

FACT SHEET FOR STATE WASTE DISCHARGE PERMIT ST0501356

Western Chemical Inc. dba Syndel USA

Date of Public Notice: May 29, 2024

Permit Effective Date: xx/xx/xxxx

Purpose of this fact sheet

This fact sheet explains and documents the decisions the Department of Ecology (Ecology) made in drafting the proposed State Waste Discharge (SWD) permit for Western Chemical Inc. dba Syndel USA (Syndel)

State law requires any industrial wastewater facility to obtain a permit before discharging waste or chemicals to municipal sanitary sewer collection and treatment systems.

Ecology makes the draft permit and fact sheet available for public review and comment at least thirty (30) days before issuing the final permit. Copies of the fact sheet and draft permit for Syndel, SWD permit ST0501356, are available for public review and comment from May 29, 2024 to June 28, 2024. For more details on preparing and filing comments about these documents, please see Appendix A - Public Involvement Information.

Syndel reviewed the draft permit and fact sheet for factual accuracy. Ecology corrected any errors or omissions regarding the facility's location, history, product type or production rate, discharges, or receiving water prior to publishing this draft fact sheet for public notice.

After the public comment period closes, Ecology will summarize substantive comments and provide responses to them. Ecology will include the summary and responses to comments in this fact sheet as Appendix D - Response to Comments, and publish it when issuing the final State Waste Discharge (SWD) permit. Ecology generally will not revise the rest of the fact sheet. The full document will become part of the legal history contained in the facility's permit file.

Summary

Syndel manufactures aquaculture pharmaceutical health and nutritional products. Syndel applied for a wastewater discharge permit to discharge cleaning wastewater to the City of Ferndale sewer system in 2023. This is the first wastewater discharge permit issued to this facility.

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I. Introduction

The Washington State Legislature defined Ecology's authority and obligations for the wastewater discharge permit program in 90.48 RCW (Revised Code of Washington).

The following regulations in the Washington Administrative Code (WAC) apply to industrial wastewater discharge to publicly or privately owned wastewater treatment plants:

- State waste discharge permit program (chapter 173-216 WAC)
- Submission of plans and reports for construction of wastewater facilities (chapter 173-240 WAC)

These rules require any industrial facility owner/operator to obtain a State Waste Discharge (SWD) permit before discharging wastewater to state waters. This includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities which discharge into public waters of the state. They also help define the basis for limits on each discharge and for performance requirements imposed by the permit.

Ecology prepared the draft permit and accompanying fact sheet. Ecology generally makes the draft documents available for public review before final issuance. If the volume of the discharge has not changed or if the characteristics of the discharge have not changed Ecology may choose not to issue a public notice. A public notice announcement tells people where they can read the draft permit, and where to send their comments, during a period of thirty days (WAC 173-220-050). (See *Appendix A-Public Involvement Information* for more detail about the public notice and comment procedures). After the public comment period ends, Ecology may make changes to the draft permit in response to comment(s). Ecology will summarize the responses to comments and any changes to the permit in Appendix D.

II. Background Information

Table 1 - Facility information

Applicant:	
Facility name and address	Western Chemical Inc. dba Syndel USA 1441 W Smith Rd Ferndale, WA 98248
Contact at facility	Name: Doug Dickinson Title: Director of Operations Telephone #: (360) 312-4196 Email: dougd@syndel.com
Responsible official	Name: Ryan Becker Title: CFO Email: ryanb@syndel.com
Industrial user type	Categorical Industrial User
Industry type	Pharmaceutical manufacturing

Applicant:	
Categorical industry	40 CFR Part 439 Pharmaceutical Manufacturing Point Source Category Subpart C Chemical Synthesis Products Subpart D Mixing/Compounding and Formulation
Type of treatment by industry	Equalization
Fee Category	Facilities not otherwise classified <1,000 gpd
SIC code(s)	5169: Chemicals and Allied Products, Not Elsewhere Classified
NAIC code(s)	325412: Pharmaceutical Preparation Manufacturing
Facility location (NAD83/WGS84 reference datum)	Latitude: 48.832870 Longitude: -122.559620
Treatment plant receiving discharge	City of Ferndale Wastewater Treatment Plant NPDES Permit WA0022454
Treatment plant discharge location (NAD83/WGS84 reference datum)	Nooksack River Latitude: 48.8347 Longitude: -122.5981

Permit status

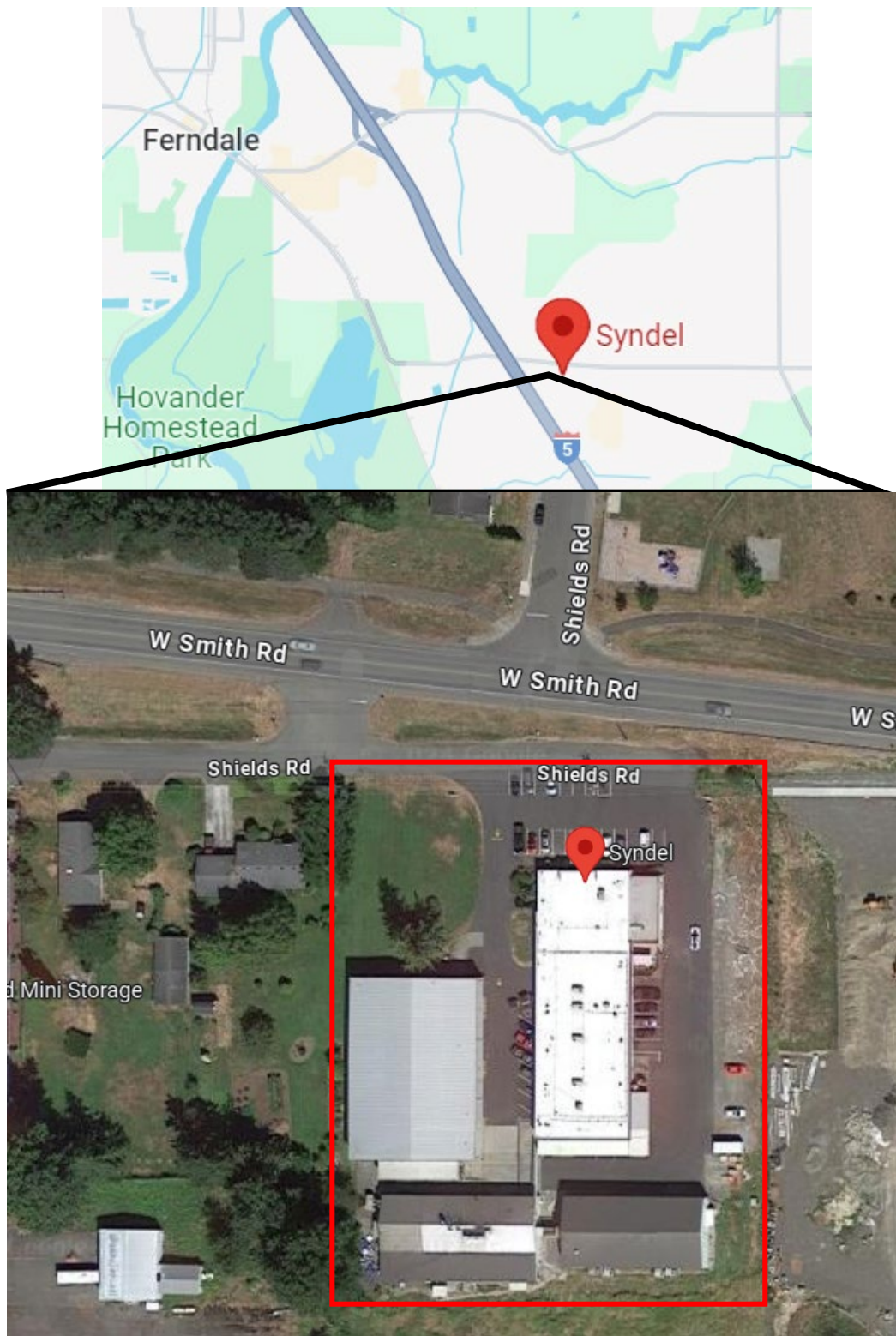
Application for permit submittal date: November 28, 2023

Date of Ecology acceptance of application: February 21, 2024

Inspection status

Date of last inspection: August 9, 2023

Figure 1 - Facility location map (source: Google Maps)



II.A. Facility description

1. History

Western Chemical Inc dba Syndel USA (Syndel) has been manufacturing aquaculture pharmaceutical health and nutritional products at this facility since 2018. In 2023, Syndel applied for a wastewater discharge permit to discharge pharmaceutical process wastewater to the City of Ferndale wastewater treatment plant. This is the first permit issued to Syndel for the discharge of process wastewater.

2. Industrial process

Syndel manufactures three aquaculture pharmaceutical and health products including Syncline®, Ovadine®, and Vidalife. Syncline and Ovadine have pharmaceutically active ingredients regulated by the Food and Drug Administration (FDA).

Syncline (tricaine methanesulfonate) is a 100% active substance and is manufactured in 40 kg batches over a two day period. Tricaine methanesulfonate is manufactured from a chemical reaction using meta-aminobenzoic acid, ethanol, and methane sulfonic acid. Ethanol functions as a solvent and reagent in the reaction. The ethanol used is 99% pure and denatured with 1% toluene. Following completion of manufacture on the second day, the pharmaceutical is put into bulk packaging containers. Subsequently, the manufacturing room, equipment, and reaction vessels are cleaned with reverse osmosis (RO) water. All wastewater discharged is from the cleaning process.

Ovadine is manufactured through chemical blending. Ovadine is a 10% polyvinylpyrrolidone iodine (PVP-iodine) complex. After chemical blending, the pharmaceutical is put into bulk packaging containers. Subsequently, the manufacturing room and equipment are cleaned and washed down with RO water. All process wastewater discharged is from the cleaning process.

The RO water system is always generating RO water from potable water. When no production is occurring, the RO is directly discharged to the underground storage tank.

Vidalife is also manufactured through chemical blending, but does not contain any pharmaceutically active ingredients. Vidalife is manufactured in a different building than Syncline and Ovadine.

Syndel uses the following raw materials in the production of the above three products: PVP-iodine, citric acid anhydrous, dibasic sodium phosphate anhydrous, meta-amino benzoic acid, methane sulfonic acid, SDA 2B alcohol, PVP K-30, propyl paraben, bromocresol green, and 40% tetrasodium EDTA.

3. Wastewater pretreatment

Wastewater generated from the production cleaning processes for Syncline and Ovadine flows through floor drains to an underground storage tank outside of the manufacturing. When wastewater in the tank reaches a preset volume, a pump is activated to transfer wastewater to the main onsite storage tank. The main onsite storage tank accumulates process wastewater and domestic wastewater generated at the facility. Vidalife cleaning wastewater discharges to an above ground holding tank which is periodically pumped to the main onsite storage tank. All wastewater is pumped from the main onsite storage tank to the City of Ferndale sewer lines. Figure 2 shows a schematic of the wastewater flow.

Syndel plans to install an aboveground holding tank before the Building C underground tank. This will allow Syndel flexibility in operations and discharge.

Syndel does not require pretreatment to meet the permit limits. The mixing of the wastestreams is adequate to meet the categorical standards. However, Syndel does have the capability for pH neutralization if necessary.

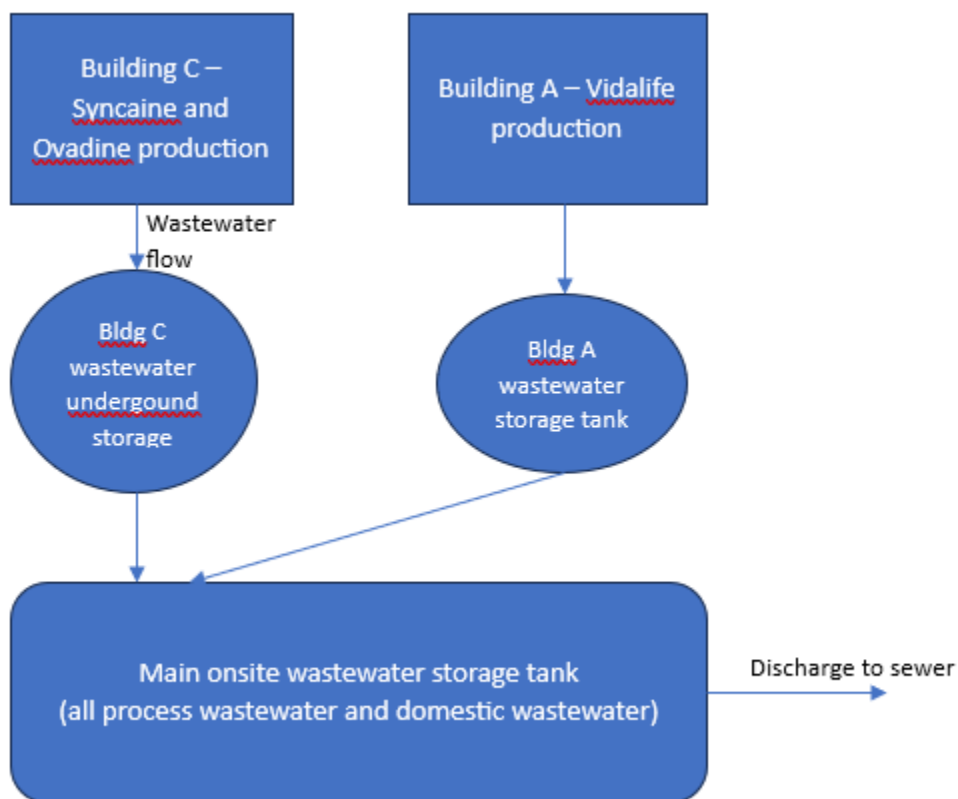


Figure 2 - Wastewater flow diagram

4. Solid wastes

Syndel generates hazardous waste primarily when the manufacturing process reclaims ethanol from Syncline production. Additionally, Syndel captures the first

rinse of equipment wash water from the Syncaine line and disposes this through a waste hauler to meet applicable discharge standards.

II.B. Discharge location to the City of Ferndale

The Syncaine and Ovadine process wastewater is sampled from the underground storage tank outside the manufacturing building prior to pumping to the combined underground storage tank. All samples are collected as grab samples. pH is measured by a handheld meter.

Combined process and sanitary wastewater from Syndel discharges to the City of Ferndale sewer system through a side sewer connection along W Smith Rd.

The City of Ferndale operates an extended activated sludge wastewater treatment plant (WWTP), capable of nitrogen reduction, and ultraviolet disinfection. The maximum month design flow of the WWTP is 4.1 million gallons per day.

II.C. Wastewater characterization

As part of the permit application and baseline report monitoring requirements, Syndel reported concentration of pollutants in the discharge for the regulated parameters in 40 CFR 439 as well as BOD₅ (Biochemical Oxygen Demand) and TSS (Total Suspended Solids). Information on the applicability of the pretreatment standards in 40 CFR 439 to this discharge is documented in Section III.A. Syndel collected samples from wastewaters generated from cleaning all equipment associated with each individual product (Tables 2, 4, and 5). Syndel also provided discrete Syncaine wastewater sampling for wastewater generated during cleaning of each piece of production equipment to isolate presence of toluene (Table 3). Pollutants of concern in the wastewater are from pharmaceutical residuals present in the cleaning wastewater including organic constituents and pH.

Table 2 - Syncaine wastewater characterization

Parameter	Units	Sample Value
Ammonia	mg/L	0.22
Cyanide	mg/L	0.021
pH	standard units	2.3
BOD ₅	mg/L	>10,000
TSS	mg/L	2.4
Acetone	mg/L	0.43
4-methyl-2-pentanone	mg/L	3.3
Isobutyraldehyde	mg/L	Non detect (Reporting level 0.05)
n-Amyl acetate	mg/L	ND (RL 0.025)
n-Butyl acetate	mg/L	ND (RL 0.025)
Ethyl acetate	mg/L	ND (RL 0.25)
Isopropyl acetate	mg/L	ND (RL 0.05)
Methyl formate	mg/L	ND (RL 0.5)
Isopropyl ether	mg/L	ND (RL 0.025)
Tetrahydrofuran	mg/L	ND (RL 0.25)

Parameter	Units	Sample Value
Benzene	mg/L	ND (RL 0.05)
Toluene	mg/L	22
Xylenes	mg/L	1.3
n-Heptane	mg/L	ND (RL 0.05)
n-Hexane	mg/L	ND (RL 0.05)
Methylene chloride	mg/L	ND (RL 0.05)
Chloroform	mg/L	ND (RL 0.05)
1,2-dichloroethane	mg/L	ND (RL 0.05)
Chlorobenzene	mg/L	ND (RL 0.05)
o-Dichlorobenzene	mg/L	ND (RL 0.05)
Diethyl amine	mg/L	ND (RL 17)
Triethyl amine	mg/L	ND (RL 17)

Table 3 - Syncaïne equipment specific-wastewater toluene concentrations

Equipment/source	Units	Sample Value
Reactor 1	mg/L	2.8
Reactor 2	mg/L	0.57
Crystallizer	mg/L	0.19
Centrifuge	mg/L	0.78
Dryer	mg/L	ND (RL 0.10)
Floor	mg/L	ND (RL 0.10)

Table 4 - Ovadine wastewater characterization

Parameter	Units	Sample Value
Ammonia	mg/L	0.41
Cyanide	mg/L	ND (0.01)
pH	standard units	6.8
BOD ₅	mg/L	16
TSS	mg/L	ND (RL 3.0)
Acetone	mg/L	ND (RL 0.5)
4-methyl-2-pentanone	mg/L	ND (RL 0.2)
Isobutyraldehyde	mg/L	ND (RL 0.5)
n-Amyl acetate	mg/L	ND (RL 0.25)
n-Butyl acetate	mg/L	ND (RL 0.25)
Ethyl acetate	mg/L	ND (RL 0.5)
Isopropyl acetate	mg/L	ND (RL 0.5)
Methyl formate	mg/L	ND (RL 5)
Isopropyl ether	mg/L	ND (RL 0.25)
Tetrahydrofuran	mg/L	ND (RL 0.5)
Benzene	mg/L	ND (RL 0.1)
Toluene	mg/L	ND (RL 0.1)
Xylenes	mg/L	ND (RL 0.1)
n-Heptane	mg/L	ND (RL 0.5)
n-Hexane	mg/L	ND (RL 0.5)
Methylene chloride	mg/L	ND (RL 0.1)

Parameter	Units	Sample Value
Chloroform	mg/L	0.031 (RL 0.1) ^a
1,2-dichloroethane	mg/L	ND (RL 0.1)
Chlorobenzene	mg/L	ND (RL 0.1)
o-Dichlorobenzene	mg/L	ND (RL 0.1)
Diethyl amine	mg/L	ND (RL 1000)
Triethyl amine	mg/L	ND (RL 1000)

Table 5 - Vidalife wastewater characterization

Parameter	Units	Sample Value
Ammonia	mg/L	0.11
Cyanide	mg/L	0.008 (RL 0.01)
pH	standard units	9.5
BOD ₅	mg/L	51
TSS	mg/L	ND (RL 3.0)
Acetone	mg/L	ND (RL 0.25)
4-methyl-2-pentanone	mg/L	ND (RL 0.1)
Isobutyraldehyde	mg/L	ND (RL 0.05)
n-Amyl acetate	mg/L	ND (RL 0.025)
n-Butyl acetate	mg/L	ND (RL 0.025)
Ethyl acetate	mg/L	ND (RL 0.25)
Isopropyl acetate	mg/L	ND (RL 0.05)
Methyl formate	mg/L	ND (RL 0.5)
Isopropyl ether	mg/L	ND (RL 0.025)
Tetrahydrofuran	mg/L	ND (RL 0.25)
Benzene	mg/L	ND (RL 0.05)
Toluene	mg/L	ND (RL 0.05)
Xylenes	mg/L	ND (RL 0.05)
n-Heptane	mg/L	ND (0.05)
n-Hexane	mg/L	ND (0.05)
Methylene chloride	mg/L	ND (RL 0.05)
Chloroform	mg/L	0.015 (RL 0.05) ^a
1,2-dichloroethane	mg/L	ND (RL 0.5)
Chlorobenzene	mg/L	ND (RL 0.05)
o-Dichlorobenzene	mg/L	ND (RL 0.5)
Diethyl amine	mg/L	ND (RL 50)
Triethyl amine	mg/L	ND (RL 50)

^a Chloroform was detected at the method detection level using EPA Method 624.1 in both the Ovadine and Vidalife wastewater sample. This result is an estimate and is less than half of the respective reporting level for each sample run.

II.D. State environmental policy act (SEPA) compliance

State law exempts the issuance, reissuance, or modification of any wastewater discharge permit from the SEPA process as long as the permit contains conditions that are no less stringent than federal and state rules and regulations (RCW 43.21C.0383). The exemption applies only to existing discharges, not to new

discharges. Syndel is an existing discharger, however has not previously been covered under a discharge permit.

III. Proposed Permit Limits

State regulations require that Ecology base limits in a State Waste Discharge permit on the:

- Technology and treatment methods available to treat specific pollutants (technology-based). Technology-based limits are set by the EPA and published as a regulation (40 CFR 400-471), or Ecology develops limits on a case-by-case basis (40 CFR 125.3, and RCW 90.48). Dischargers must treat wastewater using all known, available, reasonable methods of prevention, control, and treatment (AKART).
- Effects of the pollutants on the publicly-owned treatment works (POTW). Wastewater must not interfere with the operation of the POTW. Ecology considers local limits in developing permit limits.
- Applicable requirements of other local, state, and federal laws.

Ecology applies the most stringent applicable limits to each parameter of concern. These limits are described below.

The limits in this permit reflect information received in the application and from supporting engineering and monitoring reports. Ecology evaluated the permit application and determined the limits needed to comply with the rules adopted by the state of Washington. Ecology does not develop effluent limits for all reported pollutants. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, or are not listed in regulation.

Ecology does not usually develop limits for pollutants not reported in the permit application that may be present in the discharge. The permit does not authorize discharge of the non-reported pollutants. During the permit term, the facility's effluent discharge conditions may change from those conditions reported in the permit application. The facility must notify Ecology if significant changes occur in any constituent. Until Ecology modifies the permit to reflect additional discharge of pollutants, a permitted facility could be violating its permit.

III.A. Technology-based effluent limits

Waste discharge permits issued by Ecology specify conditions requiring the facility to use all known available and reasonable methods of prevention, control, and treatment of discharges AKART before discharging to waters of the state (RCW 90.48).

Existing federal categorical standards, 40 CFR Part 439 Pharmaceutical Manufacturing Point Source Category, apply to the wastewater discharges from Syncaine and Ovadine manufacturing at this facility. 40 CFR Part 439 applies to process wastewater discharges resulting from the research and manufacture of

pharmaceutical products. Pharmaceutical products include products manufactured by one of the four manufacturing processes described in this regulation and considered by the FDA to be pharmaceutically active. Both Syncaine and Ovadine are regulated by the FDA. The Syncaine wastewater is regulated by 40 CFR 439 Subpart C Chemical Synthesis Products, Pretreatment Standards for New Sources (PSNS) [40 CFR 439.37]. The Ovadine wastewater is regulated by 40 CFR 439 Subpart D Mixing/Compounding and Formulation, PSNS [40 CFR 439.47]. The regulated parameters and maximum daily and monthly average limits applicable to Subpart D are consistent with those applicable to Subpart C. However, since Subpart C has additional regulated parameters, and Syndel combines the Syncaine and Ovadine wastewater in a storage tank prior to discharge, Ecology is applying the limits for all regulated parameters under Subpart C to the discharge of the Syncaine and Ovadine wastewater.

No federal categorical standards apply to the Vidalife wastewater. Ecology required the Vidalife wastewater be sampled for the 40 CFR Part 439 listed parameters during the baseline monitoring for permit application out of caution. After reviewing the applicability of the federal standards, Ecology has determined they do not apply to this wastestream.

The state waste discharge permit regulations include restrictions and prohibitions to protect publicly owned sewerage systems. A facility may not discharge any wastewater having a pH less than 5.0 or greater than 11.0 or having any other corrosive property capable of causing damage or hazard to structures, equipment, or personnel unless the system is specifically designed to accommodate such discharge, and the discharge is authorized by a permit (WAC 173-216-060).

Federal regulations (40 CFR 403.5b) also prohibit the discharge of pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the collection and treatment system is designed to accommodate such discharges.

Syndel does not employ any pretreatment equipment prior to discharging process wastewater. Ecology determined the facility meets the minimum requirements demonstrating compliance with the AKART standard and federal effluent guidelines if Syndel meets the applicable limits and requirements of this permit.

The following permit limits are necessary to satisfy the requirement for AKART:

Table 6 - Technology-based effluent limits

Parameter	Monthly average (mg/L)	Daily maximum (mg/L)
Ammonia (as N) ^a	29.4	84.1
Acetone	8.2	20.7
4-methyl-2-pentanone	8.2	20.7
Isobutyraldehyde	8.2	20.7
n-Amyl acetate	8.2	20.7

Parameter	Monthly average (mg/L)	Daily maximum (mg/L)
n-Butyl acetate	8.2	20.7
Ethyl acetate	8.2	20.7
Isopropyl acetate	8.2	20.7
Methyl formate	8.2	20.7
Isopropyl ether	8.2	20.7
Tetrahydrofuran	3.4	9.2
Benzene	0.7	3.0
Toluene	0.2	0.3
Xylenes	0.7	3.0
n-Heptane	0.7	3.0
n-Hexane	0.7	3.0
Methylene chloride	0.7	3.0
Chloroform	0.03	0.1
1,2-dichloroethane	8.2	20.7
Chlorobenzene	0.7	3.0
o-Dichlorobenzene	8.2	20.7
Diethyl amine	100	255
Triethyl amine	100	255
Cyanide, total	9.4	33.5

Parameter	Daily minimum	Daily maximum
pH	5.0 standard units	11.0 standard units

^a As authorized in 40 CFR 439.16(b), sources that discharge to a POTW with nitrification capability are not required to achieve the pretreatment standard for ammonia. The City of Ferndale POTW is designed for nitrogen reduction therefore, Syndel does not need to achieve the pretreatment standard or monitor. Baseline monitoring shows the Syndel effluent is well below the standard.

III.B. Effluent limits based on local limits

To protect the Ferndale WWTP from pass-through, interference, concentrations of toxic chemicals that would impair beneficial or designated uses of sludge, or potentially hazardous exposure levels, Ecology believes it necessary to impose limits for certain parameters. Ecology based these limits on local limits established by the City of Ferndale and codified in municipal code Chapter 13.31.090 (Ord. 1810 §1, 2013). Ecology's pretreatment program delegation agreement with EPA includes language in which Ecology agreed to enforce limits adopted by non-delegated programs (local limits). Applicable limits for this discharge include the following:

Table 7 - Limits based on local limits

Parameter	Maximum daily allowable discharge concentration (mg/L)	Maximum instantaneous allowable discharge concentration (mg/L)
Arsenic, total	0.20	0.40
Cadmium, total	0.10	0.20
Copper, total	0.20	0.40

Parameter	Maximum daily allowable discharge concentration (mg/L)	Maximum instantaneous allowable discharge concentration (mg/L)
Chromium, total	2.80	5.60
Cyanide, total	0.90	1.80
Lead, total	0.10	0.20
Mercury	0.10	0.20
Nickel, total	1.70	3.40
Selenium, total	0.10	0.20
Silver, total	0.40	0.80
Zinc, total	2.60	5.20
Total toxic organics	2.10	4.20
FOG (nonpolar)	100.0	100.0

Parameter	Daily minimum	Daily maximum
pH	5.0 standard units	12.5 standard units

Based on the operations conducted at Syndel, Ecology does not expect metals or cyanide to be present in significant concentrations in the wastewater discharge. However, to confirm this, Ecology is requiring a one-time characterization of metals to be submitted with permit renewal application. Ecology includes the standard language that discharges must meet local requirements. The categorical pretreatment standards include limits for the most likely present organics, therefore Ecology will not implement the TTO standard or require monitoring. Ecology does not expect FOG to be present in significant quantities to cause any issues with the City of Ferndale collection system, monitoring is not required. The local limit for cyanide is more stringent than the categorical standard, Ecology will implement the maximum daily local limit for cyanide.

III.C. Applicable effluent limits

Ecology applies the most stringent limit as the effluent limit in the permit. The discharge limits applicable to the permit are in Table 8. Additionally, a discharge of a pollutant in excess of local limits, as outlined above, violates the terms of the permit.

Table 8 - Effluent limits in the permit

Parameter	Monthly average (mg/L)	Daily maximum (mg/L)
Acetone	8.2	20.7
4-methyl-2-pentanone	8.2	20.7
Isobutyraldehyde	8.2	20.7
n-Amyl acetate	8.2	20.7
n-Butyl acetate	8.2	20.7
Ethyl acetate	8.2	20.7
Isopropyl acetate	8.2	20.7
Methyl formate	8.2	20.7
Isopropyl ether	8.2	20.7
Tetrahydrofuran	3.4	9.2
Benzene	0.7	3.0

Parameter	Monthly average (mg/L)	Daily maximum (mg/L)
Toluene	0.2	0.3
Xylenes	0.7	3.0
n-Heptane	0.7	3.0
n-Hexane	0.7	3.0
Methylene chloride	0.7	3.0
Chloroform	0.03	0.1
1,2-dichloroethane	8.2	20.7
Chlorobenzene	0.7	3.0
o-Dichlorobenzene	8.2	20.7
Diethyl amine	100	255
Triethyl amine	100	255
Cyanide, total	N/A	0.9

Parameter	Daily minimum	Daily maximum
pH	5.0 standard units	11.0 standard units

Ecology is not applying a flow limit in the permit. Monitoring for flow is required and Syndel must notify Ecology if flow is greater than 20% of the flow volume identified in the permit application.

There are no applicable effluent limits for the Vidalife wastewater. Ecology has included this wastestream as an authorized discharge. The prohibited discharge standards in special condition S5 apply to this wastestream, and Ecology is implementing required best management practices to control this discharge.

IV. Monitoring Requirements

Ecology requires monitoring, recording, and reporting (WAC 173-216-110) to verify that the treatment process is functioning correctly, the discharge meets groundwater criteria, and that the discharge complies with the permit's effluent limits.

If a facility uses a contract laboratory to monitor wastewater, it must ensure that the laboratory uses the methods and meets or exceeds the method detection levels required by the permit. The permit describes when facilities may use alternative methods. It also describes what to do in certain situations when the laboratory encounters matrix effects. When a facility uses an alternative method as allowed by the permit, it must report the test method, detection level (DL), and quantitation level (QL) on the discharge monitoring report or in the required report.

The monitoring schedule is detailed in the proposed permit under Special Condition S.2. Specified monitoring frequencies consider the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

Due to the high BOD₅ result in the baseline monitoring, Ecology is requiring BOD₅ monitoring. Ecology will not require TSS monitoring beyond the permit renewal application monitoring.

Syndel submitted a monitoring waiver request to Ecology during permit application. In accordance with 40 CFR 403.12(e)(2), Ecology is waiving the monitoring for parameters that were found non detect during the baseline monitoring conducted for the permit application. The waiver conditions are presented in condition S.2. Syndel must sample for the waived pollutants during permit renewal application. If at any time, these pollutants are found to be present, Syndel must notify Ecology and immediately begin sampling on a semiannual basis.

IV.A. Lab accreditation

Ecology requires that facilities must use a laboratory registered or accredited under the provisions of chapter 173-50 WAC, Accreditation of Environmental Laboratories, to prepare all monitoring data. Syndel may conduct flow and pH monitoring on site without accreditation.

V. Other Permit Conditions

V.A. Reporting and record keeping

Ecology based Special Condition S3 on its authority to specify any appropriate reporting and record keeping requirements to prevent and control waste discharges (WAC 173-216-110).

For monitoring reporting purposes, Ecology recognizes that Syndel's operation and production schedule is variable. Additionally, the capacity of the Building A and C storage tanks is much greater than the wastewater generated during one production run. Therefore, wastewater generated from multiple production runs may accumulate prior to being pumped to the main onsite storage tank. Therefore, Ecology is requiring only semiannual DMR reporting even for parameters that are required to be monitoring for each batch discharged.

V.B. Operation and Maintenance

The proposed permit contains Special Condition S.4 as authorized under RCW 90.48.110, WAC 173-216-110, and WAC 173-240, to ensure proper operation and regular maintenance of equipment, and to ensure that Syndel takes adequate safeguards so that it uses constructed facilities to their optimum potential in terms of pollutant capture and treatment.

Syndel does not provide any treatment to wastewater prior to discharge. Therefore, an O&M Manual is not required. However, Special Condition S.4 requires Syndel to prepare and submit a Wastewater Discharge Operation Plan to document discharge practices and activities to comply with listed best management practices. Implementation of the procedures in the Operating Plan ensures the facility's compliance with the terms and limits in the permit.

Syndel is planning to install an aboveground storage tank prior to the Building C underground tank. Syndel must notify Ecology when this is installed.

V.C. Prohibited discharges

Ecology prohibits certain pollutants from being discharged to the POTW. These include substances which cause pass-through or interference, pollutants which may cause damage to the POTW or harm to the POTW workers (chapter 173-216 WAC) and the discharge of designated dangerous wastes not authorized by this permit (chapter 173-303 WAC).

V.D. Dilution prohibited

Ecology prohibits the facility from diluting its effluent as a partial or complete substitute for adequate treatment to achieve compliance with permit limits.

V.E. Solid waste

Syndel must prevent pollution of the waters of the state through inappropriate disposal of solid waste or through the release of leachate from solid waste.

V.F. Slug discharge plan

Ecology determined that Syndel does not have the potential for a batch discharge or a spill that could adversely affect the treatment plant, therefore the proposed permit does not require a slug discharge control plan [(40 CFR 403.8 (f)(I) (iii)(B)(6) and (f) (2)(vi)]. Drains in production areas are routed to holding tanks which are then routed to a main onsite storage tank prior to pumping to the City sewer system. This provides several layers of storage to contain any spills or slugs. Ecology has incorporated emergency response and spill response elements into the Operating Plan required in Special Condition S4.

V.G. General conditions

Ecology bases the standardized General Conditions on state and federal law and regulations. They are included in all state waste discharge permits issued by Ecology.

VI. Public notification of noncompliance

Ecology may annually publish a list of all industrial users in significant noncompliance with pretreatment standards or requirements during any of the previous four quarters in a local newspaper. Accordingly, this permit Special Condition informs the Facility that noncompliance with this permit may result in publication of the noncompliance.

VII. Permit Issuance Procedures

VII.A. Permit modifications

Ecology may modify this permit to impose or change numeric limits, if necessary to comply with changes in the pretreatment requirements, conditions in local sewer ordinances, or based on new information from sources such as inspections and effluent monitoring.

Ecology may also modify this permit to comply with new or amended state or federal regulations.

VII.B. Proposed permit issuance

This proposed permit includes all statutory requirements for Ecology to authorize a wastewater discharge. The permit includes limits and conditions to protect human health, and the beneficial uses of waters of the state of Washington. Ecology proposes to issue this permit for a term of five years.

VIII. References for Text and Appendices

Syndel. 2024 permit application. Retrieved from
<https://apps.ecology.wa.gov/paris/DownloadDocument.aspx?id=474816>

Washington State and Ecology website general reference links:

[Laws and Regulations](#)¹

[Permit and Wastewater Related Information](#)²

Environmental Protection Agency general reference links:

[Part 439 Pharmaceutical Manufacturing Point Source Category](#)

[National Pretreatment Program](#)

¹ <http://leg.wa.gov/LawsAndAgencyRules/Pages/default.aspx>

² <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance>

Appendix A – Public Involvement Information

Ecology proposes to issue a permit to Western Chemical Inc dba Syndel USA. The permit includes wastewater discharge limits and other conditions. This fact sheet describes the facility and Ecology's reasons for requiring permit conditions.

Ecology placed a Public Notice of Application on March 27, 2024 and April 3, 2024 in the Bellingham Herald to inform the public about the submitted application and to invite comment on the issuance of this permit.

Ecology will place a Public Notice of Draft on May 29, 2024 in the Bellingham Herald to inform the public and to invite comment on the proposed draft National Pollutant Discharge Elimination System permit and fact sheet.

The notice:

- Tells where copies of the draft Permit and Fact Sheet are available for public evaluation (the closest Regional or Field Office, posted on our website).
- Offers to provide the documents in an alternate format to accommodate special needs.
- Urges people to submit their comments, in writing, before the end of the Comment Period
- Tells how to request a public hearing of comments about the proposed NPDES permit.
- Explains the next step(s) in the permitting process.

[Frequently Asked Questions about Effective Public Commenting³](#)

You may obtain further information from Ecology by telephone, 206-594-0000, or by writing to the address listed below.

Water Quality Permit Coordinator
Department of Ecology
Northwest Regional Office
P.O. Box 330316
Shoreline, WA 98133-9716

The primary author of this permit and fact sheet is Maia Hoffman.

³ <https://apps.ecology.wa.gov/publications/SummaryPages/0307023.html>

Appendix B – Your Right to Appeal

You have a right to appeal this permit to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of the final permit. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. “Date of receipt” is defined in RCW 43.21B.001(2) (see glossary).

To appeal you must do the following within 30 days of the date of receipt of this permit:

- File your appeal and a copy of this permit with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours as defined in WAC 371-08-305 and -335. “Notice of appeal” is defined in WAC 371-08-340.
- Serve a copy of your appeal and this permit on Ecology on the Department of Ecology mail, in person, or by email (see addresses below).
- You must also comply with other applicable requirements in chapter 43.21B RCW and chapter 371-08 WAC.

Filing with the PCHB

For the most current information regarding filing with the PCHB: visit <https://eluho.wa.gov/>⁴ or call 360-664-9160.

Service on Ecology

Street Address:

Department of Ecology
Attn: Appeals Processing Desk
300 Desmond Drive SE
Lacey, WA 98503

Mailing Address:

Department of Ecology
Attn: Appeals Processing Desk
PO Box 47608
Olympia, WA 98504-7608

E-Mail Address:

ecologyappeals@ecy.wa.gov

⁴ <https://eluho.wa.gov/>

Appendix C – Glossary

AKART – The acronym for “all known, available, and reasonable methods of prevention, control and treatment.” AKART is a technology-based approach to limiting pollutants from wastewater discharges, which requires an engineering judgment and an economic judgment. AKART must be applied to all wastes and contaminants prior to entry into waters of the state in accordance with RCW 90.48.010 and RCW 90.48.520, WAC 173-200-030(2)(c)(ii), and WAC 173-216-110(1)(a).

Ammonia – Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average monthly discharge limit – The average of the measured values obtained over a calendar months’ time.

Best management practices (BMPs) – Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD₅ – Determining the five-day Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD₅ is used in modeling to measure the reduction of dissolved oxygen in receiving waters after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD₅ is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass – The intentional diversion of waste streams from any portion of a treatment facility.

Categorical pretreatment standards – National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties, which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

Clean water act (CWA) – The federal Water Pollution Control Act enacted by Public Law 92 500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Compliance inspection-without sampling – A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance inspection-with sampling – A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations. In addition it includes as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Ecology may conduct additional sampling.

Construction activity – Clearing, grading, excavation, and any other activity, which disturbs the surface of the land. Such activities may include road building; construction of residential houses, office buildings, or industrial buildings; and demolition activity.

Date of receipt – This is defined in RCW 43.21B.001(2) as five business days after the date of mailing; or the date of actual receipt, when the actual receipt date can be proven by a preponderance of the evidence. The recipient's sworn affidavit or declaration indicating the date of receipt, which is unchallenged by the agency, constitutes sufficient evidence of actual receipt. The date of actual receipt, however, may not exceed forty-five days from the date of mailing.

Detection level – 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.

Engineering report – A document that thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report must contain the appropriate information required in WAC 173-240-060 or WAC 173-240-130.

Grab sample – A single sample or measurement taken at a specific time or over as short a period of time as is feasible.

Groundwater – Water in a saturated zone or stratum beneath the surface of land or below a surface water body.

Industrial user – A discharger of wastewater to the sanitary sewer that is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

Industrial wastewater – Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business; from the development of any natural resource; or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated stormwater and, also, leachate from solid waste facilities.

Interference – A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
- Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Local limits – Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

Maximum daily discharge limit – The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method detection limit (MDL) – See Detection level.

Minor facility -- A facility discharging to surface water with an EPA rating score of < 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Mixing zone – An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The permit specifies the area of the authorized mixing zone that Ecology defines following procedures outlined in state regulations (chapter 173-201A WAC).

National pollutant discharge elimination system (NPDES) – Section 402 of the Clean Water Act, the federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State are joint NPDES/State permits issued under both state and federal laws.

pH – The pH of a liquid measures its acidity or alkalinity. It is the negative logarithm of the hydrogen ion concentration. A pH of 7 is defined as neutral and large variations above or below this value are considered harmful to most aquatic life.

Pass-through – A discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the

POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of State water quality standards.

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”.

Reasonable potential – A reasonable potential to cause or contribute to a water quality violation, or loss of sensitive and/or important habitat.

Responsible corporate officer – 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 employing more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

Sample Maximum – No sample may exceed this value.

Significant industrial user (SIU) –

- All industrial users subject to Categorical Pretreatment Standards under 40 CFR Chapter I, Subchapter N and 40 CFR 403.6 and;
- Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement [in accordance with 40 CFR 403.8(f)(6)].

Upon finding that the industrial user meeting the criteria in the second paragraph has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

*The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

Slug discharge – Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge to the POTW. This may include any pollutant released at a flow rate that may cause interference or pass through with the POTW or in any way violate the permit conditions or the POTW's regulations and local limits.

Solid waste – All putrescible and non-putrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes, abandoned vehicles or parts thereof, contaminated soils and contaminated dredged material, and recyclable materials.

State waters – Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater – That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based effluent limit – A permit limit based on the ability of a treatment method to reduce the pollutant.

Total suspended solids (TSS) – Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

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

Appendix D — Response to Comments

[Ecology will complete this section after the public notice of draft period.]