjeldahl Nitrogen (filtered and unfiltered)	mg/L	Monthly	24 hour composite
Total Phosphorus (filtered and unfiltered)	mg/L	Monthly	24 hour composite

Parameter	Units & speciation	Minimum sampling frequency ^a	Sample type ^b
Soluble Reactive Phosphorus	mg/L	Monthly	24 hour composite
Carbonaceous Biochemical Oxygen Demand (5-day)	mg/L	Monthly	24 hour composite
Alkalinity	mg/L	Monthly	24 hour composite

Table 9 – Internal Monitoring at Influent flow to the Bioreactor (INBI)

Parameter	Units & speciation	Minimum sampling frequency ^a	Sample type ^{b,c}
BOD ₅ ^m	mg/L and lb/day	Monthly	Grab and calculated
Peak Instantaneous Flow through the Wastewater Treatment Plant ^{l,o}	MGD	Continuous	Metered/Recorded
Daily Total Flow through the Wastewater Treatment Plant ^{l,o}	MGD	Continuous	Metered/Recorded

Table 10 – Feedstock Rate (PROD)

Parameter	Units & speciation	Minimum sampling frequency ^a	Sample type ^b
Feedstock rate ^{l,n}	Barrels/day	Daily	Calculated

Table 11 – Ballast Water Flow (OBW)

Parameter	Units & speciation	Minimum sampling frequency ^a	Sample type ^b
Ballast Water Flow ^l	MGD	Continuous	Calculated

Table 12 – Rainfall (ORF)

Parameter	Units & speciation	Minimum sampling frequency ^a	Sample type ^b
Rainfall ^l	Inch/day	Daily	Measurement

Table 13 – Emergency Overflow at Outfall 001A

Parameter	Units & speciation	Minimum sampling frequency ^a	Sample type ^{c, p}
Flow measurements	MGD	Once/event	Calculated
pH	Standard units	Once/event	Grab
Total Suspended Solids	mg/L	Once/event	Composite
BOD ₅	mg/L	Once/event	Composite
Chemical Oxygen Demand	mg/L	Once/event	Composite

Parameter	Units & speciation	Minimum sampling frequency ^a	Sample type ^{c, p}
Oil and Grease	mg/L	Once/event	Grab
Phenolic Compounds	mg/L	Once/event	Grab
Total Chromium	µg/L	Once/event	Composite
Hexavalent Chromium	µg/L	Once/event	Composite
Total Residual Chlorine	µg/L	Once/event	Grab
Cyanide	µg/L	Once/event	Grab
Priority Pollutants (PP) – Total Metals ^q	µg/L; ng/L for Mercury	Once/event	Composite, Grab for Mercury
PP – Volatile Organic Compounds ^t	µg/L	Once/event	Grab
PP – Acid-extractable Compounds ^u	µg/L	Once/event	Composite
PP – Base-neutral Compounds ^v	µg/L	Once/event	Composite
PP – Dioxin ^x	pg/L	Once/event	Composite
PP – Pesticides/PCBs ^r	µg/L	Once/event	Composite

Table 14 – Annual Priority Pollutant Analysis ^s, Wastewater Effluent at Outfall 001

Parameter	Units	Minimum sampling frequency ^a	Sample type ^{b,c}
Cyanide	µg/L	Annually	Grab
Total Phenolic Compounds	µg/L	Annually	Grab
Chromium (hex), dissolved	µg/L	Annually	24-Hour Composite
Priority Pollutants (PP) – Total Metals ^q	µg/L; ng/L for Mercury	Annually	24-Hour composite, Grab for Mercury
PP – Volatile Organic Compounds ^t	µg/L	Annually	Grab
PP – Acid-extractable Compounds ^u	µg/L	Annually	24-Hour composite
PP – Base-neutral Compounds ^v	µg/L	Annually	24-Hour composite
PP – Dioxin ^x	pg/L	Annually	24-Hour composite
PP – Pesticides/PCBs ^r	µg/L	Annually	24-Hour composite

Table 15 – Additional monitoring

Monitoring type	Description
Sediment Study	As specified in special condition S11.
Wastewater Treatment Efficiency Study	As specified in special condition S12.
Mixing Zone Study	As specified in special condition S14.
Groundwater Impact Study	As specified in special condition S15.
Construction Stormwater	As specified in special condition S22.C.
Dioxin Monitoring	As specified in special condition S16.
Per- and Polyfluoroalkyl Substances Study	As specified in special condition S17.
Acute Whole Effluent Toxicity Testing	As specified in special condition S20.
Chronic Whole Effluent Toxicity Testing	As specified in special condition S21.

Footnotes:

^a Sampling frequencies are defined as follows:

Continuous means uninterrupted except for brief lengths of time for calibration, power failure, or unanticipated equipment repair or maintenance. The time interval for the associated data logger must be no greater than 30 minutes. With the exception of pH, sample every four hours when continuous monitoring is not possible. If pH data from the continuous monitor is unavailable, pH monitoring must consist of hourly grab samples or other methods approved by Ecology.

1/Week means once per week (weekly).

3/week means three (3) times during each calendar week and on a rotational basis throughout the days of the week, except weekends and holidays.

1/Day means once per day (daily).

Monthly means once per calendar month.

Semi-annually means twice per calendar year, every six months.

Annually means once per calendar year.

Once/event means one sample per overflow event.

Quarterly sampling periods are January through March, April through June, July through September, and October through December.

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

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

^d 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.

^e Final effluent means wastewater exiting, or that has exited, the last treatment process or operation. Typically, this is after or at the exit from the chlorine contact chamber or other disinfection process.

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

^g 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; and the monthly instantaneous maximum and minimum pH. If multiple excursions occur during the day, note the duration for each excursion in the notation field in the parameter notes.

^h Take effluent samples for the BOD5 analysis before or after the disinfection process. If taken after, dechlorinate and reseed the sample.

ⁱ Report a numeric value for fecal coliforms following the procedures in the Information Manual for Wastewater Treatment Plant Operators, Publication 04-10-020 (Ecology, 2004). Do not report a result as Too Numerous To Count (TNTC).

^j Temperature monitoring will begin one minute after the start of discharge. Once the compliance schedule referenced in Special Condition S8 is implemented, temperature monitoring will begin the moment discharge begins.

^k The Permittee must monitor for nutrients at Outfall 001 during the first full three years of the permit cycle starting [DATE](6 months after permit effective date). The weekly ammonia as nitrogen monitoring from Wastewater Effluent at Outfall 001 counts toward the monthly ammonia as nitrogen monitoring from Nutrient Monitoring at Outfall 001. The Permittee is not required to sample additional ammonia as nitrogen monitoring for the Nutrient Monitoring at Outfall 001.

^l These parameters must be reported in the monthly discharge monitoring report.

^m As measured at the influent to the bioreactor.

ⁿ Feedstock is defined as the crude oil and natural gas liquids fed to the topping units.

^o As measured at the effluent from the primary treatment system (API/DAFs).

^p Composite means samples collected with a composite sampler or at least one sample collected every hour of discharge into a single container and analyzed as one sample.

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

^r As specified in Appendix A Table 8 – Pesticides and PCBs. Pesticides and polychlorinated biphenyls (PCBs) are required only if the Permittee uses pesticides and PCBs onsite.

^s Annual priority pollutants at Outfall 001 must be monitored during February-June and submit the data by January 15th of each year.

^t As specified in Appendix A Table 5 – Priority Pollutants: Volatile Compounds.

^u As specified in Appendix A Table 4 – Priority Pollutants: Acid Compounds.

^v As specified in Appendix A Table 6 – Priority Pollutants: Base/Neutral Compounds.

^x As specified in Appendix A Table 9 – Nonconventionals – Dioxin & Furan Congeners.

S2.B. Stormwater Monitoring Requirements

The monitoring requirements listed in Table 16 through Table 19 below include parameters with benchmark values listed in S1.C and other parameters with no benchmark values.

Table 16 – Monitoring for Outfalls 002 and 006

Monitoring Type	Monitoring Frequency^{a,b,c}	Sample Type
Turbidity	Quarterly	Grab
Oil and Grease	Quarterly	Grab
Total Zinc	Quarterly	Grab
Total Copper	Monthly	Grab
Hardness	Quarterly	Grab
pH	Quarterly	Grab
Fecal Coliform	Quarterly	Grab
Enterococci	Quarterly	Grab
Priority Pollutants (PP) – Total Metals ^e	Annually	Grab

Table 17 – Monitoring for Outfall 003

Monitoring Type	Monitoring Frequency^{a,b,c}	Sample Type
Turbidity	Quarterly	Grab
Oil and Grease	Quarterly	Grab
Total Zinc	Monthly	Grab
Total Copper	Monthly	Grab

Monitoring Type	Monitoring Frequency ^{a,b,c}	Sample Type
Hardness	Quarterly	Grab
pH	Quarterly	Grab
Fecal Coliform	Quarterly	Grab
Enterococci	Quarterly	Grab
Priority Pollutants (PP) – Total Metals ^e	Annually	Grab

Table 18 – Monitoring for Outfall 011, 014, and 015

Monitoring Type	Monitoring Frequency ^{a,b,c}	Sample Type
Turbidity	Annually	Grab
Oil and Grease	Annually	Grab
Total Zinc	Annually	Grab
Total Copper	Annually	Grab
Hardness	Annually	Grab
pH	Annually	Grab
Priority Pollutants (PP) – Total Metals ^e	1/Permit Cycle	Grab

Table 19 – Monitoring for Outfall 004, 010, 012, 013

Monitoring Type	Monitoring Frequency ^{a,d,e,f}	Sample Type
Turbidity	1/Permit Cycle	Grab
Oil and Grease	1/Permit Cycle	Grab
Total Zinc	1/Permit Cycle	Grab
Total Copper	1/Permit Cycle	Grab
Hardness	1/Permit Cycle	Grab
pH	1/Permit Cycle	Grab
Priority Pollutants (PP) – Total Metals ^e	1/Permit Cycle	Grab

Footnotes:

^a Visually monitor the discharge at the time of sample collection. Visual monitoring must include observations of the presence of floating materials, visible sheen, discoloration, turbidity, odor, etc. in the stormwater discharge.

^b The Permittee may petition Ecology to reduce or suspend monitoring for one or more of these parameters upon consistent attainment of benchmark values. Consistent attainment is defined as eight consecutive quarters where the reported values are equal to or less than benchmark values.

^c Quarters are defined as:

First Quarter - January, February, and March

Second Quarter - April, May, and June

Third Quarter – July, August, September

Fourth Quarter - October, November, and December

^d Collect samples that are representative of the flow and characteristics of the discharge.

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

^f Submit evaluations, monitoring results, and visual monitoring observations with the permit renewal application by **[DATE](1 year before expiration of the permit).**

If there is no discharge during an entire quarter, the Permittee must submit a DMR to Ecology stating that no discharge occurred. The permittee must sample the stormwater discharges from Outfalls 002, 003, and 006 during the first fall storm event each year. "First fall storm event" means the first time after October 1st of each year that precipitation occurs and results in a stormwater discharge from a facility.

The Permittee must collect samples within the first 12 hours of stormwater discharge events. If it is not possible to collect a sample within the first 12 hours of a stormwater discharge event, the Permittee must collect the sample as soon as practicable after the first 12 hours and keep documentation with the sampling records explaining why they could not collect samples within the first 12 hours.

The Permittee is not required to sample outside of regular environmental staff business hours (Monday - Friday from 8:00am - 5:00pm), during unsafe conditions, or during quarters where there is no discharge.

For each stormwater sample taken, the Permittee must record the following information and retain it on-site for Ecology review for each stormwater sample taken.

- Sample date
- Sample time

- A notation describing if the Permittee collected the sample within the first 12 hours of stormwater discharge events
- An explanation of why it could not collect a sample within the first 12 hours of a stormwater discharge event, if it was not possible
- Sample location (using SWPPP identifying number)
- Method of sampling, and method of sample preservation, if applicable
- Individual who performed the sampling

If no stormwater sample was sampled from the site during a given reporting period, the Permittee must submit the report indicating "no sample sampled", or "no discharge during the quarter", as applicable.

S2.C. 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. Grab samples taken to meet the requirements of this permit must be collected at the time of discharge.

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

S2.D. Flow measurement, field measurement, and continuous monitoring devices

The Permittee will install a temperature meter capable of continuous measurement in degrees Celsius at the end of the discharge line (see Special Condition S7).

For all flow measurement, field measurement, and continuous monitoring devices, the Permittee must:

1. Select and use appropriate flow measurement, field measurement, and continuous monitoring devices and methods consistent with accepted scientific practices.
2. Install, calibrate, and maintain the devices to ensure the accuracy of the measurements is consistent with the accepted industry standard, the manufacturer's recommendation, and approved Operation and Maintenance (O&M) Manual procedures for the device and the waste stream.

3. Calibrate continuous monitoring instruments weekly unless it can demonstrate a longer period is sufficient based on monitoring reports. The Permittee:
 - a. May calibrate apparatus for continuous monitoring of Dissolved Oxygen by air calibration.
 - b. Must calibrate continuous pH measurement instruments according to the manufacturer's requirements.
 - 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 *Standard Operating Procedure EAP080, Version 2.2, Continuous Temperature Monitoring of Freshwater Rivers and Streams* (Ecology, 2022). Calibration as specified in this document is not required if the Permittee uses recording devices certified by the manufacturer.
5. Use field measurement devices as directed by the manufacturer and do not use reagents beyond their expiration dates.
6. Establish a calibration frequency for each device or instrument in the O&M Manual that conforms to the frequency recommended by the manufacturer.
7. Calibrate flow monitoring devices at a minimum frequency of at least one calibration per year.
8. Maintain calibration records for at least three years.

S2.E. Laboratory accreditation

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

S2.F. Request for reduction in monitoring

The Permittee may request a reduction of the sampling frequency after 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, and
3. Clearly state the justification for the reduction.

S2.G. Monthly Stormwater Outfall Visual Inspection Requirements

The Permittee must conduct and document visual inspections of Outfalls 002, 003, and 006 each month. The inspections must be conducted by qualified personnel.

Each inspection must include visual observations made at the stormwater sampling locations and areas where the stormwater is discharged off-site. The inspection must include observations for the presence of floating materials, visible sheen, discoloration, turbidity, odor, or presence of illicit discharges. The inspection must include an assessment of all BMPs that have been implemented. The effectiveness of the BMPs, and whether any maintenance or changes in BMPs are needed.

If an illicit discharge is discovered, the Permittee must notify Ecology within 7 days. The Permittee must eliminate the illicit discharge within 30 days.

The Permittee must record the results of each inspection including:

- Time and date of the inspection.
- Locations inspected.
- Any observations of non-compliance and the remedial actions the Permittee plans to take.
- Name, title, and signature of the person conducting the inspection.

The Permittee must submit the results of monthly visual inspections to Ecology with the quarterly DMR.

S3. Reporting and recording requirements

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

S3.A. Discharge Monitoring Reports

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

1. Summarize, report, and submit monitoring data obtained during each monitoring period on the electronic Discharge Monitoring Report (DMR) form provided by Ecology within the [Water Quality Permitting Portal](https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance/WQWebPortal-guidance)³. 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.
2. Submit DMRs no later than the dates specified below, unless otherwise specified in this permit.

³ <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance/WQWebPortal-guidance>

3. Submit DMRs for parameters with the monitoring frequencies specified in S2 (monthly, quarterly, annual, etc.) at the reporting schedule identified below. The Permittee must:
 - a. Submit **monthly** DMRs by the 15th day of the following month.
 - b. Submit **quarterly** DMRs, unless otherwise specified in the permit, by the 15th day of the month following the monitoring period. Quarterly sampling periods are January through March, April through June, July through September, and October through December. The Permittee must submit the first quarterly DMR by [DATE](15th of the month after permit effective date) for the quarter beginning on [DATE](1st of the month of quarter containing permit effective date).
 - c. Submit **annual** DMRs, unless otherwise specified in the permit, by January 15th for the previous calendar year. The annual sampling period is a calendar year, starting [DATE](April 1 of the year of the permit effective date).
 - d. Submit **semiannual** DMRs, unless otherwise specified in the permit, by July 15th and January 15th of each year. Semiannual sampling periods are January through June, and July through December, starting [DATE](January 1 or July 1 of the year of the permit effective date, whichever comes first).
 - e. Submit **permit renewal application monitoring data** in WQWebDMR, as required in Special Condition S2, by [DATE](1 year before permit expiration date).
4. Enter the "No Discharge" reporting code for an entire DMR, for a specific monitoring point, or a specific parameter as appropriate, if the Permittee did not discharge wastewater or a specific pollutant during a given monitoring period.
5. Report single analytical values below detection as "less than the Detection Level (DL)" by entering the < followed by the numeric value of the detection level (e.g. < 2.0) on the DMR. If the method used did not meet the minimum DL and Quantitation Level (QL) identified in the permit report the actual QL and DL in the comments or in the location provided.
6. Report single analytical values between the DL and the QL by entering the estimated value, the code for estimated value/below quantitation limit (J) and any additional information in the comments.
7. Submit a copy of the laboratory report as an attachment using WQWebDMR.
8. Submit bacteria monitoring results as follows:
 - a. Do Not report zero for bacterial monitoring. Report as required by the laboratory method.
 - b. Calculate and report an arithmetic average value for each day for bacteria if multiple samples were taken in one day.
 - c. Calculate the geometric mean values for bacteria (unless otherwise specified in the permit) using the reported numeric value for all bacteria

samples measured above the detection value except when it took multiple samples in one day. If multiple samples are taken in one day, use the arithmetic average for the day in the geometric mean calculation. Use the detection value for those samples measured below detection.

9. 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 Special Condition S2.
10. Calculate average values and calculated total values (unless otherwise specified in the permit) using:
 - a. The reported numeric value for all parameters measured between the detection value and the quantitation value for the sample analysis.
 - b. One-half (1/2) the detection value (for values reported below detection) if the lab detected the parameter in another sample from the same monitoring point for the reporting period.
 - c. Zero (for values reported below detection) if the lab did not detect the parameter in another sample for reporting period.
11. Report single-sample grouped parameters (for example: priority pollutants, PAHs, pulp and paper chlorophenolics, TTOs) on the WQWebDMR form and include: sample date, concentration detection, DL (as necessary), and laboratory QL (as necessary).

S3.B. Permit submittals and schedules

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

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

Water Quality Permit Coordinator
Department of Ecology

Industrial Section
PO Box 47706
Olympia, WA 98504-7600

S3.C. Records retention

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

S3.D. Recording of results

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

1. The date, exact place, method, and time of sampling or measurement;
2. The individual who performed the sampling or measurement;
3. The 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. The Permittee must make reasonable attempts to collect a sample of any unusual discharge or discharge condition including prohibited bypasses, upsets, and maintenance-related conditions affecting effluent quality. The sample must be representative of the volume and nature of the uncharacteristic discharge. The additional monitoring results must be reported on the monthly DMR or follow-up report, along with a note of explanation.
3. Immediate reporting.

The Permittee must **immediately** report to Ecology and the local health jurisdiction at the numbers listed below, all:

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

Northwest Region Office	206-594-0000
Ecology Industrial Section Permit Manager (phone or email)	
Skagit County Public Health	360-416-1500

“Immediate reporting” means report permit violations immediately without delay of any interval of time from the moment the Permittee becomes aware of the violation. Priority should first be given to stopping active noncompliance.

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

Department of Health, Shellfish Program

- 360-789-8962

4. Twenty-four (24) hour reporting

The Permittee must report the following to Ecology at the telephone number listed in S3.F.3, within 24 hours from the time the Permittee becomes aware of any of the following:

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

5. Five-day follow-up report

The Permittee must also submit a written report within five days of the time that the Permittee becomes aware of any reportable event under S3.F.3 or S3.F.4. “Day” means when the compliance period is stated in days: (A) exclude the day of the event that triggers the period; (B) count every day, including intermediate Saturdays, Sundays, and legal holidays; and (C) include the last day of the period, but if the last day is a Saturday, Sunday, or legal holiday, the period continues to run until the end of the next day that is not a Saturday, Sunday, or legal holiday.

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

The report must contain:

- a. A description of the noncompliance and its cause.
- b. The period of noncompliance, including exact dates and times.

- c. The estimated time the Permittee expects the noncompliance to continue if not yet corrected.
 - d. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
 - e. If the noncompliance involves an overflow prior to the treatment works, an estimate of the quantity (in gallons) of untreated overflow.
 - f. Include a description of actions taken to stop, contain, and cleanup unauthorized discharges and to mitigate any associated environmental impacts.
 - g. If an ERTS number was assigned to the event when it was initially reported, include this number in the five-day follow up report for reference.
 - h. Identification of other agencies contacted per the emergency notification call list in S3.F.3.
 - i. If samples were taken to characterize the event, provide any analytical results that are available with the five-day report. If the data was collected at the same monitoring points and for parameters specified on the DMR, the sample results must also be reported on the DMR.
6. Waiver of written reports

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

7. All other permit violation reporting

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

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

S3.G. Other reporting

1. Spills of oil or hazardous materials

In addition to the requirements in S3.F, the Permittee must report a spill of oil or hazardous materials in accordance with the requirements of Revised Code of Washington (RCW) 90.56.280 and WAC 173-303-145. Visit the website [How to Report a Spill⁴](https://ecology.wa.gov/About-us/Get-involved/Report-an-environmental-issue/Report-a-spill) for further instructions.

2. Failure to submit relevant or correct facts

⁴ <https://ecology.wa.gov/About-us/Get-involved/Report-an-environmental-issue/Report-a-spill>

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

S3.H. Maintaining a copy of this permit

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

S4. Operation and maintenance

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

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

Wastewater Treatment Unit Interruption

Interruption of wastewater treatment unit activity, such as a scheduled downtime for maintenance or unscheduled downtime for emergency repairs, for a period longer than twenty-four (24) hours must be reported to Ecology within thirty (30) days after the interruption. A wastewater treatment unit with sub-units operating in parallel that are taken out of service would constitute a unit interruption. Reports/notifications may be collected and submitted by email or letter to the Ecology Industrial Section Permit Manager.

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

3. O&M Manual submittal and requirements

The Permittee must:

- a. Review, update, and submit for Ecology review and approval by **[DATE](2 years after permit effective date)** the O&M Manual that meets the requirements of WAC 173-240-150 for the wastewater treatment plant; In addition to the electronic copy required by Special Condition S3.B, the Permittee must also submit one hard copy of the O&M Manual to the address listed in Special Condition S3.B.
- b. Maintain and follow the O&M Manual to meet the requirements of WAC 173-240-150.
- c. Review and update the O&M Manual when changes occur at the refinery that significantly affect the volume or character of the wastewater

processed by the wastewater treatment plant and confirm this review to Ecology by letter to Ecology.

- d. Submit to Ecology for review and approval substantial changes or updates to the O&M Manual.
- e. Keep the approved O&M Manual at the permitted facility.
- f. Follow the instructions and procedures of this manual.

4. O&M Manual components

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

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

5. Treatment System Operating Plan

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

The Permittee must submit an updated Treatment System Operating Plan to Ecology by **[DATE] (2.5 years after permit effective date).**

The Permittee must update and submit this Plan, as necessary, to include requirements for any major modifications of the treatment system.

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

- a. A baseline operating condition, which describes the operating parameters and procedures, used to meet the effluent limits of S1 at the production levels used in developing these limits.
- b. In the event of production rates, which are below the baseline levels used to establish these limits, the Plan must describe the operating procedures and conditions needed to maintain design treatment efficiency. The monitoring and reporting must be described in the Plan.
- c. In the event of an upset, due to plant maintenance activities, severe stormwater events, startups or shut downs, or other causes, the Plan must describe the operating procedures and conditions employed to mitigate the upset. The monitoring and reporting must be described in the Plan.
- d. A description of any regularly scheduled maintenance or repair activities at the facility which would affect the volume or character of the wastes discharged to the wastewater treatment system and a plan for monitoring and treating/controlling the discharge of maintenance-related materials (such as cleaners, degreasers, solvents, etc.).

S4.B. Bypass procedures

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

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

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

2. Anticipated bypass for non-essential maintenance.

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

- a. If a bypass is for non-essential maintenance, the Permittee must notify Ecology, if possible, at least 10 days before the planned date of bypass. The notice must contain:
 - A description of the bypass and the reason the bypass is necessary.

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

- Stopping production.
- Maintenance during normal periods of equipment downtime, but not if the Permittee should have installed adequate backup equipment in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance.
- Transport of untreated wastes to another treatment facility.

S5. Solid waste

S5.A. Solid waste handling

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

S5.B. Leachate

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

S6. Application for permit renewal or modification for facility changes

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

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

S7. Facility loading

S7.A. Design criteria

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

Table 20 - Design criteria

Process Wastewater Treatment Plant Capacity	
Peak Instantaneous Flow through the WWTP ^a	7000 gpm
BOD ₅ Loading for Maximum Month ^b	12,200 lbs/day

^a As measured at the effluent from the primary treatment system (API/DAFs)

^b As measured at the influent to bioreactor pre-treatment (Tank 74)

S7.B. Plans for Maintaining Adequate Capacity

The Permittee must submit to Ecology a plan and a schedule for continuing to maintain a capacity when:

1. The actual flow or wasteload reaches 85 percent of any one of the design criteria in S7.A for three consecutive months; or
2. The projected increase would reach design capacity within five years, whichever occurs first.

If such a plan is required, it must contain provisions and a schedule for continuing to maintain capacity. The capacity as outlined in this plan must be sufficient to achieve the effluent limitations and other conditions of this permit. The plan must address the following actions and any others necessary to meet the objective of maintaining capacity.

1. Analysis of the present design including the introduction of any process modifications that would affect the ability of the existing facility to achieve effluent limits and other requirements of this permit at levels in excess of the existing design criteria specified in S7.A.
2. Reduction or elimination of excessive infiltration and inflow into the sewer system.
3. Limitation on future additional wasteloads.
4. Modification or expansion of facilities necessary to accommodate increased flow or wasteload.

Engineering documents associated with the plan must meet requirements of Chapter 173-240-060 WAC, "Engineering Report," and be approved by Ecology prior to any construction.

S8. Compliance schedule

By the dates tabulated below, the Permittee must complete the following tasks and submit a report describing, at a minimum:

- Whether the task is complete and, if not, the date by which the Permittee expects to complete the task.
- The reasons for any delay and the steps being taken to return the project to the established schedule.

The Permittee must accomplish representative sampling for temperature at Outfall 001 by monitoring temperature at the moment discharge begins. The following compliance schedule establishes milestones for meeting this requirement.

Table 21 - Compliance schedule

	Tasks	Date Due
1	Begin monitoring and reporting temperature at the moment discharge begins, as is representative of discharge.	[DATE] (3 years from permit effective date)

S9. Nutrient Study

The Permittee must perform a Nutrient Study to determine the sources of nutrients to the wastewater treatment system, determine the nutrient loading requirements of the wastewater treatment system, and determine the current nutrient loading to the wastewater treatment system.

S9.A. Nutrient Study Plan Requirements

The Permittee must submit to Ecology for review and approval a Nutrient Study Plan by [DATE] (1 year after the permit effective date). The Nutrient Study Plan must include at a minimum:

1. How the Permittee will determine the sources of nutrients to the wastewater treatment system (including during normal operations and during turnaround or other maintenance activities that could impact nutrient loading and discharge),
2. How the Permittee will determine the nutrient loading requirements of the wastewater treatment system, including sampling information if applicable (such as parameters, location of sampling, and frequency of sampling), and
3. How the Permittee will determine the current nutrient loading to the wastewater treatment system, including sampling information (such as parameters, location of sampling, and frequency of sampling). The current nutrient loading must account for all the nutrients sources listed in Special Condition S9.A.

The Permittee must implement the approved Nutrient Study Plan.

S9.B. Nutrient Study Report Requirements

The Permittee must submit to Ecology for review a Nutrient Study Report by [DATE](1 year prior to permit expiration date). The Nutrient Study Report must include the results of the Nutrient Study, including, but not limited to:

1. The information from implementing the Nutrient Study Plan, and
2. An evaluation of potential opportunities for reduction of loading and discharge of nutrients.

S10. Non-routine and unanticipated wastewater

S10.A. Notification requirements

Beginning on the effective date of this permit, the Permittee is authorized to discharge non-routine wastewater or unanticipated wastewater, and therefore not listed on the permit application, on a case-by-case basis if approved by Ecology.

Prior to any such discharge, the Permittee must contact Ecology, and at a minimum, provide the following information:

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

S10.B. Chemical analysis

The Permittee must analyze the water for constituents limited for the discharge and report them as required by subpart A.5 above. The Permittee must also analyze for: hardness and any metals that are limited by water quality standards. The analysis must also include any parameter deemed necessary by Ecology. All discharges must comply with the effluent limits as established in Special Condition S1 of this permit, Water Quality Standards, and any other limits imposed by Ecology.

S10.C. Flow limitation

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

S10.D. Approval requirements

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

S11. Sediment monitoring

S11.A. Sediment Sampling and Analysis Plan

The Permittee must submit to Ecology for review and approval, a Sediment Sampling and Analysis Plan for sediment monitoring by [DATE] (one year after permit effective date), no later than six months prior to the planned sampling event. The purpose of the Plan is to characterize or re-characterize sediment quality (the nature and extent of chemical contamination and biological toxicity, or both) in the vicinity of the Permittee's discharge locations. The Permittee must follow the guidance provided in Appendix A of the *Sediment Cleanup User's Manual* (Ecology, 2021), Sampling Guidance for NPDES Permits under the Sediment Management Standards. No sampling shall be conducted prior to Sediment Sampling and Analysis Plan approval by Ecology. All sediments will be collected and analyzed in

accordance with the Ecology-approved Sediment Sampling and Analysis Plan. This plan will include the following analyses:

- Full suite of 47 SMS marine chemical parameters with the addition of petroleum hydrocarbons and BTEX for Outfalls 001, 002, and 003.
- Perform concurrent bioassay analyses at Outfall 001 and follow-up bioassay analyses at Outfalls 002 and 003 as needed.
- Conventional parameters: ammonia, total sulfides, total organic carbon, sediment grain size, total volatile solids, and total solids.

For Outfall 001, recollect samples for previous station locations (six stations plus ambient background sample), and additional samples northwest of the outfall. Perform concurrent bioassay analyses for each sampling location. A reference station for bioassay testing should be collected from an Ecology approved location.

For Outfalls 002 and 003, collect samples within the vicinity of the outfalls. Chemistry will be the priority analysis with bioassay follow-ups if needed.

When Ecology has approved and adopted sediment laboratory method(s), developed benthic criteria, and accredited laboratories for chemical analyses of perfluoroalkyl and polyfluoroalkyl substances (PFAS), the Permittee may be required by Ecology to investigate and analyze sediment samples for PFAS near to, or directly at the facility.

S11.B. Sediment data report

Following Ecology Approval of the Sediment Sampling and Analysis Plan, the Permittee must collect sediments between August 15th and September 15th. The Permittee must submit to Ecology, for review and approval, a sediment data report containing the results of the sediment sampling and analysis within 12 months of Ecology approval of Sediment Sampling and Analysis Plan. The sediment data report must conform to the approved Sediment Sampling and Analysis Plan. In addition, the Permittee must follow the guidance provided in the *Sediment Cleanup User's Manual* (Ecology, 2021), Appendix A: Sampling Guidance for NPDES Permits under the Sediment Management Standards. The report must document when the data was successfully loaded into EIM as required below.

In addition to the sediment data report, submit the sediment chemical data, biological data, or both, to [Ecology's Environmental Information System \(EIM\)](https://ecology.wa.gov/Research-Data/Data-resources/Environmental-Information-Management-database)⁵. Data must be submitted to EIM according to the instructions on the EIM website. The EIM website provides information on submitting data, and a link to the EIM Help Center.

⁵ <https://ecology.wa.gov/Research-Data/Data-resources/Environmental-Information-Management-database>

In addition to the EIM data submittal, Ecology's [MyEIM](#)⁶ tools must be used to confirm that the submitted data was accurately entered into EIM. Any differences between the MyEIM analytical results and sediment data report must be identified and explained.

S12. Wastewater Treatment Efficiency Study

The Permittee must conduct a new wastewater treatment efficiency study. The Permittee must also update the engineering report for the wastewater treatment system to reflect the information from the new treatment efficiency study and compare the current and future conditions to predicted design capacities.

S12.A. Wastewater Treatment Efficiency Study — Sampling Locations

The Permittee must conduct chemical analyses of influent and effluent samples from several points within the wastewater treatment system to determine treatment and removal efficiencies. Influent and effluent samples must be collected from the following points:

1. Influent to the primary treatment system (API influent)
2. Dissolved Nitrogen Floatation Unit influent
3. Biological Pre-Treatment Tank (Tank 74) influent
4. Bioreactor influent
5. Clarifying Units influent
6. South retention pond influent
7. Stormwater influent to the clean water flume
8. Stormwater effluent from the clean water flume to the final pond
9. South retention pond effluent to the final pond
10. Final effluent from the final pond (pump to bay)

At the time of sampling, the flow through the treatment units must be monitored and recorded. Acceptable methods of monitoring shall include in pipe metering or other methods approved by Ecology.

The specific influent and effluent sampling points must be identified on a flow diagram of the wastewater treatment system. The flow diagram must identify all extraneous wastewater streams to the individual treatment units, including recycle streams. The sample points must be selected to be representative of each wastewater stream without the influence of recycle streams. The flow monitoring method and monitoring points must also be identified for each treatment system (process water and stormwater). This information must be submitted to Ecology for approval by **[DATE] (36 months after the permit effective date)**.

The Permittee may submit existing data on internal waste streams for substitution or partial substitution of the following sampling requirements. Existing data must be

⁶ <https://ecology.wa.gov/Research-Data/Data-resources/Environmental-Information-Management-database/Using-MyEIM>

submitted for Ecology review by [DATE] (36 months after the permit effective date). The data submittal must include a discussion of the sampling points and methods used to ensure that the data is representative. Ecology will then make a determination of the usability of the data and any subsequent sampling required.

S12.B. Wastewater Treatment Efficiency Study—Sampling Intervals and Sample Analysis

Influent and effluent sampling must be conducted during six separate intervals following Ecology's approval of the sampling locations identified in Section A. Three of the sampling intervals must be conducted when the effluent plant is primarily processing dry weather flow; the other three intervals must be conducted when the effluent plant is treating wet weather flow. Minor precipitation events during dry weather sampling are not expected to impact the data significantly but should be recorded if they occur. Sampling intervals must be spaced at least one month apart. Sampling of the clean water flume (sample locations #7 and #8) will not be necessary if the Permittee is not discharging from the clean water flume during the three dry weather flow intervals.

Samples must be collected when the wastewater treatment system is in a relatively steady state, i.e., no peak flows, upsets, or maintenance turnarounds.

The timing must be such that the effluent samples from each point correspond to the upstream influent samples and the resultant analytical results can be effectively used to estimate removal efficiencies across the applicable portions of the treatment system.

The following table summarizes the required monitoring to evaluate the efficiency of the treatment system.

Table 22 - Sampling Intervals and Analysis

Sampling Requirements	Wet Weather Flow Interval 1	Wet Weather Flow Interval 2	Wet Weather Flow Interval 3	Dry Weather Flow Interval 1	Dry Weather Flow Interval 2	Dry Weather Flow Interval 3
Group A Parameters ^a with automated 24-hour time-based composite sampler at locations 1-6 and Group B Parameters ^d with grab samples at locations 1-6	1 set ^b	--	--	1 set ^b	--	--
Sanitary parameters ^c sampled at locations 6, 9, and 10	1 set ^b	--	--	1 set ^b	--	--

Sampling Requirements	Wet Weather Flow Interval 1	Wet Weather Flow Interval 2	Wet Weather Flow Interval 3	Dry Weather Flow Interval 1	Dry Weather Flow Interval 2	Dry Weather Flow Interval 3
Oil and grease grab samples at locations 1-10	5 sets	5 sets	5 sets	5 sets	5 sets	5 sets
BOD ₅ , COD, TSS automated 24-hour composite samples at locations 1-10	5 sets	--	--	5 sets	--	--
BOD ₅ , COD, and TSS 24- hour composite samples at locations 1-10; or 6 equally spaced grab composited samples are acceptable	--	5 sets	5 sets	--	5 sets	5 sets

Footnotes:

^a “Group A Parameters” means BOD₅, COD, ammonia, Total Kjeldahl Nitrogen (TKN), TSS, priority pollutant metals (excluding mercury), and priority pollutant base/neutral acids.

^b “Set” means one sample collected at each of the identified sampling points.

^c “Sanitary parameters” means BOD₅, TSS, ammonia, TKN, and fecal coliforms.

^d “Group B Parameters” means oil and grease, priority pollutant volatiles, cyanide, mercury, and sulfide.

During one wet and one dry weather interval, samples from locations 7-10 must be analyzed for the following: BOD₅, TSS, ammonia, TKN, and fecal coliforms. Samples from locations 1-6 must be analyzed for the following conventionals and non-conventionals:

- BOD₅
- COD
- Ammonia
- Total Kjeldahl Nitrogen (TKN)
- Oil and grease
- TSS
- Sulfide
- Priority pollutant metals
- Cyanide
- Priority pollutant volatiles
- Priority pollutant base/neutral acids

During the same wet and dry weather sampling intervals that samples are collected to analyze for priority pollutants, five additional sets of composite samples must be collected during each sampling interval at locations 1-6 and analyzed for BOD₅, TSS, COD, and oil and grease. The

samples for BOD5, TSS, and COD must be collected with a 24-hour automated time-based composite sampler.

If the Permittee discharges less than 24 hours from the stormwater flume (sample location #5), the facility may collect and composite grab samples taken every hour during the discharge, as an alternative to the 24-hour time based composite sample requirement.

Separate grab samples must be collected at each location and analyzed for oil and grease.

Sampling must also be conducted during four other intervals (two wet and two dry weather as identified above). During each interval, five sets of composite samples must be collected at sample locations 1-6 and analyzed for BOD5, TSS, COD, and oil and grease. The samples for BOD5, TSS, and COD must be representative 24-hour time-based composite samples or six grab samples equally spaced over a 24-hour period. If the Permittee discharges less than 24 hours from the clean water flume (sample location #8), the facility may collect and composite grab samples taken every hour during the discharge, as an alternative to the 24 hour time based composite sample requirement. Separate grab samples must be collected at each sample location and analyzed for oil and grease.

With the exception of oil and grease, samples at all locations must be collected with a 24 hour time-based composite sampler. A separate grab sample must be collected for oil and grease at each identified location.

Priority pollutant analyses for this study may be done in conjunction with other priority pollutant monitoring required by the permit if the timing is appropriate.

A priority pollutant list with CAS numbers and minimum detection limits is provided in Appendix A. The priority pollutant analyses may exclude PCBs, PBBs, and all pesticides except any listed pesticide that is used on the refinery site.

Sample analysis must be conducted in accordance with 40 CFR 136 and/or Standard Methods for the Examination of Water and Wastewater, 23rd edition, 2017, or updated versions thereof. The Permittee must follow the quality assurance procedures in 40 CFR 136 and/or Standard Methods for the Examination of Water and Wastewater, 23rd edition, 2017, or updated versions thereof.

S12.C. Engineering Report

The Permittee must update the engineering report for the wastewater treatment system. The report must be prepared in accordance with Chapter 173-240 WAC and include the following elements:

1. A schematic of the treatment units, including the emergency wastewater impoundment.
2. The last 2 years of flow data through the treatment units including recycle streams. Flow data must be presented in terms of average dry weather flow, average monthly flow of the maximum month, and peak hourly flow. If flow-monitoring data is not available for wastewater streams, then an estimate must be provided with the method used for estimation.

3. Basic design data and sizing calculations for each unit in the wastewater treatment system. Clarifier information must include detention times, overflow rates, solids and weir loading rates, volume, and depth. Activated sludge basin information must include hydraulic detention time, volumetric loading, MLSS, F:M ratio, return ratio, and sludge residence time. Information for sedimentation and holding ponds must include solids loading rates, volume, and retention time. This information must be provided for design criteria parameters BOD5, TSS, COD, and oil and grease, where applicable.
4. An analysis of current treatment and removal efficiencies for the design criteria parameters (BOD5, TSS, COD, and oil and grease, where applicable) and current operating conditions for each treatment unit based on information collected in the treatment efficiency study described above.
5. Predicted design capacities including hydraulic and organic loadings for each wastewater treatment unit under the flow conditions described above in (2). The predicted design capacities must be based on the information collected during the study, the previous 2 years of flow data, and any additional relevant information collected by the Permittee.
6. Predicted effluent wastewater characteristics at design flows.
7. An analysis that compares current conditions within the refinery to the predicted design capacity of the wastewater treatment system, as determined in the approved engineering report.
The analysis must also predict the effect of any changes proposed for the refinery's operations during the next permit term on the wastewater treatment system capacity.
8. A discussion of any production increases, changes to crude sources, modifications to process units, changes in additives, etc., that could potentially cause an increase in hydraulic and/or organic loading to the wastewater treatment facility. The updated engineering report must be submitted to Ecology for review and approval by [DATE] (48 months after the permit effective date).

S13. Outfall evaluation

The Permittee must inspect, once per permit cycle but no later than [DATE](1.5 years past permit effective date), 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. Within 90 days of the inspection but no later than [DATE](1.5 years past permit effective date), the Permittee must submit the Outfall Evaluation report to Ecology through the Water Quality Permitting Portal – Permit Submittals application. The Permittee must submit hard copies of any video files to Ecology as required by Permit Condition S3.B. The Portal does not support submittal of video files.

The inspector must, at a minimum:

1. Assess the physical condition of the outfall pipe, diffuser, and associated couplings.
2. Determine the extent of sediment accumulation in the vicinity of the diffuser.
3. Ensure diffuser ports are free of obstructions and are allowing uniform flow.
4. Confirm physical location (latitude/longitude) and depth (at MLLW) of the diffuser section of the outfall.
5. Assess physical condition of the submarine line.
6. Assess physical condition of anchors used to secure the submarine line.
7. Assess physical condition of the outfall line from the wastewater treatment plant to the submarine line.

The report must include the following, at a minimum:

1. The Survey Report from the inspector which should address items 1-7 above, including photographic verification if conditions allows, and
2. Identification of any repairs that are necessary to maintain the integrity and continued function of the outfall line and diffuser, including a proposed schedule for the repairs.

S14. Mixing study

S14.A. General requirements

The Permittee must:

1. Submit a Plan of Study to Ecology for review by [DATE] (2 years past permit effective date), prior to initiation of the effluent mixing study. Use the Guidance for Conducting Mixing Zone Analyses (Appendix C of the Permit Writer's Manual (Ecology, 2018)) and the protocols identified in S14.C.
2. Include the results of the effluent mixing study in the Effluent Mixing Report and submit it to Ecology for approval by [DATE] (3 years past permit effective date).
3. If the results of the mixing study, toxicity tests, and chemical analysis indicate that the concentration of any pollutant(s) exceeds or has a reasonable potential to exceed the state Water Quality Standards, Chapter 173-201A WAC, Ecology may issue an Administrative Order to require a reduction of pollutants or modify this permit to impose effluent limits to meet the Water Quality Standards.

S14.B. Reporting requirements

The mixing zone study must include:

1. A statement confirming that AKART has been applied to the discharge.
2. A description of the size of the mixing zone allowed under Chapter 173-201A WAC.

3. Any analysis showing how mixing zones have been minimized using the lowest dilution from hydraulic limitations, width limitations, distance limitations, and those predicted by the model.
4. A clear description of the critical conditions used for dilution factors:
 - a. For ambient marine waters: Use 10 or 90th percentile current velocity for acute and 50th percentile tidal current velocity for chronic, carcinogens and non-carcinogens.
 - b. Use depth of outfall at MLLW.
 - c. Use density profile that gives the lowest dilution. Evaluate both maximum and minimum stratification. For human health, use average density profiles to estimate dilution.
 - d. For marine environment or rivers with reversing flows, use flux-average dilution factors for all conditions.
 - e. For the two-second plume travel centerline dilution factor, utilize the 10th, 50th, and 90th percentile currents at MLLW.
5. Diffuser information:
 - a. Location, orientation, description, and dimension of diffusers and ports.
 - b. Port elevation above bottom and the depth of the diffuser/port below water surface based on either 7q10 flow (for rivers) or MLLW (for marine or tidally-influenced river reaches).
 - c. Plan view maps showing the mixing zone size and dimensions in relation to the diffuser.
 - d. Schematic of waterbody cross-section, showing channel width, depth, and diffuser location in relation to shoreline and bottom.
 - e. Report on the integrity of the diffuser and the ports being modeled.
6. Discharge characteristics:
 - a. Existing and projected maximum daily, maximum monthly average, and annual average flows.
 - b. Discharge density (temperature and salinity)
7. Ambient water characteristics:
 - a. Critical marine current velocities (10th, 90th, and 50th percentiles over a neap and spring tide and directions).
 - b. Velocity profile in the vicinity of the diffuser.
 - c. Temporal density (temperature and salinity) profiles near the diffuser. May need to consider both seasonal and tidal variability.
 - d. Manning's roughness coefficient, if used.
 - e. Available information regarding background concentrations of chemical substances in the receiving water for which there are criteria in Chapter 173-201A WAC.
8. Model selection and results:
 - a. Model selection and application discussion. Consider model applicability to single or multiport diffuser, opposing port configuration, submerged,

surface, or above-surface discharge, buoyant or non-buoyant discharge, and potential plume attachment to boundaries.

- b. Description of mixing and plume dynamics (nearfield, farfield, tidal buildup/reflux).
- c. Sensitivity analysis.
- d. Calibration to empirical data (tracer studies), if applicable.
- e. Provide model output and summary table of results.

S14.C. Protocols

The Permittee must determine the dilution ratio using protocols outlined in the following references, approved modifications thereof, or another method approved by Ecology:

1. *CORMIX User Manual: A Hydrodynamic Mixing Zone Model and Decision Support System for Pollutant Discharges into Surface Waters*, EPA-823-K-07-001 (Doneker & Jirka, 2007).
2. *Dilution Models for Effluent Discharges, 4th Edition* (Visual Plumes). Ecosystem Research Div. USEPA, Athens, GA, USA (Frick, Roberts, Davis, Keyes, & Baumgartner, 2003).
3. *Permit Writer's Manual*. Washington State Department of Ecology. Publication No. 92-109 (Ecology, 2018).
4. *Guidance for Conducting Mixing Zone Analysis* (Appendix C, Permit Writer's Manual) (Ecology, 2018).
5. *Measurement of Discharge Using Tracers*, Chapter A16, Techniques of Water Resources Investigations of USGS, Book 3, Application of Hydraulics, USGS, U.S. Department of Interior, Reston, VA (Kilpatrick & Cobb, 1985).
6. *Fluorometric Procedures for Dye Tracing*, Chapter A12. Techniques of Water Resources Investigations of the USGS, Book 3, Application of Hydraulics, USGS, U.S. Department of Interior, Reston, VA (Wilson, Cobb, & Kilpatrick, 1986).

S15. Groundwater Impact Study

Ecology has promulgated Ground Water Quality Standards (Chapter 173-200 WAC) to protect beneficial uses of groundwater. Permits issued by Ecology shall be conditioned in such a manner as not to allow violations of those standards. The effect of any discharge through the unlined clay bottoms of the clean water flume, final pond, south retention pond, and stormwater basin cannot be fully determined without further investigation.

The Permittee must evaluate the impacts of discharge through the unlined clay bottoms of the clean water flume, final pond, south retention pond, and stormwater basin on groundwater quality by completing the elements below.

1. Prepare and submit to Ecology for review and approval a groundwater impact study plan in accordance with Chapter 173-200-080 WAC by [DATE] (third

- year of permit).** The study plan shall include a plan for a hydrogeologic study and monitoring plan.
2. Upon approval of the plan by Ecology, the Permittee must conduct a study to determine site-specific hydrogeologic conditions, well siting, quality control protocols, a sampling plan and sampling protocols. The Permittee must conduct the study within 180 days of Ecology's approval of the study plan. The Permittee must construct wells in accordance with Chapter 173-160 WAC.
 3. Prepare and submit a report detailing the results of the groundwater impact study to Ecology for review and approval within 120 days of completing the study. The report shall contain a monitoring plan if Ecology determines that there is potential for the wastewater to impact groundwater.
 4. Guidance for preparation of hydrogeologic studies and monitoring plans is provided in the *Implementation Guidance for the Ground Water Quality Standards*, Publication #96-02 (Ecology, 2005). Existing information on hydrogeologic conditions can be used if it has been obtained within the past five years and the information is in accordance with the guidance.

S16. Dioxin Study

S16.A. Wastewater Sampling

The Permittee must:

1. Notify Ecology 60 days prior to the planned sampling event.
2. Sample the final effluent at Outfall 001 and the wash water wastewater streams from the catalytic reformer units for chlorinated dioxins and furans (2,3,7,8-Cl substituted tetra- through octa-congeners, as specified in Appendix A Table 9 – Nonconventionals – Dioxin & Furan Congeners) twice during the permit cycle during catalytic reformer regeneration events. Collection of the samples must be timed to evaluate the discharge of caustic wash water from each regeneration event to the wastewater treatment system. Samples must be composite samples.
3. The first sampling event must include:
 - a. Collection and testing of caustic wash water from Catalytic Reformer Unit #1 during a regeneration event, and
 - b. Collection and testing of the final effluent from Outfall 001. Sampling at Outfall 001 must be timed to capture effluent that is most likely to contain wastewater generated during the catalytic reformer regeneration event that are sampled for dioxins in the caustic wash water.
4. The second sampling event must include:
 - a. Collection and testing of caustic wash water from Catalytic Reformer Unit #2 during a regeneration event, and
 - b. Collection and testing of the final effluent from Outfall 001. Sampling at Outfall 001 must be timed to capture effluent that is most likely to contain

wastewater generated during the catalytic reformer regeneration event that are sampled for dioxins in the caustic wash water.

5. Conduct the analysis including sample containers and QA/QC in accordance with Method 1613. Tetra- through Octa-Chlorinated Dioxins and Furans by Isotopic Dilution HRGC/HRMS, USEPA Office of Water, Engineering and Analysis Division, Revision A. The Minimum Level (ML) of detection for 2,3,7,8-TCDD/TCDF must be 5 parts per quadrillion or less.
6. Report the lowest detected concentrations of all 2,3,7,8-Cl substituted dioxins and furans that meet the quality assurance specifications of Method 1613, including all detected concentrations below the calibration limits of Method 1613.

S16.B. Dioxin Study Report

The Permittee must submit to Ecology a Dioxin Study Report including the results of the sampling and analysis by [DATE](1 year before expiration of permit). Dioxin Study Report must include:

1. The sample dates of all testing,
2. The concentrations of the 2,3,7,8-Cl substituted tetra- through octa- dioxin and furan congeners, as specified in Appendix A Table 9 – Nonconventionals – Dioxin & Furan Congeners, for each sample, and
3. The total flow for each wash water from the regeneration events.

The Permittee must require the laboratory to report and maintain on file for each sample the analytical holding times, summary of internal precision and recovery, calibration data, analysis sequence (run logs), daily checks (ongoing precision and accuracy standards, blanks, instrument checks), QA/QC data (duplicates, matrix spikes/labeled analog spikes), and raw data (chromatograms).

S17. Per-and Polyfluoroalkyl Substances (PFAS) Study

S17.A. PFAS Sampling and Analysis Plan

The Permittee must submit to Ecology for review and approval, a joint PFAS Sampling and Analysis Plan and Quality Assurance Project Plan, referred to as a SQAPP for effluent monitoring by [DATE] (6 months after the permit effective date).

The purpose of the monitoring is to determine whether PFAS is present in the discharge and the levels, if present, of certain PFAS in the final effluent at Monitoring Point 001. The PFAS Sampling and Analysis Plan must include **quarterly** monitoring for two years, using analytical method 1633 for sample analysis and preparation. The PFAS Sampling and Analysis Plan must also include the QA/QC procedures (as specified in 40 CFR 136.748) that will be followed for the monitoring.

Other methods for evaluating PFAS in wastewater may be used if approved by Ecology. Rationale for the selected method must be provided in the PFAS Sampling and Analysis Plan.

S17.B. PFAS Monitoring Data Report

The Permittee must begin effluent monitoring by [DATE] (1 year after the permit effective date) or within 90 days of Ecology's approval of the PFAS Sampling and Analysis Plan, whichever is later. The Permittee must submit the monitoring data on the quarterly DMR beginning [DATE] (1 year after the permit effective date, first quarter end date).

S18. Certified operator

This permitted facility must be operated by an operator certified by the state of Washington for at least a Class II plant. The operator must be in responsible charge of the day-to-day operation of the wastewater treatment plant. When the plant is operated on more than one daily shift, an operator-in-charge of each shift must be certified for at least a Class I plant.

S19. Dangerous wastes – permit by rule requirements

The Permittee is authorized to treat dangerous wastes, generated on- or off-site, at the wastewater treatment facility under the permit by rule provisions of Chapter 173-303-802(5) WAC. This authorization is limited to the on-site and off-site waste streams identified on the permit application and application amendments as approved by Ecology.

The Permittee must maintain records of the off-site waste streams treated at the wastewater facility. The origin, volume, known waste constituents, any analytical data, and date of addition must be recorded. This information must be available to an authorized representative of Ecology per General Condition G2. A summary of the off-site dangerous wastes accepted and treated by the Permittee must be submitted **with the permit renewal application by [DATE] (at least one year prior to expiration date).**

S20. Acute toxicity

S20.A. Effluent limit for acute toxicity

The effluent limit for acute toxicity is:

No acute toxicity detected in a test concentration representing the ACEC.

The ACEC means the maximum concentration of effluent during critical conditions at the boundary of the acute mixing zone, defined in Special Condition S1.E of this permit. The ACEC equals 1.6 percent effluent.

S20.B. Compliance with the effluent limit for acute toxicity

Compliance with the effluent limit for acute toxicity means the results of the testing specified in Section D show no statistically significant difference in survival between the control and the ACEC.

If the test results show a statistically significant difference in survival between the control and the ACEC, and Ecology has not determined the test result to be anomalous under Section E, and the test is otherwise valid, the result is a violation of the effluent limit for acute toxicity. The Permittee must immediately conduct the additional testing described in Section E.

The Permittee must determine the statistical significance by conducting a hypothesis test at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in survival between the control and the ACEC is less than 10 percent, the Permittee must conduct the hypothesis test at the 0.01 level of significance.

S20.C. Compliance testing for acute toxicity

The Permittee must:

1. Perform the acute toxicity tests with 100 percent effluent, the ACEC, and a control, or with a full dilution series.
2. Conduct quarterly acute toxicity testing on the final effluent if characterization determines the effluent limit for acute toxicity applies. Testing must begin by [DATE] (choose January 1, April 1, July 1, or October 1, depending on first quarter after permit effective date). Quarterly means January through March, April through June, July through September, and October through December. If no discharge occurs during the required month, the Permittee must notify Ecology by the end of the month and conduct sampling on the next representative discharge that occurs in the following month.
3. Submit a quarterly written report to Ecology within 45 days of sampling and starting no later than [DATE] (choose April 30th, July 30th, October 30th, or January 30th). Each subsequent report is due on April 30th, July 30th, October 30th, and January 30th of each year. Further instructions on testing conditions and test reports content are in Section G below.
4. The Permittee must perform compliance tests using each of the species and protocols listed below on a rotating basis:

Table 23 - Acute toxicity tests

Acute Toxicity Test	Species	Method
Topsmelt 96-Hour Static-Renewal Test	Atherinops affinis	EPA-821-R-02-012
Mysid 48-Hour Static Test	Americamysis bahia (formerly Mysidopsis bahia)	EPA-821-R-02-012

S20.D. Response to noncompliance with the effluent limit for acute toxicity

If a toxicity test conducted under Section D determines a statistically significant difference in response between the ACEC and the control, using the statistical test described in Section C, the Permittee must begin additional testing within one week from the time of receiving the test results. The Permittee must:

1. Conduct one additional test each week for four consecutive weeks, using the same test and species as the failed compliance test.
2. Test at least five effluent concentrations and as control to determine appropriate point estimates. One of these effluent concentrations must equal the ACEC. The results of the test at the ACEC will determine compliance with the effluent limit for acute toxicity as described in Section C.
3. Return to the original monitoring frequency in Section D after completion of the additional compliance monitoring.

Anomalous test results: If a toxicity test conducted under Section D indicates noncompliance with the acute toxicity limit and the Permittee believes that the test result is anomalous, the Permittee may notify Ecology that the compliance test result may be anomalous. The Permittee may take one additional sample for toxicity testing and wait for notification from Ecology before completing the additional testing. The Permittee must submit the notification with the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous.

If Ecology determines that the test result was not anomalous, the Permittee must complete all the additional monitoring required in this section; or

If the one additional sample fails to comply with the effluent limit for acute toxicity, then the Permittee must complete all the additional monitoring required in this section; or

If Ecology determines that the test result was anomalous, the one additional test result will replace the anomalous test result for the purpose of determining compliance with the acute toxicity limit.

If all the additional testing in S20.D complies with the permit limit, the Permittee must submit a report to Ecology on possible causes and preventive measures for the transient toxicity event, which triggered the additional compliance monitoring. This report must include a search of all pertinent and recent facility recordings, including:

- Operating records
- Monitoring results
- Inspection records
- Spill reports
- Weather records
- Production records
- Raw material purchases
- Pretreatment records, etc.

If additional testing in this section shows another violation of the acute toxicity limit, the Permittee must submit a Toxicity Identification/Reduction Evaluation (TI/RE) Plan to Ecology within 60 days after the sample date [WAC 173-205-100(2)].

S20.E. Sampling and reporting requirements

1. The Permittee must submit all reports for toxicity testing in accordance with the *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, Publication 95-80 (Ecology, 2016). Reports must contain toxicity data, bench sheets, and reference toxicant results for test methods. In addition, the Permittee must submit toxicity test data in electronic format (CETIS export file preferred) for entry into Ecology's database.
2. The Permittee must collect 24-hour composite effluent samples or grab samples for toxicity testing. The Permittee must cool the samples to 0 – 6 degrees Celsius during collection and send them to the lab immediately upon completion. The lab must begin the toxicity testing as soon as possible but no later than 36 hours after sampling was completed.
3. The laboratory must conduct water quality measurements on all samples and test solutions for toxicity testing, as specified in the *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, Publication WQ-R-95-80 (Ecology, 2016).
4. All toxicity tests must meet quality assurance criteria and test conditions specified in the EPA methods listed in Subsection C and the *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, Publication WQ-R-95-80 (Ecology, 2016). If Ecology determines any test results to be invalid or anomalous, the Permittee must repeat the testing with freshly collected effluent.

5. The laboratory must use control water and dilution water meeting the requirements of the EPA methods listed in Section A or pristine natural water of sufficient quality for good control performance.
6. The Permittee must conduct Whole Effluent Toxicity tests on an unmodified sample of final effluent.
7. The Permittee may choose to conduct a full dilution series test during compliance testing in the order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC. The ACEC equals 1.6 percent effluent.
8. All Whole Effluent Toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing must comply with the acute statistical power standard of 29 percent as defined in WAC 173-205-020. If the test does not meet the power standard, the Permittee must repeat the test on a fresh sample with an increased number of replicates to increase the power.

S21. Chronic toxicity

S21.A. Effluent characterization

The Permittee must:

1. Conduct Chronic Toxicity testing on final effluent once in the last winter and once in the last summer prior to submission of the application for permit renewal.
2. Conduct Chronic Toxicity testing on a series of at least five concentrations of effluent and a control. This series of dilutions must include the ACEC. The ACEC equals 1.6 percent effluent. The series of dilutions should also contain the CCEC of 0.8 percent effluent.
3. Compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.
4. Submit the results to Ecology by [DATE] (with the permit renewal application).
5. Perform Chronic Toxicity Tests with all of the following species and the most recent version of the following protocols:

Table 24 – Saltwater chronic toxicity tests

Saltwater Chronic Test	Species	Method
Topsmelt Survival and Growth	<i>Atherinops Affinis</i>	EPA 821-R-96-0008
Mysid Shrimp Survival and Growth	<i>Americamysis Bahia</i> (Formerly <i>Mysidopsis Bahia</i>)	EPA-821-R-02-014
Sea Urchin/Sand Dollar Survival and Development ^a	<i>Strongylocentrotus Purpuratus/Dendraster Excentricus</i>	EPA 821-R-96-0008

Footnotes:

^a Upon Ecology approval, sand dollar (*Dendraster Excentricus*) may be used as a substitute for sea urchin during the summer months due to lack of availability.

The laboratory must conduct the Sea Urchin and Sand Dollar (Echinoderm) test in accordance with EPA/600/R-95/136 and the echinoderm fertilization test conditions in the *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, Publication WQ-R-95-80 (Ecology, 2016). The laboratory must use whichever one of the two species that will give a valid result in each test.

S21.B. Sampling and reporting requirements

1. The Permittee must submit all reports for toxicity testing in accordance with the *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, Publication WQ-R-95-80 (Ecology, 2016). Reports must contain toxicity data, bench sheets, and reference toxicant results for test methods. In addition, the Permittee must submit toxicity test data in electronic format (CETIS export file preferred) for entry into Ecology's database.
2. The Permittee must collect 24-hour composite effluent samples or grab samples for toxicity testing. The Permittee must cool the samples to 0 – 6 degrees Celsius during collection and send them to the lab immediately upon completion. The lab must begin the toxicity testing as soon as possible but no later than 36 hours after sampling was completed.
3. The laboratory must conduct water quality measurements on all samples and test solutions for toxicity testing, as specified in the *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, Publication WQ-R-95-80 (Ecology, 2016).
4. All toxicity tests must meet quality assurance criteria and test conditions specified in the most recent versions of the EPA methods listed in Subsection C and the *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, Publication WQ-R-95-80 (Ecology, 2016). If Ecology determines any test results to be invalid or anomalous, the Permittee must repeat the testing with freshly collected effluent.
5. The laboratory must use control water and dilution water meeting the requirements of the EPA methods listed in Section A or pristine natural water of sufficient quality for good control performance.
6. The Permittee must conduct Whole Effluent Toxicity tests on an unmodified sample of final effluent.
7. The Permittee may choose to conduct a full dilution series test during compliance testing in the order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the CCEC and the ACEC. The CCEC and the ACEC may either substitute for the effluent concentrations that are closest to them in the dilution series or be extra effluent concentrations. The CCEC equals 0.8 percent effluent. The ACEC equals 1.6 percent effluent.

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

S22. Pollution Prevention and Stormwater Evaluation

S22.A. Sampling Point Study

The Permittee must conduct a special sampling study at Outfalls 002, 003, and 006 that would include sampling at the current monitoring location, at locations with potential off-site stormwater contributions, and at the point of discharge to receiving waters. The study must include monthly sampling at these locations. The Permittee must submit a sampling point study report to summarize the findings of this study and recommend changes to the sampling locations for Outfalls 002, 003, and 006. The Permittee must submit the sampling point study report no later than

[DATE](January 1 after 1.5 years past permit effective date).

S22.B. Pollution Prevention Plan

Pollution prevention planning and activities at the facility include:

- New pollution prevention projects identified for the upcoming permit cycle in the plan update.
- Standard Operating Procedures (SOPs), Best Management Practices (BMPs), and work practices developed and updated from previous permit pollution plans, stormwater pollution prevention plans (SWPPPs), solid waste control plans, and spill plans.

The Permittee must continue to ensure proper operation and maintenance of the refinery process units and wastewater treatment system by following existing SOPs, BMPs, and work practices. The Permittee must continue or maintain these procedures and other measures and/or facilities currently employed at the refinery to prevent or minimize the potential for release of pollutants to the wastewater treatment system, stormwater, and/or waters of the State unless modified by the pollution prevention plan update required below.

Stormwater Pollution Prevention

Stormwater BMPs must:

1. Provide all known, available, and reasonable methods of prevention, control, and treatment (AKART) of stormwater pollution from industrial and construction activities at the site.
2. Ensure the discharges do not cause or contribute to a violation of the Water Quality Standards.
3. Comply with applicable federal technology-based treatment requirements under *40 CFR 125.3*.

4. Be consistent with the *2024 Stormwater Management Manual for Western Washington* (Ecology, 2024) or provide an equivalent level of pollution prevention approved by Ecology.

Storage Tank Wastewater

The Permittee must remove wastewater from oil, product, and intermediate distillate storage tanks in a manner and with facilities as required to prevent the wastewater from draining or spilling onto the ground.

Pollution Prevention Plan Update and Implementation

The Permittee must update its Pollution Prevention Plan and submit it to Ecology for review and approval by [DATE] (2 years after permit effective date). The Permittee must implement the approved pollution prevention plan update and any approved modifications to the plan and abide by the timeframes identified throughout the term of the permit.

The objective of this update is to identify any new sources of pollutants, to reevaluate previous identified pollution prevention opportunities, and to identify any new opportunities and implement those that are technically and economically achievable. Previously identified opportunities include those identified in *Water Pollution Prevention Opportunities in Petroleum Refineries* (Ecology Publication No. 02-07-017) (Ecology, 2002). The update must also include an evaluation of the existing SOPs, BMPs, and work practices developed under previous pollution prevention planning/activities.

Specifically, the Permittee should evaluate the following pollution prevention opportunities:

- Relocation of effluent pH control.
- Implementing source control BMPs for arsenic.

The update must account for all implemented changes to Outfalls 002, 003, and 006 from the Sampling Point Study in Special Condition S22.A.

Specific Plan Update Requirements

The Permittee must update the following plan elements as necessary to address changes:

- The policy statement and signature
- Employee involvement
- Training and awareness
- Descriptions of current pollution prevention activities
- Description of potential pollutants and sources.

Appendix C includes references to guidance documents, specific items to be included in the plan, and procedures for identifying, evaluating, and prioritizing

pollution prevention opportunities. Other information available to the Permittee may also be used in preparing the plan.

The updated plan must include a schedule for implementation of each newly selected opportunity. If a detailed analysis of technical and economic feasibility for any pollution prevention opportunity will extend beyond the deadline for submitting the updated plan, the Permittee must include a schedule for completing the analysis in the plan submittal. The timeframe for implementing any opportunities scheduled for further evaluation and then selected must be provided in the biennial report.

The Permittee must modify the plan if the Permittee or Ecology determines during inspections or investigations that existing BMPs are, or would be, ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site. The Permittee must modify the plan as necessary to include additional or modified BMPs designed to correct problems identified.

The Permittee must modify the plan whenever there is a change in design, construction, operation, or maintenance at the facility that significantly changes the nature of pollutants in wastewater or stormwater from the facility; significantly increases the quantity of pollutants discharged; or causes the pollution prevention plan, existing SOPs, BMPs, or work practices to be less effective in controlling pollutants. The Permittee must provide for implementation of any modifications to the pollution prevention plan in a timely manner.

Site-wide Stormwater Inspections

The Permittee must conduct two site-wide stormwater inspections per year: once during the wet season (October 1-April 30) and the other during the dry season (May 1-September 30).

The Permittee must conduct the wet season inspection during a rainfall event and must include observations of the presence of any floating materials, suspended solids, oil and grease, discolorations, turbidity, odor, etc. in stormwater runoff throughout the refinery that could contribute to a discharge off-site.

The Permittee must conduct the dry season inspection at least eight days after a rainfall event and must determine the presence of unpermitted non-stormwater discharges such as sanitary wastewater, non-contact cooling water, process wastewater, and drainage from raw material/product/waste storage to the stormwater drainage system. If an unpermitted, non-stormwater discharge is discovered, the Permittee must immediately notify Ecology.

Inspections must be conducted by personnel who are knowledgeable and trained in the application of BMPs and pollution prevention activities at the refinery. Results from the stormwater visual inspections must be reported in the pollution prevention plan biennial update reports.

Biennial Reporting

The Permittee must periodically evaluate and modify, as necessary, the pollution prevention plan and existing SOPs, BMPs, and work practices to ensure that it has been updated or otherwise modified to reflect current conditions, that measures to reduce or eliminate pollutant loadings selected in the plan are adequate and are being properly implemented in accordance with the terms of the permit, and whether any additional controls are needed.

The Permittee must submit a biennial progress report by [DATE] (within 2 years after submittal of the update Pollution Prevention Plan required in Special Condition S22.B) and every two years thereafter. The report must identify the implementation status of each pollution prevention opportunity selected, the benefits or other results of implementation actions completed, and any modifications or updates to the plan. The report must also include a summary of the results of stormwater inspections.

Continuous Improvement

In maintaining, implementing, and updating the pollution prevention plan, the Permittee should employ continuous improvement principles, including the systematic and ongoing identification, evaluation, and implementation or pollution prevention opportunities in all decisions having environmental consequences.

S22.C. Stormwater AKART Analysis and Engineering Report

The Permittee must determine if the existing Best Management Practices (BMPs) employed at the facility provide all known, available, and reasonable methods of prevention, control, and treatment (AKART) for stormwater at Outfalls 002, 003, and 006, with emphasis on zinc for Outfall 003, coker area fines, copper, and fecal coliform source identification/mitigation. If the evaluation demonstrates that the Permittee is not providing AKART for stormwater, the Permittee must propose changes to the existing BMPs or new BMPs to meet the AKART standard and a schedule for implementing the proposed changes or new BMPs.

The AKART analysis must consist of a site assessment that identifies sources of pollutants in the stormwater discharges. The evaluation must also include an economic analysis, environmental analysis, and industry analysis of stormwater BMPs.

The AKART analysis must be conducted by an engineer who has experience and/or training in pollutant sources in stormwater and stormwater BMPs.

The Permittee must submit an AKART Analysis and Engineering Report to Ecology for review and approval by [DATE](2 years after permit effective date).

The Permittee may request additional time to submit the AKART Analysis and Engineering Report. If Ecology agrees to give additional time to submit the AKART Analysis and Engineering Report, approval will be by letter to the Permittee.

The engineering report must be prepared by or under the supervision of a licensed professional engineer. The report must include:

1. A site map identifying significant features including, but not limited to, stormwater drainage areas, stormwater drainage/conveyance infrastructure, tanks, sampling locations, pervious and impervious areas, buildings, existing physical stormwater controls, and surface waters.
2. A description of the stormwater discharges at Outfalls 002, 003, and 006.
3. For each stormwater drainage basin, an assessment and description of existing and potential sources of pollutants in stormwater, with emphasis on zinc for Outfall 003.
 - a. Sources of pollutants include adjacent process areas and a discussion of track-out of materials and the potential contaminants from these areas
4. For each stormwater drainage basin, a description of existing operational, structural, and treatment BMPs applied to the stormwater discharges or pollutant sources.
5. An evaluation of existing operational, structural, and treatment BMPs to determine if they are adequate to attain AKART and meet water quality standards in the receiving water.
6. An identification of the range of management options for prevention, control, and treatment of pollutants in the stormwater discharges including operational source controls, structural source controls, and treatment measures.

At a minimum, the Permittee must evaluate applicable BMPs in *the 2024 Stormwater Management Manual for Western Washington* (Ecology, 2024) and the BMPs in *Suggested Practices to Reduce Zinc Concentrations in Industrial Stormwater Discharges* (Ecology Publication No. 08-10-025) (Ecology, 2008).
7. An engineering economic analysis addressing the cost for the management options identified above. The economic analysis must address the cost of implementation including installation, operation and maintenance, housekeeping, and regulatory compliance costs and evaluate the overall cost per amount of pollutant prevented, treated, or otherwise controlled.
8. An environmental analysis addressing the benefit to the receiving water of the pollutant prevented, treated, or controlled for each option. This analysis must include the ability for each option to meet applicable water quality standards in the receiving water.
9. An analysis of practices of comparable industrial facilities for similar sources of stormwater.
10. Recommendations and implementation schedules for changes to existing operational, structural, or treatment BMPs.
11. Recommendations and implementation schedules for new operational, structural, or treatment BMPs.

The report should include specific references to:

- Areas with no existing BMPs
- Areas with existing BMPs
- Potential sources of contaminants of concern

The evaluation of each area should include:

- A description of the operational and/or structural BMPs that are currently being implemented to prevent or reduce pollutants, including a qualitative assessment of the effectiveness of each BMP
- A description of potential additional operational and/or structural BMPs that will or may be implemented in order to apply AKART on a site-specific basis to prevent or reduce pollutants
- A description of the potential monitoring or other assessment and evaluation efforts that will or may be implemented to monitor, assess, or evaluate the effectiveness of the additional BMPs
- A schedule for implementing the additional BMPs including, as appropriate: funding, training, purchasing, construction, monitoring, and other assessment and evaluation components of implementation
- Measures to minimize impervious surfaces
- Measures to minimize loss of native vegetation
- Other measures to minimize stormwater runoff

In order to review opportunities to improve BMP implementation on-site, HF Sinclair must consult:

- Recommended operational and structural Source Control BMPs listed in Stormwater Management Manual for Western Washington (Volume IV)
- Runoff Treatment BMPs listed in Stormwater Management Manual for Western Washington (Volume V)
- Erosion and sediment control BMPs listed in Stormwater Management Manual for Western Washington (Volume II) (e.g., if turbidity, sediment, or associated pollutants need to be addressed)
- Manufactured Treatment Devices that have been evaluated through Ecology's TAPE or CTAPE program
- BMPs that are "demonstrably equivalent", as defined by the Industrial Stormwater General Permit

A map should be included with the report that documents all implemented BMP areas. The AKART analysis should include upstream sampling for investigating sources of contaminants of concern.

For Outfall 002, upstream sources to investigate should include the:

- Track out from the delayed coking unit and other adjacent process areas
- Employee parking lot
- Contractors parking lot

For Outfall 003, upstream sources to investigate should include the:

- Recovery yard
- Spoils area
- Flare stack

For Outfall 006, upstream sources to investigate should include the:

- East main substation
- Eastern side of the Sulfur Recovery Units 16, 17, and 18
- Track out from adjacent process areas

After Ecology reviews the AKART Analysis and Engineering Report and agrees with any proposed recommendations that include new structural or treatment BMPs, the Permittee will be required to submit engineering report(s) and plans and specifications per WAC 173-240-110,-130, and -140.

Any proposed changes to existing BMPs or new BMPs identified by the AKART Analysis and Engineering Report must be implemented on a schedule approved by Ecology but no later than **[DATE](3 years after the permit effective date)**.

The Permittee must analyze the samples in accordance with the requirements in Appendix B. The monitoring results must be reported in the monthly DMR per Special Condition S3.A.

The Permittee must also update the Pollution Prevention Plan to incorporate any changes to existing BMPs or new BMPs recommended in the approved AKART Analysis and Engineering Report. The Permittee must modify the Pollution Prevention Plan within sixty (60) days of implementing changes to existing BMPs or new BMPs.

S23. Construction Stormwater

Construction stormwater includes stormwater associated with construction activity and construction support activities at the construction site (an onsite portable rock crusher, equipment staging yards, material storage areas, borrow areas, etc.).

S23.A. Authorization and Conditions to Discharge Construction Stormwater

Beginning on the effective date of this permit, the Permittee is authorized to discharge construction stormwater to Outfall 001, Outfall 002, Outfall 003, Outfall 006, subject to the following requirements and limitations:

1. Construction stormwater discharges must not cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), ground water quality standards (Chapter 173-200 WAC), sediment management standards (Chapter 173-204 WAC), and human health-based criteria in the National Toxics Rule (40 CFR Part 131.36). Discharges that do not comply with these standards are not authorized.
2. Prior to the discharge of construction stormwater to waters of the state, the Permittee must apply all known, available, and reasonable methods of prevention, control, and treatment (AKART). This includes the preparation and implementation of an adequate Construction Stormwater Pollution Prevention Plan (CSWPPP) with all appropriate best management practices (BMPs) installed and maintained in accordance with the CSWPPP and the terms and conditions of this permit.
3. Ecology presumes that a Permittee complies with water quality standards unless discharge monitoring data or other site-specific information demonstrates that a discharge causes or contributes to a violation of water quality standards when the Permittee complies with the following conditions. The Permittee must fully:
 - a. Comply with all permit conditions – including planning, sampling, monitoring, reporting, and recordkeeping conditions.
 - b. Implement construction stormwater BMPs contained in Ecology's 2024 Stormwater Management Manual for Western Washington (Ecology, 2024), or construction stormwater BMPs that are demonstrably equivalent to BMPs contained in stormwater technical manuals published or approved by Ecology, including the proper selection, implementation, and maintenance of all applicable and appropriate BMPs for on-site pollution control.
4. This authorization only applies to stormwater associated with construction activities or construction support activities conducted within the boundaries of the permitted facility. This authorization does not apply to construction stormwater that has come in contact with contaminated soil and/or contaminated groundwater.
5. Should the Permittee generate stormwater outside the boundaries of the permitted facility from construction activities or construction support activities,

the Permittee is authorized to receive this stormwater for treatment in the Permittee's wastewater treatment system.

S23.B. Construction Stormwater Pollution Prevention Plans

A standard Construction Stormwater Pollution Prevention Plan (CSWPPP) for construction activities greater than one acre and less than five (1-5) acres, including construction dewatering, must be updated (prepared) and submitted to the Ecology by [DATE] (1 year after the permit effective date) for review and approval.

Project details for each construction project and for any site-specific issues for that project that require additional BMPs must be submitted to Ecology at least 90 days prior to the start of construction.

The Permittee must prepare a project specific CSWPPP for construction activity, including construction dewatering, occurring on sites greater than or equal to 1 acre, prior to the start of each construction project. The Permittee must also prepare a project-specific CSWPPP for construction activity occurring on sites less than 1 acre if construction activity involves significant concrete work (1,000 cubic yards of poured concrete or recycled concrete over the life of a project) or the use of engineering soils (soil amendments including but not limited to Portland cement-treated base (CTB), cement kiln dust (CKD), or fly ash). The Permittee must submit the project specific CSWPPP to Ecology at least 90 days prior to the start of construction.

Each CSWPPP must be prepared in accordance with the objectives and requirements identified in Appendix D of this permit. The Permittee must implement each CSWPPP in accordance with the requirements of this permit beginning with initial soil disturbance and until final stabilization.

S23.C. Site Logbook

The Permittee must maintain a site logbook that contains a record of implementation of its CSWPPP and other permit requirements including the installation and maintenance of construction stormwater BMPs, site inspections, and stormwater monitoring.

S23.D. Site Inspections

Site inspections must include all areas disturbed by construction activities, all construction stormwater BMPs, and all construction stormwater discharge points. Construction sites one acre or larger or sites less than one acre that involve significant concrete work or use of engineered soils that discharge stormwater (directly or indirectly) to surface waters of the state must have site inspections conducted by a Certified Erosion and Sediment Control Lead (CESCL).

1. The Permittee must examine construction stormwater visually for the presence of suspended sediment, turbidity, discoloration, and oil sheen. The Permittee must evaluate the effectiveness of BMPs and determine if it is

- necessary to install, maintain, or repair BMPs to improve the quality of construction stormwater discharges. Based on the results of the inspection, the Permittee must correct the problems identified by:
- a. Reviewing the CSWPPP for compliance with Appendix D and making appropriate revisions within 7 days of the inspection;
 - b. Immediately beginning the process of fully implementing and maintaining appropriate construction stormwater source control and/or treatment BMPs as soon as possible, addressing the problems no later than within 10 days of the inspection. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when an extension is requested by the Permittee within the initial 10-day response period; and
 - c. Documenting BMP implementation and maintenance in the site logbook.
2. The CESCL must inspect all areas disturbed by construction activities, all BMPs, and all construction stormwater discharge points at least once every calendar week and within 24 hours of any discharge from the site. (For purposes of this condition, individual discharge events that last more than one day do not require daily inspections. For example, if a construction stormwater pond discharges continuously over the course of a week, only one inspection is required that week.) The Permittee may reduce the inspection frequency for temporarily stabilized inactive sites to once every calendar month.
 3. The Permittee must have staff knowledgeable in the principles and practices of erosion and sediment control. The CESCL must have the skills to assess the:
 - a. Site conditions and construction activities that could impact the quality of stormwater, and
 - b. Effectiveness of erosion and sediment control measures used to control the quality of stormwater discharges.
 4. The CSWPPP must identify the CESCL who must be present on site or on-call at all times. The CESCL must obtain certification through an approved erosion and sediment control training program that meets the minimum training standards established by Ecology (see BMP C160 in the *Stormwater Management Manual for Western Washington* (Ecology, 2024)).
 5. The CESCL must summarize the results of each inspection in an inspection report or checklist and enter the report/checklist info, or attach it to, the site logbook. At a minimum, each inspection report or checklist must include:
 - a. Inspection date and time.
 - b. Weather information, the general conditions during the inspection and the approximate amount of precipitation since the last inspection, and precipitation within the last 24 hours.
 - c. A summary or list of all implemented BMPs, including observations of all erosion/sediment control structures or practices.

- d. A description of the locations of;
 - (i) BMPs inspected;
 - (ii) BMPs that need maintenance and why;
 - (iii) BMPs that failed to operate as designed or intended; and
 - (iv) Where additional or different BMPs are needed, and why.
- e. A description of stormwater discharged from the construction site. The CESCL must note the presence of suspended sediment, turbidity, discoloration, and oil sheen, as applicable.
- f. Any water quality monitoring performed during the inspection.
- g. General comments and notes, including a brief description of any BMP repairs, maintenance, or installations made following the inspection.
- h. A summary report and a schedule of implementation of the remedial actions that the Permittee plans to take if the site inspection indicates that the site is out of compliance. The remedial actions taken must meet the requirements of the CSWPPP and the permit.
- i. The name, title, and signature of the person conducting the site inspection, a phone number or other reliable method to reach this person, and the following statement: "I certify that this report is true, accurate, and complete, to the best of my knowledge and belief."

S23.E. General Sampling Requirements

1. The Permittee must sample the stormwater discharge from construction sites 1 or more acres. Sampling is also required for construction sites less than 1 acre if construction activity involves significant concrete work or the use of engineering soils.
2. Sampling is not required for stormwater that is discharged directly to the Permittee's onsite wastewater treatment system.
3. Sampling is not required outside of normal working hours or during unsafe conditions.
4. If a Permittee is unable to sample during a monitoring period, the Permittee must include a brief explanation in the monthly DMR.
5. Sampling is required at all discharge points where construction stormwater is discharged from the construction site.
6. The Permittee must identify all sampling point(s) on the CSWPPP site map and clearly mark these points in the field with a flag, tape, stake, or other visible marker.
7. Samples must be representative of flow and characteristics of the discharge. The monitoring requirements for projects that discharge off site are summarized below:

Table 25 - Off-Site Discharge Requirements

Size of Soil Disturbance ^a	Weekly Site Inspections	Weekly Turbidity Sampling	Weekly pH Sampling ^b	CESCL Required for Inspections?
Sites < 1 acre that involve significant concrete work or the use of engineering soils ^b	Required	Not Required	Required	Yes
Sites > 1 acre	Required	Required	Required for sites that involve significant concrete work or the use of engineering soils ^b	Yes

Footnotes:

^a Soil disturbance is calculated by adding together all areas that will be affected by construction activity. Construction activity means clearing, grading, excavation, and any other activity that disturbs the surface of the land, including ingress/egress from the site.

^b Significant concrete work is defined as 1,000 cubic yards of poured concrete or recycled concrete over the life of a project. The use of engineering soils includes soil amendments including but not limited to Portland cement-treated base (CTB), cement kiln dust (CKD), or fly ash.

S23.F. Turbidity Sampling, Benchmark, and Reporting Trigger

If construction activity involves the disturbance of 1 or more acres, the Permittee must conduct turbidity sampling in accordance with the table and the requirements below. Sampling is not required on sites that disturb less than an acre.

1. The Permittee must sample all discharge points at least once every calendar week when stormwater discharges from the construction site. Sampling is not required when there is no discharge during a calendar week.
2. The Permittee may reduce the sampling frequency for temporarily stabilized inactive sites to once every calendar month.
3. The Permittee must perform turbidity analysis with a calibrated turbidity meter (turbidimeter) either on-site or at an accredited laboratory. The Permittee must record the results in the site logbook in Nephelometric Turbidity Units (NTU).
4. The benchmark value for turbidity is 25 NTUs or less.
 - a. Turbidity 26-249 NTUs.
 If the discharge turbidity is 26 to 249 NTUs, the Permittee must:
 - (i) Review the CSWPPP for compliance with Appendix D and make appropriate revisions within 7 days of the date the discharge exceeded the benchmark.

- (ii) Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems within 10 days of the date of the discharge exceeded the benchmark. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when the Permittee requests an extension within the initial 10-day response period.
- (iii) Document BMP implementation and maintenance in the site logbook.
- b. Turbidity 250 NTUs or greater.
 If the discharge turbidity is greater than or equal to 250 NTUs, the Permittee must complete the reporting and adaptive management process described below:
 - (i) Report the exceedance to the Ecology regional office at the telephone listed below and to the Industrial Section permit manager within 24 hours, in accordance with Condition S3.F.
 Northwest Regional Office 425-649-7000
 - (ii) Review the CSWPPP for compliance with Appendix D and make appropriate revisions within 7 days of the date the discharge exceeded the benchmark.
 - (iii) Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems within 10 days of the date of the discharge exceeded the benchmark. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when the Permittee requests an extension within the initial 10-day response period.
 - (iv) Document BMP implementation and maintenance in the site logbook.
 - (v) Sample discharge daily until turbidity is 25 NTUs or lower.

Table 26 - Turbidity monitoring and sampling requirements for sites disturbing ≥ 1 acre

Parameter	Unit	Analytical Method	Sampling Frequency	Benchmark Value	Phone Reporting Trigger Value
Turbidity	NTU	SM2130	Weekly, if discharging	25	250

S23.G. pH Sampling Requirements

For sites where construction activity involves significant concrete work or the use of engineered soils, regardless of acreage, the Permittee must conduct pH sampling.

1. For construction sites with significant concrete work, the Permittee must begin the pH sampling when the concrete is first poured and exposed to precipitation and continue sampling weekly throughout and after the concrete

- pour and curing period until the stormwater pH is in the range of 6.5 to 8.5 standard units.
2. For construction sites with recycled concrete work, the Permittee must begin the weekly pH sampling period when the recycled concrete is first exposed to precipitation and continue sampling weekly throughout until the recycled concrete is fully stabilized with the stormwater pH in the range of 6.5 to 8.5.
 3. For construction sites with engineered soils, the Permittee must begin the pH sampling period when the soil amendments are first exposed to precipitation and continue sampling weekly throughout until the engineered soils are fully stabilized with the stormwater pH in the range of 6.5 to 8.5.
 4. The Permittee must sample pH in the sediment trap/pond(s) or other locations that receive stormwater runoff from the area of significant concrete work or engineered soils before the stormwater discharges to surface waters.
 5. The Permittee must perform pH analysis on-site with a calibrated pH meter.
 6. The Permittee must record pH sampling results in the site logbook.
 7. The benchmark value for pH is 8.5. Any time sampling indicates that pH is 8.5 or greater, the Permittee must either:
 - a. Prevent the high pH water (8.5 or above) from entering storm sewer systems or surface waters; or
 - b. If necessary, adjust or neutralize the high pH water, until it is in the range of 6.5 to 8.5 using an appropriate treatment BMP such as carbon dioxide (CO₂) sparging or dry ice. The Permittee must obtain written approval from Ecology before using any form of chemical treatment other than CO₂ sparging or dry ice.

S23.H. Construction Stormwater Reporting Requirements

The Permittee must report results of construction stormwater monitoring in the monthly DMR in accordance with the requirements in Special Condition S2.A.

REFERENCES

- Doneker, R. L., & Jirka, G. H. (2007). *CORMIX User Manual: A Hydrodynamic Mixing Zone Model and Decision Support System for Pollutant Discharges into Surface Waters*, EPA-823-K-07-001. Retrieved from <http://www.mixzon.com/downloads/>
- Ecology. (2004). *Information Manual for Treatment Plant Operators, Publication 04-10-020*. Retrieved from <https://apps.ecology.wa.gov/publications/SummaryPages/0410020.html>
- Ecology. (2016). *Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies*. Retrieved from <https://apps.ecology.wa.gov/publications/summarypages/0403030.html>
- Ecology. (2016). *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria (Publication 95-80)*. Retrieved from <https://apps.ecology.wa.gov/publications/SummaryPages/9580.html>

- Ecology. (2018). *Water Quality Program Permit Writer's Manual, Publication 92-109*. Retrieved from <https://apps.ecology.wa.gov/publications/summarypages/92109.html>
- Ecology. (2021). *Sediment Cleanup User's Manual SCUM*. Retrieved from <https://apps.ecology.wa.gov/publications/SummaryPages/1209057.html>
- Ecology. (2022). *Standard Operating Procedure EAP080, Version 2.2: Continuous Temperature Monitoring of Freshwater Rivers and Streams, Publication 22-03-216*. Retrieved from <https://apps.ecology.wa.gov/publications/SummaryPages/2203216.html>
- Ecology. (2023). *Criteria for Sewage Works Design, Publication 98-37 (Orange Book)*. Retrieved from <https://apps.ecology.wa.gov/publications/SummaryPages/9837.html>
- Frick, W. E., Roberts, P. J., Davis, L. R., Keyes, D. J., & Baumgartner, G. K. (2003). *Dilution Models for Effluent Discharges, 4th Edition (Visual Plumes)*. Athens, GA: Ecosystems Research Division, USEPA. Retrieved from <https://www.epa.gov/sites/production/files/documents/VP-Manual.pdf>
- Kilpatrick, F. A., & Cobb, E. D. (1985). *Measurement of Discharge Using Tracers, Chapter A16, Techniques of Water-Resources Investigations of the USGS, Book 3, Application of Hydraulics*. Reston VA: USGS. Retrieved from https://pubs.usgs.gov/twri/twri3-a16/pdf/TWRI_3-A16.pdf
- USEPA. (1996). *Method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels*. Retrieved from https://www.epa.gov/sites/default/files/2015-10/documents/method_1669_1996.pdf
- Wilson, J. F., Cobb, E. D., & Kilpatrick, F. A. (1986). *Fluorometric Procedures for Dye Tracing, Chapter A12. Techniques of Water-Resources Investigations of the USGS, Book 3, Application of Hydraulics*. Reston, VA: USGS. Retrieved from https://pubs.usgs.gov/twri/twri3-a12/pdf/TWRI_3-A12.pdf

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

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

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

2. All reports required by this permit and other information requested by Ecology must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described above and submitted to Ecology.
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

3. Changes to authorization. If an authorization under paragraph G1.2., above, is no longer accurate because a different individual or position has responsibility for overall operation of the facility, a new authorization satisfying the requirements of paragraph G1.2., above, must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.
4. Certification. Any person signing a document under this section must make the following certification:

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

G2. RIGHT OF INSPECTION AND ENTRY

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

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

G3. PERMIT ACTIONS

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

1. The following are causes for terminating this permit during its term, or for denying a permit renewal application:
 - a. Violation of any permit term or condition.

- b. Obtaining a permit by misrepresentation or failure to disclose all relevant facts.
 - c. A material change in quantity or type of waste disposal.
 - d. Determination that the permitted activity endangers human health or the environment, or contributes to Water Quality Standards violations and can only be regulated to acceptable levels by modification or termination.
 - e. A change in any condition requires either a temporary or permanent reduction, or elimination of any discharge or sludge use or disposal practice controlled by the permit.
 - f. Nonpayment of fees assessed pursuant to RCW 90.48.465.
 - g. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.
2. The following are causes for modification but not revocation and reissuance except when the Permittee requests or agrees:
- a. A material change in the condition of waters of the State.
 - b. New information not available at the time of permit issuance that would have justified the application of different permit conditions.
 - c. Material and substantial alterations or additions to the permitted facility or activities which occurred after this permit issuance.
 - d. Promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision.
 - e. The Permittee has requested a modification based on other rationale meeting the criteria of 40 CFR Part 122.62.
 - f. Ecology has determined that good cause exists for modification of a compliance schedule, and the modification will not violate statutory deadlines.
 - g. Incorporation of an approved local pretreatment program into a municipality's permit.
3. The following are causes for modification or, alternatively, revocation and reissuance:
- a. The permitted facility being determined to be a new source pursuant to 40 CFR Part 122.29(b).
 - b. A significant change in the nature or an increase in quantity of pollutants discharged.
 - c. A significant change in the Permittee's sludge use or disposal practices. Following such notice, and the submittal of a new application or supplement to the existing application, along with required Engineering Plans and Reports, this permit may be modified, or revoked and reissued pursuant to 40 CFR Part 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by the permit constitutes a violation.

G4. REPORTING PLANNED CHANGES

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

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

G5. PLAN REVIEW REQUIRED

Prior to constructing or modifying any wastewater control facilities, an Engineering Report and detailed Plans and Specifications must be submitted to Ecology for approval in accordance with Chapter 173-240 WAC. Engineering Reports, Plans, and Specifications must be submitted at least 180 days prior to the planned start of construction unless a shorter time is approved by Ecology. Facilities must be constructed and operated in accordance with the approval plans.

G6. COMPLIANCE WITH OTHER LAWS AND STATUTES

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

G7. TRANSFER OF THIS PERMIT

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

1. Transfer by Modification

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

2. Automatic Transfers

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

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

G8. REDUCED PRODUCTION FOR COMPLIANCE

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

G9. REMOVED SUBSTANCES

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

G10. DUTY TO PROVIDE INFORMATION

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

G11. OTHER REQUIREMENTS OF 40 CFR

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

G12. ADDITIONAL MONITORING

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

G13. PAYMENT OF FEES

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

G14. PENALTIES FOR VIOLATION OF PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit is deemed guilty of a crime, and upon conviction thereof, shall be punished by a fine up to \$10,000 and costs of prosecution, or by imprisonment in the discretion of the

court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

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

G15. UPSET

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

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

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

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

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

G16. PROPERTY RIGHTS

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

G17. DUTY TO COMPLY

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

G18. TOXIC POLLUTANTS

The Permittee must comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the

regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G19. PENALTIES FOR TAMPERING

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

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

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

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

G21. COMPLIANCE SCHEDULES

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

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

The Permittee must use the specified analytical methods, detection levels (DLs) ¹ and quantitation levels (QLs) ² in the following table for permit and application required monitoring unless:

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

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

If the Permittee is unable to obtain the required DL and QL due to matrix effects, the Permittee must submit a matrix-specific detection level (MDL) and a quantitation level (QL) to Ecology with appropriate laboratory documentation when the detection levels are too high to provide results near or below criteria (or applicable permit limits).

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

The list also includes:

- Pulp and paper pollutants identified in 40 CFR Part 430.
- Dioxin and furan congeners identified using EPA Method 1613.
- Per- and polyfluoroalkyl substances (PFAS) identified using EPA Method 1633.

Appendix A Table 1 – Conventional pollutants

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

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

Appendix A Table 2 - Nonconventional pollutants

Pollutant	CAS number (if available)	Recommended analytical protocol	Detection level (DL) ¹ µg/L unless specified	Quantitation level (QL) ² µg/L unless specified
Alkalinity, Total		SM2320-B		5 mg/L as CaCO ₃
Aluminum, Total	7429-90-5	200.8	2.0	10
Ammonia, Total (as N)		SM4500-NH3-B and C/D/E/G/H		20
Barium Total	7440-39-3	200.8	0.5	2.0
BTEX (benzene +toluene + ethylbenzene + m,o,p xylenes)		EPA SW 846 8021/8260	1	2
Boron, Total	7440-42-8	200.8	2.0	10.0
Chemical Oxygen Demand		SM5220-D		10 mg/L
Chloride		SM4500-Cl B/C/D/E and SM4110 B		Sample and limit dependent
Chlorine, Total Residual		SM4500 Cl G	10	50
Cobalt, Total	7440-48-4	200.8	0.05	0.25
Color		SM2120 B/C/E		10 color units
Dissolved oxygen		SM4500-OC/OG		0.2 mg/L
E.coli		SM 9221B, 9221F, 9223B	N/A	Specified in method; sample aliquot dependent
Enterococci		EPA 1600 SM 9230B, 9230C, 9230D,	N/A	Specified in method; sample aliquot dependent

Flow		Calibrated device		
Fluoride	16984-48-8	SM4500-F E	25	100
Hardness, Total		SM2340B		200 as CaCO ₃
Iron, Total	7439-89-6	200.7	12.5	50
Magnesium, Total	7439-95-4	200.7	10	50
Manganese, Total	7439-96-5	200.8	0.1	0.5
Molybdenum, Total	7439-98-7	200.8	0.1	0.5
Nitrate + Nitrite Nitrogen (as N)		SM4500-NO ₃ - E/F/H		100
Nitrogen, Total Kjeldahl (as N)		SM4500-N _{org} B/C and SM4500NH ₃ - B/C/D/EF/G/H		300
NWTPH Dx ⁴		Ecology NWTPH Dx	250	250
NWTPH Gx ⁵		Ecology NWTPH Gx	250	250
Phosphorus, Total (as P)		SM 4500 PB followed by SM4500-PE/PF	3	10
Salinity		SM2520-B		3 practical salinity units or scale (PSU or PSS)
Settleable Solids		SM2540 -F		Sample and limit dependent
Soluble Reactive Phosphorus (as P)		SM4500-P E/F/G	3	10
Sulfate (as mg/L SO ₄)		SM4110-B		0.2 mg/L
Sulfide (as mg/L S)		SM4500-S2F/D/G		0.2 mg/L
Sulfite (as mg/L SO ₃)		SM4500-SO3B		2 mg/L
Temperature		Analog recorder or micro-recording devices (thermistors)		0.2°C
Tin, Total	7440-31-5	200.8	0.3	1.5
Titanium, Total	7440-32-6	200.8	0.5	2.5
Total Coliform		SM 9221B SM 9222B	N/A	Specified in method; sample aliquot dependent
Total Organic Carbon		SM5310-B/C/D		1 mg/L

Total Dissolved solids		SM2540 C		20 mg/L
------------------------	--	----------	--	---------

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

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

Appendix A Table 4 - Priority pollutants: Acid compounds

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

2,4-Dimethylphenol	34	105-67-9	625.1	2.7	8.1
4,6-dinitro-o-cresol (2-methyl-4,6,- dinitrophenol)	60	534-52-1	625.1/1625B	24	72
2,4 dinitrophenol	59	51-28-5	625.1	42	126
2-Nitrophenol	57	88-75-5	625.1	3.6	10.8
4-Nitrophenol	58	100-02-7	625.1	2.4	7.2
Parachlorometa cresol (4-chloro-3- methylphenol)	22	59-50-7	625.1	3.0	9.0
Pentachlorophenol	64	87-86-5	625.1	3.6	10.8
Phenol	65	108-95-2	625.1	1.5	4.5
2,4,6-Trichlorophenol	21	88-06-2	625.1	2.7	8.1

Appendix A Table 5 - Priority pollutants: Volatile compounds

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

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

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

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

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

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

Appendix A Table 7 - Dioxin

Priority pollutant	PP #	CAS number (if available)	Recommended analytical protocol	Detection level (DL) ¹ µg/L unless specified	Quantitation level (QL) ² µg/L unless specified
2,3,7,8-Tetra-Chlorodibenzo-P-Dioxin (2,3,7,8 TCDD)	129	1746-01-6	1613B	1.3 pg/L	5 pg/L

Appendix A Table 8 - Pesticides and PCBs

Priority pollutants	PP #	CAS number (if available)	Recommended analytical protocol	Detection level (DL) ¹ µg/L unless specified	Quantitation level (QL) ² µg/L unless specified
Aldrin	89	309-00-2	608.3	4.0 ng/L	12 ng/L
alpha-BHC	102	319-84-6	608.3	3.0 ng/L	9.0 ng/L
beta-BHC	103	319-85-7	608.3	6.0 ng/L	18 ng/L
gamma-BHC (Lindane)	104	58-89-9	608.3	4.0 ng/L	12 ng/L
delta-BHC	105	319-86-8	608.3	9.0 ng/L	27 ng/L
Chlordane ⁹	91	57-74-9	608.3	14 ng/L	42 ng/L
4,4'-DDT	92	50-29-3	608.3	12 ng/L	36 ng/L
4,4'-DDE	93	72-55-9	608.3	4.0 ng/L	12 ng/L
4,4' DDD	94	72-54-8	608.3	11ng/L	33 ng/L
Dieldrin	90	60-57-1	608.3	2.0 ng/L	6.0 ng/L
alpha-Endosulfan	95	959-98-8	608.3	14 ng/L	42 ng/L
beta-Endosulfan	96	33213-65-9	608.3	4.0 ng/L	12 ng/L
Endosulfan Sulfate	97	1031-07-8	608.3	66 ng/L	198 ng/L
Endrin	98	72-20-8	608.3	6.0 ng/L	18 ng/L
Endrin Aldehyde	99	7421-93-4	608.3	23 ng/L	70 ng/L

Heptachlor	100	76-44-8	608.3	3.0 ng/L	9.0 ng/L
Heptachlor Epoxide	101	1024-57-3	608.3	83 ng/L	249 ng/L
PCB-1242 ¹⁰	106	53469-21-9	608.3	0.065	0.195
PCB-1254	107	11097-69-1	608.3	0.065	0.195
PCB-1221	108	11104-28-2	608.3	0.065	0.195
PCB-1232	109	11141-16-5	608.3	0.065	0.195
PCB-1248	110	12672-29-6	608.3	0.065	0.195
PCB-1260	111	11096-82-5	608.3	0.065	0.195
PCB-1016 ¹⁰	112	12674-11-2	608.3	0.065	0.195
Toxaphene	113	8001-35-2	608.3	240 ng/L	720 ng/L

Appendix A Table 9 - Nonconventionals – dioxin & furan congeners

Pollutant	CAS number (if available)	Recommended analytical protocol	Detection level (DL) ¹ µg/L unless specified	Quantitation level (QL) ² µg/L unless specified
2,3,7,8- Tetrachlorodibenzo-p-dioxin (TCDD) (this is a priority pollutant also listed in Table 8)	1746-01-6	EPA 1613	1.3 pg/L	5 pg/L
Total TCDD	41903-57-5			
2,3,7,8- Tetrachlorodibenzofuran (TCDF)	51207-31-9		1.3 pg/L	5 pg/L
Total-TCDF	55722-27-5			
1,2,3,7,8- Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4			
Total-PeCDD	36088-22-9			
1,2,3,7,8- Pentachlorodibenzofuran (PeCDF)	57117-41-6			
2,3,4,7,8-PeCDF	57117-31-4			
Total-PeCDF	30402-15-4			
1,2,3,4,7,8- Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6			
1,2,3,6,7,8-HxCDD	57653-85-7			
1,2,3,7,8,9-HxCDD	19408-74-3			
Total-HxCDD	34465-46-8			

1,2,3,4,7,8- Hexachlorodibenzofuran (HxCDF)	70648-26-9			
1,2,3,6,7,8-HxCDF	57117-44-9			
1,2,3,7,8,9-HxCDF	72918-21-9			
2,3,4,6,7,8-HxCDF	60851-34-5			
Total-HxCDF	55684-94-1			
1,2,3,4,6,7,8- Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9			
Total-HpCDD	37871-00-4			
1,2,3,4,6,7,8- Heptachlorodibenzofuran (HpCDF)	67562-39-4			
1,2,3,4,7,8,9-HpCDF	55673-89-7			
Total-HpCDF	38998-75-3			
Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9			
Octachlorodibenzofuran (OCDF)	39001-02-0			

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

Pollutant	CAS number (if available)	Recommended analytical protocol	Detection level (DL) ¹ µg/L unless specified	Quantitation level (QL) ² µg/L unless specified
Perfluorobutanoic acid (PFBA)	375-22-4	1633	0.330 ng/L	6.4 ng/L
Perfluoropentanoic acid (PFPeA)	2706-90-3	1633	0.196 ng/L	3.2 ng/L
Perfluorohexanoic acid (PFHxA)	307-24-4	1633	0.318 ng/L	1.6 ng/L
Perfluoroheptanoic acid (PFHpA)	375-85-9	1633	0.221 ng/L	1.6 ng/L
Perfluorooctanoic acid (PFOA)	335-67-1	1633	0.302 ng/L	1.6 ng/L
Perfluorononanoic acid (PFNA)	375-95-1	1633	0.221 ng/L	1.6 ng/L
Perfluorodecanoic acid (PFDA)	335-76-2	1633	0.333 ng/L	1.6 ng/L
Perfluoroundecanoic acid (PFUnA)	2058-94-8	1633	0.264 ng/L	1.6 ng/L
Perfluorododecanoic acid (PFDoA)	307-55-1	1633	0.379 ng/L	1.6 ng/L
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	1633	0.238 ng/L	1.6 ng/L
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	1633	0.264 ng/L	1.6 ng/L
Perfluorobutanesulfonic acid (PFBS)	375-73-5	1633	0.245 ng/L	1.6 ng/L
Perfluoropentanesulfonic acid (PFPeS)	2706-91-4	1633	0.204 ng/L	1.6 ng/L

Perfluorohexanesulfonic acid (PFHxS)	355-46-4	1633	0.217 ng/L	1.6 ng/L
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	1633	0.137 ng/L	1.6 ng/L
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	1633	0.327 ng/L	1.6 ng/L
Perfluorononanesulfonic acid (PFNS)	68259-12-1	1633	0.303 ng/L	1.6 ng/L
Perfluorodecanesulfonic acid (PFDS)	335-77-3	1633	0.334 ng/L	1.6 ng/L
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	1633	0.179 ng/L	1.6 ng/L
1H,1H,2H,2H-Perfluorohexanesulfonic acid (4:2FTS)	757124-72-4	1633	2.281 ng/L	6.4 ng/L
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2FTS)	27619-97-2	1633	3.973 ng/L	6.4 ng/L
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2FTS)	39108-34-4	1633	1.566 ng/L	6.4 ng/L
Perfluorooctanesulfonamide (PFOSA)	754-91-6	1633	0.227 ng/L	1.6 ng/L
N-methyl perfluorooctanesulfonamide (NMeFOSA)	31506-32-8	1633	0.196 ng/L	1.6 ng/L
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	4151-50-2	1633	0.585 ng/L	1.6 ng/L
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	1633	0.586 ng/L	1.6 ng/L
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	1633	0.324 ng/L	1.6 ng/L
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	24448-09-7	1633	1.191 ng/L	16 ng/L
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	1691-99-2	1633	1.022 ng/L	16 ng/L
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	1633	0.406 ng/L	6.4 ng/L
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	1633	0.779 ng/L	6.4 ng/L
Perfluoro(2-ethoxyethane) sulfonic acid (PFEEESA)	113507-82-7	1633	0.137 ng/L	3.2 ng/L
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	1633	0.177 ng/L	3.2 ng/L
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	1633	0.117 ng/L	3.2 ng/L

Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	1633	1.384 ng/L	3.2 ng/L
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9CL-PF3ONS)	756426-58-1	1633	0.871 ng/L	6.4 ng/L
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CL-PF3OUDS)	763051-92-9	1633	0.819 ng/L	6.4 ng/L
3-Perfluoropropyl propanoic acid (3:3FTCA)	356-02-5	1633	0.721 ng/L	8.0 ng/L
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	914637-49-3	1633	5.066 ng/L	40 ng/L
3-Perfluoroheptyl propanoic acid (7:3FTCA)	812-70-4	1633	5.942 ng/L	40 ng/L

Footnotes

- ¹ Detection level (DL) – or method detection limit means the minimum concentration of an analyte (substance) that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results as determined by the procedure given in 40 CFR part 136, Appendix B.
- ² Quantitation Level (QL) – also known as Minimum Level (ML) – The term “minimum level” refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (DL), whichever is higher. Minimum levels may be obtained in several ways: They may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the DL in a method, or the DL determined by a laboratory, by a factor of 3. For the purposes of NPDES compliance monitoring, EPA considers the following terms to be synonymous: “quantitation limit,” “reporting limit,” and “minimum level”.
- ³ Soluble Biochemical Oxygen Demand – method note: First, filter the sample through a Millipore Nylon filter (or equivalent) - pore size of 0.45-0.50 um (prep all filters by filtering 250 ml of laboratory grade deionized water through the filter and discard). Then, analyze sample as per method 5210-B.
- ⁴ Northwest Total Petroleum Hydrocarbons Diesel Extended Range OR NWTPH Dx – Analytical Methods for Petroleum Hydrocarbons <https://apps.ecology.wa.gov/publications/documents/97602.pdf>
- ⁵ Northwest Total Petroleum Hydrocarbons Gasoline Extended Range OR NWTPH Gx – Analytical Methods for Petroleum Hydrocarbons <https://apps.ecology.wa.gov/publications/documents/97602.pdf>
- ⁶ 1, 3-dichloropropylene (mixed isomers) – You may report this parameter as two separate parameters: cis-1, 3-dichloropropene (10061-01-5) and trans-1, 3-dichloropropene (10061-02-6).
- ⁷ Total Benzofluoranthenes – Because Benzo(b)fluoranthene, Benzo(j)fluoranthene and Benzo(k)fluoranthene co-elute you may report these three isomers as total benzofluoranthenes.
- ⁸ Bis(2-Chloro-1-Methylethyl) Ether – This compound was previously listed as Bis(2-Chloroisopropyl) Ether (39638-32-9)
- ⁹ Chlordane – You may report alpha-chlordane (5103-71-9) and gamma-chlordane (5103-74-2) in place of chlordane (57-74-9). If you report alpha and gamma-chlordane, the DL/PQLs that apply are 14/42 ng/L.
- ¹⁰ PCB 1016 & PCB 1242 – You may report these two PCB compounds as one parameter called PCB 1016/1242.

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

APPENDIX B - Calculating Stormwater and Ballast Water Allocations

Special Condition S1.A effluent limitations are base permit limits that apply to process water flow (these values are fixed).

Special Condition S1.B. effluent limitations in the permit are used to calculate incremental limits that apply to stormwater (the Special Condition S1.B limitations are multipliers). The incremental limit, using one of the multipliers, is added to the base permit limit for process and stormwater commingled discharges.

Stormwater flow is calculated by the subtraction of an estimated dry weather flow from the total flow discharged each day.

The stormwater allocations in the permit are based on guidelines in 40 CFR 419.22(e). The allocations for stormwater are intended to apply to runoff from areas associated with industrial activity, not outlying areas such as parking lots and surrounding acreage.

Daily maximum stormwater allocations may only be used on an individual parameter basis when mass loading in the effluent exceeds daily maximum base permit limitations and when measurable rainfall has occurred within the timeframes established in the permit. The permit states that during specified summer months, the Permittee will only be allowed to claim the stormwater allocation when it can be demonstrated that measurable rainfall has occurred at the refinery site during the previous 10 calendar days.

In calculating stormwater allocations, the Permittee will consider the days where total effluent flow exceeds the established dry weather flow. The difference is flow due to stormwater. If the stormwater allocation can be claimed per the conditions of the previous paragraph, the Permittee may multiply the additional flow (in MGD) by the appropriate allocation provided in the permit. This is an incremental permit limit in lbs/day.

Evaluating compliance with the maximum daily permit limitation is on a day-by-day basis comparing the maximum daily discharge for a parameter to the base permit limitation plus the stormwater allocation calculated for that parameter.

Example Calculation 1

Dry weather flow: 0.324 MGD

Parameter: O&G

O&G maximum daily base permit limitation: 74 lbs/day

Maximum daily O&G discharge: 80 lbs/day

Total effluent flow: 0.5 MGD

Flow rate due to rainfall: $0.5 \text{ MGD} - 0.329 \text{ MGD} = 0.176 \text{ MGD}$

O&G maximum daily stormwater allocation: 130 lbs/million gallons

O&G incremental limit due to stormwater: $0.176 \text{ MGD} \times 130 \text{ lbs/MG} = 22.88 \text{ lbs/day}$

O&G maximum daily permit limitation: $74 \text{ lbs/day} + 22.88 \text{ lbs/day} = 96.88 \text{ lbs/day}$

Note: Since 80 lbs/day is less than 96.88 lbs/day, the Permittee would be in compliance with the oil and grease maximum daily permit limitation on the day evaluated.

To evaluate compliance with the monthly average permit limitation, the Permittee would determine the days where effluent flow exceeds dry weather flow and sampling occurred. Sum the excess flow for these days and divide the result by the number of days. Then, multiply this by the monthly average storm water allocation. This is the incremental stormwater allocation. Compare the monthly average discharge for a parameter (total mass loading for the month divided by the days in the month) to the base permit limitation plus the stormwater allocation calculated for that parameter.

Example Calculation 2

Dry weather flow: 0.324 MGD

Parameter: TSS

Example Sample Data:

Appendix B Table 1 - Sample Data for Evaluating Average Permit Limits

Day of Month	Flow (MGD)	TSS (lbs/day)
1	0.332	
2	0.304	96
3	0.418	
4	0.323	151
5	0.407	
6	0.342	111
7	0.487	
8	0.422	
9	0.354	125
10	0.411	
11	0.356	105
12	0.352	
13	0.322	30
14	0.305	
15	0.282	
16	0.355	155
17	0.414	
18	0.417	149
19	0.377	
20	0.319	70
21	0.271	

Day of Month	Flow (MGD)	TSS (lbs/day)
22	0.334	
23	0.333	140
24	0.422	
25	0.364	115
26	0.467	
27	0.334	132
28	0.386	
29	0.406	
30	0.321	109

During the eight sampling days where the effluent flow exceeded the dry weather flow and sampling occurred, the total stormwater flow excess: 0.263 million gallons (MG).

Average stormwater flow excess: $0.263 \text{ MG} / 8 \text{ days} = 0.033 \text{ MGD}$

TSS average monthly base permit limitation: 107 lbs/day

Average monthly TSS discharge: 114 lbs/day

TSS average monthly stormwater allocation: 180 lbs/MG

TSS incremental limit due to storm water: $0.033 \text{ MGD} \times 180 \text{ lbs/MG} = 5.9 \text{ lbs/day}$

TSS average monthly permit limitation: $5.9 \text{ lbs/day} + 107 \text{ lbs/day} = 112.9 \text{ lbs/day}$

Note: Since 114 lbs/day is greater than 112.9 lbs/day, the TSS average monthly permit limit would be exceeded.

APPENDIX C - Refinery NPDES Pollution Prevention Plan – General and Specific Requirements

Guidance Documents

Guidance documents that must be used when developing or updating a pollution prevention plan include the *Stormwater Management Manual for Western Washington* published August 2012 (as amended in July 2019) by Ecology (Publication number 19-10-021), the 'Pollution Prevention and Best Management Practices' section of the Ecology *Permit Writer's Manual*, Chapter XII (Publication number 92-109), EPA's *An Organizational Guide to Pollution Prevention*⁶², 2001, and other information provided by the Ecology Permit Manager.

Plan Requirements

A. General Requirements

1. Policy Statement and Signature

The pollution prevention plan must include a policy statement articulating management and corporate support for the plan and a commitment to implement the plan and to continued pursuit of pollution prevention opportunities. The plan, plan updates, and modifications must be signed in accordance with General Condition G1.

2. Employee Involvement, Training, and Awareness

The pollution prevention plan must include a description of personnel training and employee involvement programs that emphasize pollution prevention and solicit employee ideas about pollution prevention opportunities and other environmental issues. Staff training records must be maintained onsite and be available for inspection.

3. Other Pollution Prevention Plans

The Permittee may incorporate applicable portions of plans prepared for their facility for other purposes. Plans or portions of plans incorporated into the Pollution Prevention Plan become enforceable requirements of this permit.

B. Specific Requirements

The Pollution Prevention Plan must contain a site map, detailed assessment of the facility, detailed description of BMPs, spill prevention and emergency cleanup procedures, and sampling requirements.

1. The site map must identify:

- a. The scale or include relative distances between significant structures and drainage systems.
- b. Significant features.
- c. The stormwater drainage and discharge structures.

- d. The stormwater drainage areas for each stormwater discharge point off-site (including discharges to groundwater) and identifying number for each discharge point.
 - e. Each sampling location by identifying number.
 - f. Paved areas and buildings.
 - g. Areas of pollutant contact (actual and potential) associated with specific industrial activities.
 - h. Surface water locations (including wetlands and drainage ditches)
 - i. Areas of existing and potential soil erosion (in a significant amount).
 - j. Vehicle maintenance areas.
 - k. Lands and waters adjacent to the site that may be helpful in identifying discharge points or drainage routes.
2. The facility assessment must include a description of the facility; an inventory of facility activities and equipment that contribute to or have the potential to contribute any pollutants to the wastewater treatment system, stormwater, and/or waters of the state; and an inventory of materials that contribute to or have the potential to contribute pollutants to the wastewater treatment system, stormwater, and/or waters of the state.
- a. The facility description must describe:
 - (i) The industrial and construction activities conducted at the site.
 - ii. Regular business hours and seasonal variations in business hours or industrial activities.
 - (iii) The general layout of the facility including buildings and storage of raw materials, and the flow of goods and materials through the facility.
 - b. The inventory of industrial activities must identify all areas associated with industrial activities that have been or may potentially be sources of pollutants, including, but not limited to, the following:
 - (i) Loading and unloading of dry bulk materials or liquids.
 - (ii) Outdoor storage of materials or products.
 - (iii) Outdoor manufacturing and processing.
 - (iv) On-site dust or particulate generating processes.
 - (v) On-site waste treatment, storage, or disposal.
 - (vi) Vehicle and equipment fueling, maintenance, and/or cleaning (includes washing).
 - (vii) Roofs or other surfaces exposed to air emissions from a manufacturing building or a process area.
 - viii. Roofs or other surfaces composed of materials that may be mobilized by stormwater (e.g., galvanized roofs, galvanized fences, etc.).
 - c. The inventory of materials must list:
 - (i) The types of materials handled at the site that potentially may be exposed to precipitation or runoff and could result in stormwater pollution.

- (ii) A short narrative for each material describing the potential of the pollutant to be present in stormwater discharges. The Permittee must update this narrative when data become available to verify the presence or absence of these pollutants.
 - (iii) A narrative description of any potential sources of pollutants from past activities, materials and spills that were previously handled, treated, stored, or disposed of in a manner to allow ongoing exposure to stormwater. Include the method and location of on-site storage or disposal. List significant spills and significant leaks of toxic or hazardous pollutants.
- 3. The Pollution Prevention Plan must identify specific individuals by name or title within the organization (pollution prevention team) whose responsibilities include Pollution Prevention Plan development, implementation, maintenance, and modification.
- 4. Best Management Practices (BMPs)
 - a. The Permittee must describe each BMP selected to eliminate or reduce the potential to contaminate stormwater and/or waters of the state and prevent violations of water quality standards.
 - b. The Permittee must include each of the following mandatory BMPs in the Pollution Prevention Plan and implement the BMPs. The Permittee may omit individual BMPs if site conditions render the BMP unnecessary, infeasible, or the Permittee provides alternative and equally effective BMPs, if the Permittee clearly justifies each BMP omission in the Pollution Prevention Plan. The Permittee must document in the Pollution Prevention Plan that the BMPs selected are demonstrably equivalent to practices contained in stormwater technical manuals approved by Ecology.
- (i) Operational Source Control BMPs
 - 1. The Pollution Prevention Plan must include Operational Source Control BMPs listed as “applicable” in the Stormwater Management Manual for Western Washington (2019) or other guidance documents or manuals approved by Ecology.
 - 2. **Good Housekeeping:** The Pollution Prevention Plan must include BMPs that define ongoing maintenance and cleanup, as appropriate, of areas which may contribute pollutants to stormwater discharges. The Pollution Prevention Plan must include the schedule/frequency for completing each housekeeping task, based upon industrial activity, sampling results, and observations made during inspections. The Permittee must:
 - a. Vacuum paved surfaces with a vacuum sweeper (or a sweeper with a vacuum attachment) to remove accumulated pollutants a minimum of once per quarter.

- b. Identify and control all on-site sources of dust to minimize stormwater contamination from the deposition of dust on areas exposed to precipitation.
 - c. Inspect and maintain baghouses monthly to prevent the escape of dust from the system. Immediately remove any accumulated dust at the base of exterior baghouses. d) Keep all dumpsters under cover or fit with a lid that must remain closed when not in use.
3. **Preventive Maintenance:** The Pollution Prevention Plan must include BMPs to inspect and maintain the stormwater drainage, source controls, treatment systems (if any), and plant equipment and systems that could fail and result in contamination of stormwater. The Pollution Prevention Plan must include the schedule/frequency for completing each maintenance task. The Permittee must:
- a. Clean catch basins when the depth of debris reaches 60% of the sump depth. In addition, the Permittee must keep the debris surface at least 6 inches below the outlet pipe.
 - b. Inspect all equipment and vehicles monthly for leaking fluids such as oil, antifreeze, etc. Take leaking equipment and vehicles out of service or prevent leaks from spilling on the ground until repaired.
 - c. Immediately clean up spills and leaks (e.g., using absorbents, vacuuming, etc.) to prevent the discharge of pollutants.
4. **Spill Prevention and Emergency Cleanup:** The Pollution Prevention Plan must include BMPs to prevent spills that can contaminate stormwater. As applicable, other documents may be referenced to meet this requirement. The Pollution Prevention Plan must specify BMPs for material handling procedures, storage requirements, cleanup equipment and procedures, and spill logs, as appropriate. The Permittee must:
- a. Store all chemical liquids, fluids, and petroleum products, on an impervious surface that is surrounded with a containment berm or dike that is capable of containing 10% of the total enclosed tank volume or 110% of the volume contained in the largest tank, whichever is greater.
 - b. Prevent precipitation from accumulating in containment areas with a roof or equivalent structure or include a plan on how it will manage and dispose of accumulated water if a containment cover is not practical.

- c. Locate spill kits within 25 feet of all stationary fueling stations, fuel transfer stations, and mobile fueling units. At a minimum, spill kits must include:
 - i. Oil absorbents capable of absorbing 15 gallons of fuel.
 - ii. A storm drain plug or cover kit.
 - iii. A non-water containment boom, a minimum of 10 feet in length with a 12-gallon absorbent capacity.
 - iv. A non-metallic shovel.
 - iv. Two five-gallon buckets with lids.
 - d. Not lock shut-off fueling nozzles in the open position. Do not “top off” tanks being refueled.
 - e. Block, plug, or cover storm drains that receive runoff from areas where fueling, during fueling.
 - f. Use drip pans or equivalent containment measures during all petroleum transfer operations.
 - g. Locate materials, equipment, and activities so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas).
 - h. Use drip pans and absorbents under or around leaky vehicles and equipment or store indoors where feasible. Drain fluids from equipment and vehicles prior to on-site storage or disposal.
 - i. Maintain a spill log that includes the following information for chemical and petroleum spills: date, time, amount, location, and reason for spill; and date/time cleanup completed, notifications made, and staff involved.
5. **Employee Training:** The Pollution Prevention Plan must include BMPs to provide pollution prevention plan training for employees. At a minimum, the training plan must include:
- a. The content of the training:
 - i. An overview of what is in the Pollution Prevention Plan.
 - ii. How employees make a difference in complying with the Pollution Prevention Plan and preventing contamination of stormwater and/or waters of the state.
 - iii. Spill response procedures, good housekeeping, maintenance requirements, and material management practices.
 - b. How the Permittee will conduct the training.
 - c. The frequency/schedule of training. The Permittee must train employees annually, at a minimum.
 - d. A log of the dates on which specific employees received training.

6. **Inspections and Recordkeeping:** The Pollution Prevention Plan must include documentation of procedures to ensure compliance with permit requirements for inspections and recordkeeping. At a minimum, the Pollution Prevention Plan must:
 - a. Identify facility personnel who will inspect designated equipment and facility areas as required by Special Condition S9.
 - b. Contain a visual inspection report or checklist that includes all items required by Special Condition S9.
 - c. Provide a tracking or follow-up procedure to ensure that a report is prepared, and any appropriate action taken in response to visual inspections.
7. **Illicit Discharges:** The Pollution Prevention Plan must include measures to identify and eliminate the discharges of process wastewater, domestic wastewater, non-contact cooling water, and other illicit discharges, to stormwater sewers, or to surface waters, or ground waters of the state. The Permittee can find BMPs to identify and eliminate illicit discharges in Volume IV of the Stormwater Management Manual for Western Washington (2019).

Water from washing vehicles or equipment, steam cleaning and/or pressure washing is considered process wastewater. The Permittee must not allow this process wastewater to commingle with stormwater or enter storm drains.

(ii) Structural Source Control BMPs

1. The Pollution Prevention Plan must include Operational Source Control BMPs listed as “applicable” in the Stormwater Management Manual for Western Washington (2019) or other guidance documents or manuals approved by Ecology.
2. The Pollution Prevention Plan must include BMPs to minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff by either locating these industrial materials and activities inside or protecting them with storm resistant coverings. The Permittee must:
 - a. Use grading, berming, or curbing to prevent runoff of contaminated flows and divert run-on away from these areas.
 - b. Perform all cleaning operations indoors, under cover, or in bermed areas that prevent stormwater runoff and run-on and also that capture any overspray.

- c. Ensure that all wash water drains to a collection system that directs wash water to further treatment or storage and not to the stormwater drainage system.

(iii) Treatment BMPs

The Permittee must:

1. Use Treatment BMPs consistent with the Stormwater Management Manual for Western Washington (2019) or other guidance documents or manuals approved by Ecology.
2. Employ oil/water separators, booms, skimmers, or other methods to eliminate or minimize oil and grease contamination of stormwater discharges.
3. Obtain Ecology approval before beginning construction/installation of all treatment BMPs that include the addition of chemicals to provide treatment.

(iv) Stormwater Peak Runoff Rate and Volume Control BMPs.

1. Facilities with new development or redevelopment must evaluate whether flow control BMPs are necessary to satisfy the state's AKART requirements and prevent violations of water quality standards. If flow control BMPs are required, they must be consistent with the Stormwater Management Manual for Western Washington (2019) or other guidance documents or manuals approved by Ecology.

(v) Erosion and Sediment Control BMPs

The Pollution Prevention Plan must describe BMPs necessary to prevent erosion of soils and other earthen materials (crushed rock/gravel, etc.) and prevent off-site sedimentation and violations of water quality standards. The Permittee must implement and maintain:

1. Sediment control BMPs such as detention or retention ponds or traps, vegetated filter strips, bioswales, or other permanent sediment control BMPs to minimize sediment loads in stormwater discharges.
2. Filtration BMPs to remove solids from catch basins, sumps, or other stormwater collection and conveyance system components (filter socks, modular canisters, sand filtration, centrifugal separators, etc.).

5. Sampling Plan

The Pollution Prevention Plan must include a stormwater sampling plan. The plan must:

- a. Identify points of discharge to surface water, storm sewers, or discrete ground water infiltration locations such as dry wells or detention ponds.
- b. Include documentation on why each discharge point is not sampled (if applicable):

- (i) Location of which discharge points the Permittee does not sample because pollutant concentrations are substantially identical to a discharge point being sampled.
 - (ii) Reasons why the Permittee expects the discharge points to discharge substantially identical effluents.
 - (iii) General industrial activities conducted in the drainage areas of each discharge point.
 - (iv) Best Management Practices conducted in the drainage area of each outfall.
 - (v) Exposed materials located in the drainage area of each discharge point that are likely to be significant contributors of pollutants to stormwater discharges.
 - (vi) Impervious surfaces in the drainage area that could affect the percolation stormwater runoff into the ground (e.g., asphalt, crushed rock, grass, etc.).
- c. Identify each sampling location by its unique identifying number.
 - d. Identify staff responsible for conducting stormwater sampling.
 - e. Specify procedures for sample collection and handling.
 - f. Specify procedures for sending samples to a laboratory.
 - g. Identify parameters for analysis, holding times and preservative, laboratory quantitation levels, and analytical methods.
 - h. Specify the procedure for submitting results to Ecology.

C. Identifying and Evaluating Pollution Prevention Opportunities

1. Description of Current Pollution Prevention Activities

The plan must include a description of preventive measures and facilities already employed at the refinery to prevent, reduce, eliminate, or control releases of pollutants to influent wastewater streams, storm water, and/or waters of the state.

2. Description of Potential Pollutants and Sources

The pollution prevention plan must include a detailed description of the processes or activities that contribute or potentially contribute pollutants to the treatment plant influent, stormwater, groundwater, and wetlands.

Influent wastewater streams must include those having daily average flow rates equal to or greater than 30 gallons per minute at the point where the wastewater stream enters the collection system, the catalytic wash water, spent caustic, and wash water waste streams. Minor incidental waste streams to stormwater, such as landscaping fertilizers, do not have to be included. The plan must identify the materials used, processed, stored, treated, or

disposed of at the facility and the pollutants that are generated or potentially generated or released. The level of detail provided in the plan should be sufficient to help identify and understand how and why materials are used and pollutants generated or released. Process flow diagrams and/or material input/output information must be included on a process unit basis.

The Permittee must include in the plan all materials which may become pollutants or cause pollution upon reaching state waters, including, but not limited to:

- a. Persistent bioaccumulative and toxic chemicals (PBTs),
- b. Oil and petroleum products, and
- c. Materials which, when spilled or otherwise released into the environment, would be designated Dangerous Waste (DW) or Extremely Hazardous Waste (EHW) by the procedures set forth in WAC 173-303-070.

In determining which sources and pollutants to address in the plan, the Permittee must use available sampling data, as well as knowledge of processes and materials, and available information on the relative toxicity or hazard of materials. Sources of PBTs must be included in the analysis. The Permittee must not be required to sample each stream analytically and may use engineering judgment to assess and quantify material inputs and outputs on a process unit basis.

3. Identification & Preliminary Evaluation of Pollution Prevention Opportunities

The plan must identify pollution prevention opportunities and provide a detailed analysis of each opportunity's technical (including safety considerations) and economic feasibility. Opportunities determined to be technically and economically feasible will be considered as known, available, and reasonable and therefore are required to be selected and scheduled for implementation. For each pollution prevention opportunity selected, the plan must identify the process(es) or activities it affects, an estimate of the amount of pollutants reduced, and the environmental or other benefits that will be achieved.

The Permittee must concentrate on opportunities that reduce or eliminate PBTs, priority pollutant metals, and methyldiethanolamine (MDEA) to influent and upstream flows to the oily water sewer.

Solids and hydrocarbon loadings to the oily water sewer must also be evaluated. Stormwater must be evaluated for oil and grease and solids loading as well as toxics.

In identifying and evaluating pollution prevention opportunities, the Permittee must consider the following:

- a. All reasonably expected activities and conditions, such as normal operations, maintenance, and other ancillary activities; equipment failure; improper operation; upsets, accidents, spills, leaks; and natural events such as rainfall, snowfall, etc.
- b. All areas of the refinery with potential to generate water pollutants including process units, raw material and product storage, handling and transfer facilities, material handling areas, maintenance areas, solid and hazardous waste storage, treatment, and disposal, and stormwater systems.

The following are examples of pollution prevention strategies that may warrant evaluation:

- a. Improving and/or establishing new management practices and standard operating procedures addressing increased training or supervision; improvements in inventory control, materials and waste handling, general operations, and housekeeping; preventive maintenance; and remedial measures.
- b. Process or equipment modifications, including re-engineering processes to use less toxic input materials or to utilize by-products.
- c. Material substitution.
- d. Reducing material inputs.
- e. Recycle/reuse of refinery waste, by-products, or process materials and fluids.
- f. Application of water conservation methods, including water reuse.
- g. Waste segregation and separation.
- h. Alternative and/or enhanced treatment technology, including upstream treatment of pollutants.

Cross-media shift of pollutants should be avoided unless a clear net environmental benefit results and compliance with standards applicable to other media or management programs would be maintained.

4. Prioritization & Selection of Pollution Prevention Opportunities

The plan must prioritize pollution prevention opportunities. The Permittee must provide their rationale for how the pollution prevention opportunities are prioritized. In addition to technical and economic feasibility, other factors may influence ranking of opportunities and should be included in the discussion. These factors may include capital projects planned or ongoing at the refinery that will provide a benefit to environmental media other than water, corresponding reduction in safety risks, etc.

Projects that achieve the highest environmental benefit must have greater priority. In prioritizing and selecting pollution prevention opportunities, the Permittee must give preference first to those that eliminate, avoid, or reduce the generation of water pollutants at the source, second to those that recycle or reuse the pollutants, and third to those that provide at-source or near-source treatment to remove pollutants or render them less toxic or harmful.

In ranking opportunities, the Permittee must also consider pollutant loading and toxicity and the potential to achieve the greatest reduction with respect to time and costs.

The Permittee is expected to establish reasonable priorities and schedules for implementation to achieve the greatest reduction in pollutant quantity and toxicity, as well as for management and fiscal necessity.

D. Arsenic BMPs and Adaptive Management

1. Plan for control of arsenic in the discharge. The plan must include:
 - a) Assessment and inventory procedures to identify arsenic sources per section B.2
 - b) BMPs for arsenic per section B.4
 - c) Sampling plan per section B.5, including action level triggers and update of the Pollution Prevention Plan
 - d) Identifying and evaluating for pollution prevention opportunities per section C 2
2. The plan for arsenic will be in separate section of the plan.

APPENDIX D - Construction Stormwater Pollution Prevention Plan Requirements

The Permittee must prepare and properly implement an adequate Construction Stormwater Pollution Prevention Plan (CSWPPP) for construction activity in accordance with the following requirements beginning with initial soil disturbance and until final stabilization.

The Permittee's CSWPPP must meet the following objectives:

1. To implement best management practices (BMPs) to prevent erosion and sedimentation, and to identify, reduce, eliminate or prevent stormwater contamination and water pollution from construction activity.
2. To prevent violations of surface water quality, ground water quality, or sediment management standards.
3. To control peak volumetric flow rates and velocities of stormwater discharges.

General Requirements

1. The CSWPPP must include a narrative and drawings. All BMPs must be clearly referenced in the narrative and marked on the drawings. The CSWPPP narrative must include documentation to explain and justify the pollution prevention decisions made for the project. Documentation must include:
 - a. Information about existing site conditions (topography, drainage, soils, vegetation, etc.).
 - b. Potential erosion problem areas.
 - c. The 13 elements of a CSWPPP in Sections D.1-13, including BMPs used to address each element.
 - d. Construction phasing/sequence and general BMP implementation schedule.
 - e. The actions to be taken if BMP performance goals are not achieved—for example, a contingency plan for additional treatment and/or storage of stormwater that would violate the water quality standards if discharged.
 - f. Engineering calculations for ponds, treatment systems, and any other designed structures. When a treatment system requires engineering calculations, these calculations must be included in the CSWPPP. Engineering calculations do not need to be included in the CSWPPP for treatment systems that do not require such calculations.
2. The Permittee must modify the CSWPPP if, during inspections or investigations conducted by the owner/operator, or the applicable local or state regulatory authority, it is determined that the CSWPPP is, or would be, ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site. The Permittee must then:

- a. Review the CSWPPP for compliance with the requirements of this appendix and make appropriate revisions within 7 days of the inspection or investigation.
 - b. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems no later than 10 days from the inspection or investigation. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when an extension is requested by a Permittee within the initial 10-day response period.
 - c. Document BMP implementation and maintenance in the site log book.
- The Permittee must modify the CSWPPP whenever there is a change in design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the State.

Stormwater Best Management Practices (BMPs)

BMPs must be consistent with Ecology's 2024 Stormwater Management Manual for Western Washington (Ecology, 2024) .

1. Revisions to the Stormwater Management Manual for Western Washington, or other stormwater management guidance documents or manuals which provide an equivalent level of pollution prevention, that are approved by Ecology and incorporated into this permit in accordance with the permit modification requirements of WAC 173-220-190;
2. Documentation in the CSWPPP that the BMPs selected provide an equivalent level of pollution prevention, compared to the Stormwater Management Manual for Western Washington, including:
 - a. The technical basis for the selection of all stormwater BMPs (scientific, technical studies, and/or modeling) that support the performance claims for the BMPs being selected.
 - b. An assessment of how the selected BMP will satisfy AKART requirements and the applicable federal technology-based treatment requirements under 40 CFR part 125.3.

CSWPPP – Narrative Contents and Requirements

The Permittee must include each of the 13 elements below in the narrative of the CSWPPP and implement them unless site conditions render the element unnecessary and the exemption from that element is clearly justified in the CSWPPP.

1. Preserve Vegetation/Mark Clearing Limits
 - a. Before beginning land-disturbing activities, including clearing and grading, clearly mark all clearing limits, sensitive areas and their buffers, and trees that are to be preserved within the construction area.
 - b. Retain the duff layer, native topsoil, and natural vegetation in an undisturbed state to the maximum degree practicable.

2. Establish Construction Access

- a. Limit construction vehicle access and exit to one route, if possible.
- b. Stabilize access points with a pad of quarry spalls, crushed rock, or other equivalent BMPs, to minimize tracking sediment onto roads. Do not use crushed concrete for construction access stabilization.
- c. Locate wheel wash or tire baths on site, if the stabilized construction entrance is not effective in preventing tracking sediment onto roads. Wheel washes and tire baths must comply with Section D.9.d. to prevent discharge to surface waters and ensure appropriate treatment and disposal methods of wash water.
- d. If sediment is tracked off site, clean the affected roadway thoroughly at the end of each day, or more frequently as necessary (for example, during wet weather). Remove sediment from roads by shoveling, sweeping, or pickup and transport of the sediment to a controlled sediment disposal area.
- e. Conduct street washing only after sediment removal in accordance with Section D.2.d. Control street wash wastewater by pumping back on site or otherwise preventing it from discharging into systems tributary to waters of the State.

3. Control Flow Rates

- a. Protect properties and waterways downstream of development sites from erosion and the associated discharge of turbid waters due to increases in the velocity and peak volumetric flow rate of stormwater runoff from the project site, as required by local plan approval authority.
- b. Where necessary to comply with Section D.3.a, construct stormwater retention or detention facilities as one of the first steps in grading. Assure that detention facilities function properly before constructing site improvements (for example, impervious surfaces).
- c. If permanent infiltration ponds are used for flow control during construction, protect these facilities from siltation during the construction phase.

4. Install Sediment Controls

The Permittee must design, install, and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, the Permittee must design, install, and maintain such controls to:

- a. Construct sediment control BMPs (sediment ponds, traps, filters, infiltration facilities, etc.) as one of the first steps in grading. These BMPs must be functional before other land disturbing activities take place.
- b. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site.

- c. Direct stormwater runoff from disturbed areas through a sediment pond or other appropriate sediment removal BMP, before the runoff leaves a construction site or before discharge to an infiltration facility.
 - d. Runoff from fully stabilized areas may be discharged without a sediment removal BMP, but must meet the flow control performance standard in Section D.3.a above.
 - e. Locate BMPs intended to trap sediment on site in a manner to avoid interference with the movement of juvenile salmonids attempting to enter off-channel areas or drainages.
 - f. Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible.
 - g. Where feasible, design outlet structures that withdraw impounded stormwater from the surface to avoid discharging sediment that is still suspended lower in the water column.
5. Stabilize Soils
- a. The Permittee must stabilize exposed and unworked soils by application of effective BMPs that prevent erosion. Applicable BMPs include, but are not limited to temporary and permanent seeding, sodding, mulching, plastic covering, erosion control fabrics and matting, soil application of polyacrylamide (PAM), the early application of gravel base on areas to be paved, and dust control.
 - b. The Permittee must control stormwater volume and velocity within the site to minimize soil erosion.
 - c. The Permittee must control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion.
 - d. The Permittee must not allow soils to remain exposed and unworked for more than the time periods set forth below to prevent erosion:
 - e. During the dry season (May 1 - September 30): 7 days
 - f. During the wet season (October 1 - April 30): 2 days
 - g. The Permittee must stabilize soils at the end of the shift before a holiday or weekend if needed based on the weather forecast.
 - h. The Permittee must stabilize soil stockpiles from erosion, protected with sediment trapping measures, and where possible, be located away from storm drain inlets, waterways, and drainage channels.
 - i. The Permittee must minimize the amount of soil exposed during construction activity.
 - j. The Permittee must minimize the disturbance of steep slopes.
 - k. The Permittee must minimize soil compaction and, unless infeasible, preserve topsoil.

6. Protect Slopes

- a. The Permittee must design and construct cut-and-fill slopes in a manner to minimize erosion. Applicable practices include, but are not limited to, reducing continuous length of slope with terracing and diversions, reducing slope steepness, and roughening slope surfaces (for example, track walking).
- b. The Permittee must divert off-site stormwater (run-on) or ground water away from slopes and disturbed areas with interceptor dikes, pipes, and/or swales. Off-site stormwater should be managed separately from stormwater generated on the site.
- c. At the top of slopes, collect drainage in pipe slope drains or protected channels to prevent erosion. Temporary pipe slope drains must handle the peak 10-minute flow rate from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate predicted by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the Western Washington Hydrology Model (WWHM) to predict flows, bare soil areas should be modeled as "landscaped area."
- d. Place excavated material on the uphill side of trenches, consistent with safety and space considerations.
- e. Place check dams at regular intervals within constructed channels that are cut down a slope.

7. Protect Drain Inlets

- a. Protect all storm drain inlets made operable during construction so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment.
- b. Clean or remove and replace inlet protection devices when sediment has filled one-third of the available storage (unless a different standard is specified by the product manufacturer).

8. Stabilize Channels and Outlets

- a. Design, construct and stabilize all on-site conveyance channels to prevent erosion from the following expected peak flows.
Channels must handle the peak volumetric flow rate using a 10-minute time step from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, peak flow rate indicated by an approved continuous runoff model with a 15-minute time step may be used. The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must use the temporary or

permanent project land cover condition, whichever will produce the highest flow rates. If using the WWHM to predict flows, bare soil areas should be modeled as "lawn area."

- b. Provide stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes, along construction road shoulders, sloped work areas, and downstream reaches at the outlets of all conveyance systems.

9. Control Pollutants

Design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. The Permittee must:

- a. Handle and dispose of all pollutants, including waste materials and demolition debris that occur on site in a manner that does not cause contamination of stormwater.
- b. Provide cover, containment, and protection from vandalism for all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment. Safety Data Sheets (SDS) should be supplied for all materials stored. Keep chemicals in their original labeled containers. On-site fueling tanks must include secondary containment. Secondary containment means placing tanks or containers within an impervious structure capable of containing 110% of the volume contained in the largest tank within the containment structure. Double walled tanks do not require additional secondary containment. If the containment water is free from indicators of contamination, such as oil sheen, turbidity, color, odor, it may be discharged with other stormwater. Visibly contaminated containment water shall be disposed of appropriately.
- c. Conduct maintenance, fueling, and repair of heavy equipment and vehicles using spill prevention and control measures. Clean contaminated surfaces immediately following any spill incident.
- d. Discharge wheel wash or tire bath wastewater to a separate on-site treatment system that prevents discharge to surface water, or to the sanitary sewer with local sewer district approval.
- e. Apply fertilizers and pesticides in a manner and at application rates that will not result in loss of chemical to stormwater runoff. Follow manufacturers' label requirements for application rates and procedures.
- f. Use BMPs to prevent contamination of stormwater runoff by pH-modifying sources.

The sources for this contamination include, but are not limited to bulk cement, cement kiln dust, fly ash, new concrete washing and curing waters, recycled concrete stockpiles, waste streams generated from concrete grinding and sawing, exposed aggregate processes, dewatering

concrete vaults, concrete pumping and mixer washout waters, or other concrete wastewater.

- g. Adjust the pH of stormwater or authorized non-stormwater if necessary to prevent an exceedance of groundwater and/or surface water quality standards.
 - h. Assure that washout of concrete trucks is performed off-site or in designated concrete washout areas only.
Do not wash out concrete truck drums or concrete handling equipment onto the ground, or into storm drains, open ditches, streets, or streams. Washout of small concrete handling equipment may be disposed of in a designated concrete washout area or in a formed area awaiting concrete where it will not contaminate surface or ground water. Do not dump excess concrete on site, except in designated concrete washout areas. Concrete spillage or concrete discharge directly to groundwater or surface waters of the State is prohibited. At no time shall concrete be washed off into the footprint of an area where an infiltration BMP shall be installed.
 - i. Obtain written approval from Ecology before using any chemical treatment, with the exception of CO₂ or dry ice used to adjust pH.
 - j. Uncontaminated water from water-only based shaft drilling for construction of building, road, and bridge foundations may be infiltrated provided the wastewater is managed in a way that prohibits discharge to surface waters. Prior to infiltration, water from water-only based shaft drilling that comes into contact with curing concrete must be neutralized until pH is in the range of 6.5 to 8.5 standard unit.
 - k. If a construction activity involves the demolition or renovation of any buildings built before 1980, the permittee must implement BMP S438 (BMPs for Construction Demolition) of the 2024 Stormwater Management Manual for Western Washington (Ecology, 2024).
10. Control Dewatering
- a. Permittees must discharge foundation, vault, and trench dewatering water, which have characteristics similar to stormwater runoff at the site, in conjunction with BMPs to reduce sedimentation before discharge to a sediment trap or sediment pond.
 - b. Permittees may discharge clean, non-turbid dewatering water, such as wellpoint ground water, to systems tributary to, or directly into surface waters of the State, as specified in Section D.8, provided the dewatering flow does not cause erosion or flooding of receiving waters. Do not route clean dewatering water through stormwater sediment ponds. Note that “surface waters of the State” may exist on a construction site as well as off site; for example, a creek running through a site.
 - c. Other dewatering treatment or disposal options may include:
 - (i) Infiltration.

- (ii) Transport off site in a vehicle, such as a vacuum flush truck, for legal disposal in a manner that does not pollute state waters.
- (iii) Ecology-approved on-site chemical treatment or other suitable treatment technologies (see Section D.9.i. regarding chemical treatment written approval).
- (iv) Sanitary or combined sewer discharge with local sewer district approval if there is no other option.
- (v) Use of a sedimentation bag with discharge to a ditch or swale for small volumes of localized dewatering.
- d. Permittees must handle highly turbid or contaminated dewatering water separately from stormwater.

11. Maintain BMPs

- a. Permittees must maintain and repair all temporary and permanent erosion and sediment control BMPs as needed to assure continued performance of their intended function in accordance with BMP specifications.
- b. Permittees must remove all temporary erosion and sediment control BMPs within 30 days after achieving final site stabilization or after the temporary BMPs are no longer needed.

12. Manage the Project

- a. Phase development projects to the maximum degree practicable and take into account seasonal work limitations.
- b. Inspect, maintain, and repair all BMPs as needed to assure continued performance of their intended function. Conduct site inspections and monitoring in accordance with Special Condition S19.
- c. Maintain, update, and implement the CSWPPP in accordance with Special Condition S23.

13. Protect Infiltration BMPs

Protect existing and proposed infiltration BMPs during construction. The primary purpose of on-site Stormwater Management (often referred to as low impact development, or LID) is to reduce the disruption of the natural site hydrology. LID BMPs are permanent facilities.

- a. The Permittee must protect all LID BMPs (including but not limited to Bioretention and Rain Garden facilities) from sedimentation through installation and maintenance of erosion and sediment control BMPs on portions of the site that drain into the infiltration BMPs. Restore the BMPs to their fully functioning condition if they accumulate sediment during construction.
Restoring the BMP must include removal of sediment and any sediment-laden soils within the BMP and replacing the removed soils with soils meeting the design specification.
- b. The Permittee must maintain the infiltration capabilities of infiltration BMPs by protecting against compaction by construction equipment and foot

- traffic. Protect completed lawn and landscaped areas from compaction due to construction equipment.
- c. The Permittee must control erosion and avoid introducing sediment from surrounding land uses onto permeable pavements. Do not allow muddy construction equipment on the base material or pavement. Do not allow sediment-laden runoff onto permeable pavements.
 - d. The Permittee must clean permeable pavements fouled with sediments or no longer passing an initial infiltration test using local stormwater manual methodology or the manufacturer's procedures.
 - e. The Permittee must keep all heavy equipment off existing soils under infiltration BMPs that have been excavated to final grade to retain the infiltration rate of the soils.

CSWPPP – Map Contents and Requirements

The Permittee's CSWPPP must also include a vicinity map or general location map (for example, a USGS quadrangle map, a portion of a county or city map, or other appropriate map) with enough detail to identify the location of the construction site and receiving waters within one mile of the site.

The CSWPPP must also include a legible site map (or maps) showing the entire construction site. The following features must be identified, unless not applicable due to site conditions:

1. The direction of north, property lines, and existing structures and roads.
2. Cut and fill slopes indicating the top and bottom of slope catch lines.
3. Approximate slopes, contours, and direction of stormwater flow before and after major grading activities.
4. Areas of soil disturbance and areas that will not be disturbed.
5. Locations of structural and nonstructural controls (BMPs) identified in the CSWPPP.
6. Locations of off-site material, stockpiles, waste storage, borrow areas, and vehicle/equipment storage areas.
7. Locations of all surface water bodies, including wetlands.
8. Locations where stormwater or non-stormwater discharges off-site and/or to a surface waterbody, including wetlands.
9. Location of water quality sampling station(s) if sampling is required by state or local permitting authority.
10. Areas where final stabilization has been accomplished and no further construction phase permit requirements apply.
11. Location or proposed location of infiltration facilities.