Fact Sheet for State Waste Discharge Permit ST0045535
AstaReal Inc.

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 permit for AstaReal Inc. that will allow discharge of process wastewater to the Publicly Owned Industrial Treatment Works (POITW) Port of Moses Lake and the facilities domestic wastewater will discharge to the City of Moses Lake Larson Treatment Plant.

State law requires any commercial or industrial 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 30 days before it issues the final permit to the facility operator. Copies of the fact sheet and draft permit for AstaReal Inc., State Waste Discharge permit ST0045535, are available for public review and comment from February 3, 2022 until the close of business March 5, 2022. For more details on preparing and filing comments about these documents, please see **Appendix A - Public Involvement Information**.

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

After the public comment period closes, Ecology will summarize substantive comments and our responses to them. Ecology will include our summary and responses to comments to this fact sheet as **Appendix E - Response to Comments**, and publish it when we issue the final State Waste Discharge 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

In late 2014, AstaReal, Inc. a wholly-owned subsidiary of Fuji Chemical Industry Company, located their algae processing plant in Moses Lake, Washington. In December 2020, AstaReal Technologies changed their facility name to AstaReal, Inc.

AstaReal Inc. produces, dries, and packages food grade algae on-site and then it is shipped off-site for further processing and distribution. Process wastewater is discharged to the Port of Moses Lake Treatment Plant and the facilities domestic wastewater is discharged to the City of Moses Lake Larson Treatment Plant. The facility discharges to an onsite 50,000 gallon storage and equalization tank that contains two 25,000 gallon compartments. The tank is used to manually batch treat for pH adjustments and flow metering. The facility then pumps pretreated wastewater to the Port of Moses Lake Public Owned Industrial Treatment Work (POITW). Ecology issued the facility a pretreatment permit for discharge to the Port of Moses Lake POITW.

The algae process results in a constant stream of wastewater generated from the different steps in processing which includes: tank cleaning water, reverse osmosis, decant water, and blowdown from the cooling tower. The facility discharges a maximum daily flow of 148,786 gallons per day. The facility discharges greater than 25,000 gallons of wastewater per day to Port of Moses Lake Publicly Owned Industrial Treatment Works (POITW).

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I. Introduction

The legislature defined Ecology's authority and obligations for the wastewater discharge permit program in the Water Pollution Control law, chapter 90.48 RCW (Revised Code of Washington).

Ecology adopted rules describing how it exercises its authority:

- State waste discharge 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 permit before discharging wastewater to state waters. This rule 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 other performance requirements imposed by the permit.

Under the State Waste Discharge permit program and in response to a complete and accepted permit application, Ecology generally prepares a draft permit and accompanying fact sheet, and makes it 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. When Ecology publishes an announcement (public notice); it tells people where they can read the draft permit, and where to send their comments, during a period of 30 days. (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 State Waste Discharge permit in response to comment(s). Ecology will summarize the responses to comments and any changes to the permit in **Appendix E**.

II. Background Information

Table 1: General Facility Information

Applicant	AstaReal, Inc. 210 Third Avenue, Suite C Moses Lake, WA 98837
Facility name and address	AstaReal, Inc. Algae Facility 7761 Randolph Road NE Moses Lake, WA 98837
Contact at facility	Sunil Kumar, Quality Manager (509) 855-4370 ext. 114
Responsible official	Arun Nair, President (509) 855-4370
Industry type	Algae manufacturing

Type of treatment by industry	pH adjustment and buffering tank
SIC Codes	0182
NAIC Codes	111419
Facility Location (NAD83/WGS84 reference datum)	Latitude: 47.199 N Longitude: 119.292 W
Treatment plant receiving discharge	Port of Moses Lake POITW

Table 2: Permit Status

Issuance date of previous permit	February 4, 2015
Application for permit renewal submittal date	November 30, 2020
Date of Ecology acceptance of application date	December 9, 2020

Table 3: Inspection Status

Date of Last Non-Sampling Inspection	October 15, 2015

Figure 1: Facility Location Map

A. Facility description

History

AstaReal Technologies, Inc. (AstaReal), a wholly-owned subsidiary of Fuji Chemical Industry Company; located their algae processing plant in Moses Lake, Washington. Appendix D, Figure D3, contains a preliminary facility site plan. The facility completed its construction in late 2014.

AstaReal has operated under a State Waste Discharge pretreatment permit from Ecology since February 2014. AstaReal discharges the process wastewater to the Port of Moses Lake Publicly Owned Industrial Treatment Works (POITW), a facultative lagoon and land treatment. The Port of Moses Lake has owned and operated an industrial wastewater collection and treatment system since 2000. The facility collects process wastewater from several industrial/commercial businesses year around and discharges to a 124-acre site via center-pivot irrigation from March 1 to November 1. Winter season wastewater is stored in a lined and covered pond. The facility's domestic wastewater is discharged to the City of Moses Lake Larson Treatment Plant.

Industrial process(s)

The AstaReal Algae Facility produces, dries, and packages food-grade algae on site and then it is shipped off site for further processing and distribution. The main process component of the facility consists of a series of 12 algae cultivation tanks. Each of the series is made of three tanks of successively larger size for a total of 36 tanks, along with supporting pumping and process equipment. They cultivate the algae in flasks and then transfer it to the successively larger tanks as the algal mass increases. After maturation, they harvest the algae in batches. It is decanted to remove excess water, dried, and then packaged and transported off site for further processing.

The facility operates 365 day per year. The process results in a constant stream of wastewater generated from the different steps in the processing which includes: tank cleaning water, reverse osmosis, decant water, and blowdown from the cooling tower. The facility discharges greater than 25,000 gallons of wastewater per day. Appendix D contains a wastewater flow diagram and production flow chart.

Wastewater pretreatment

The facility submitted a state waste discharge to POTW permit application with the following estimated process wastewater flows: average monthly 69,004 gallons per day (gpd) and maximum daily 148,786 gpd. Based on the Port of Moses Lake interim engineering report for permit modification submitted in September 2017, and AstaReal's permit application renewal for increased BOD limit approved by City of Moses Lake, the wastewater discharge flow is limited to: 69,004 gpd (average monthly) and 82,805 gpd (maximum daily), and BOD_5 limit is increased to 300 mg/L (average monthly; 12-month average as 5,254 lbs) and 600 mg/L (maximum daily) respectively. However, the data analysis of past three years shows that the maximum daily flow is 55,429 gpd (September 2018). This discharge flow comes from a combination of decant and cultivation activities, tank cleaning, RO reject, and cooling tower blowdown.

The quality and flow of the wastewater discharged to the Port of Moses Lake varies depending on processing at the facility. Due to these variations, the facility discharges to an onsite 50,000 gallon storage and equalization tank that contains two 25,000 gallon compartments.

They use the tank to manually batch treat for pH adjustments and flow metering. Appendix D contains a wastewater flow diagram and product flow chart. The facility pumps the pretreated wastewater to the Port of Moses Lake's POITW.

B. Discharge location to the Port of Moses Lake

The facility installed a monitoring point right after the 50,000 gallon storage/treatment tank. The facility will monitor for flow, pH, temperature, and conductivity. Additionally, the facility will use the monitoring point for monthly and semiannual composite sampling. The wastewater gravity flows from the pretreatment tank to an existing lift station with forced main to the Port of Moses Lake.

C. Wastewater characterization

AstaReal Inc. reported the concentration of pollutants in the permit application and in discharge monitoring reports. The tabulated data represents the quality of the effluent discharged from January 2018 to December 2020. The effluent is characterized as follows:

Table 4: Wastewater Characterization

Parameter	Units	Average Value	Maximum Value
Biochemical Oxygen Demand (BOD_5)	mg/L	170	393
Total Dissolved Solids (TDS)	mg/l	1,059	8,580
Conductivity	Micromhos/cm	1,463	4,480
Total nitrogen (TKN+NO_3-N)	mg/L	5.7	67.1
Total Kjeldahl N as N	mg/L	3.3	5.9
Boron	mg/L	0.172	0.4
Calcium	mg/L	104.4	164
Chloride	mg/L	108	301
Fluoride	mg/L	4.39	21.2
Magnesium	mg/L	.05	0.2
Phosphorus	mg/L	5.07	17.3

Parameter	Units	Average Value	Maximum Value
Sodium	mg/L	64.2	123.5
Arsenic (total)	mg/L	0.0027	0.004
Cadmium (total)	mg/L	-	0.0004
Chromium (total)	mg/L	-	0.047
Copper (total)	mg/L	0.022	0.050
Lead (total)	mg/L	-	0.0009
Manganese	mg/L	0.048	0.2
Molybdenum (total)	mg/L	0.068	0.30
Nickel (total)	mg/L	-	0.024
Selenium (total)	mg/L	-	0.002
Zinc (total)	mg/L	0.015	0.024
FOG	mg/L	17.8	68.7
Temperature	^{o}F	70.4	79.8

Table 5: Wastewater Characterization - pH

Parameter	Units	Minimum Value	Maximum Value
pH	Standard Units	4.0	10.0

D. Summary of compliance with previous permit issued

The previous permit placed effluent limits on Flow, pH, BOD5, Total Dissolved Solids (TDS), Molybdenum, Boron, Chloride, Sodium, Total Phosphorus, Total Nitrogen, Conductivity, Total Kjeldahl Nitrogen (TKN), Manganese, Fats, Oil, Grease (FOG), and Temperature.

AstaReal Inc. has not consistently complied with the effluent limits and permit conditions throughout the duration of the permit issued on February 4, 2014. Ecology assessed compliance based on its review of the facility's discharge monitoring reports (DMRs) and on inspections conducted by Ecology.

The following table summarizes the violations that occurred during the period from January 2018 to December 2020. The facility had no missing permit submittals.

Table 6: Total Number of Violations

Parameter	Number of Violations*
BOD_5, mg/L	30
TDS, mg/L	4
Molybdenum, mg/L	8
Chloride, mg/L	13
Conductivity, Micromhos/cm	7
Oil and Grease, mg/L	12

The facility violations were due to preauthorized product experimentation, and short time change in the process. The facility had about 20 late DMR submissions from January 2018 to December 2020. The facility had requested a BOD_5 increase in 2017, but Ecology could not modify the AstaReal permit because of the permit modification of receiving POITW (Port of Moses Lake) was in process. The violations were dealt with in a timely manner, corrective actions were taken by the facility, and in some situations warning letters/emails were issued.

E. 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.

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 industrial treatment works (POITW). Wastewater must not interfere with the operation of the POITW. Ecology considers local limits in developing permit limits.
- Applicable requirements of other local, state and federal laws.

Ecology applies the most stringent of these limits to each parameter of concern and further describes the proposed limits below.

The limits in this permit reflect information received in the application and from supporting reports (engineering, hydrogeology, monitoring, etc.).

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, and are not listed in regulation.

Ecology does not usually develop permit limits for pollutants not reported in the permit application but may be present in the discharge. The permit does not authorize the discharge of the non-reported pollutants. During the five-year 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.

A. Technology-based effluent limits

Ecology based the current discharge limits for flow from the information submitted on the DMRs and application information. The established limits are intended to be protective of the Port of Moses lake's POITW and are based on the Port of Moses Lakes' effluent limits.

Table 7: Technology Based Effluent Limits for Flow

Parameter	Average Monthly	Maximum Daily
Flow	69,004 gallons per day	82,805 gallons per day

Table 8: Technology-based Effluent Limits for pH

Parameter	Daily Minimum	Daily Maximum
pH	5.0 standard units	10.0 standard units

B. Effluent limits based on local limits

To protect the Port of Moses Lake POITW 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 name POITW and codified in ordinance (reference Industriala Process Water Treatment-Facility Use Resolution No 1336; this supercedes Resulution No. 1157 dated 10/22/2001). Ecology's pretreatment program delegation agreement with EPA includes language in which Ecology agreed to enforce limits adopted by non-delegated programs (local limits). Table 5 contains additional limits based on the receiving treatment facility (Port of Moses Lake WWTP) limiting flow, BOD, and metals based on the capacity of the land treatment system and winter storage capacity.

Applicable effluent limits for this discharge include the following (Port of Moses Lakes-Resolution no 1336):

Table 5: Limits Based on Local Limits

Parameter	6-Month Average Discharge Limits	Maximum Daily
$BOD_{5,}$ mg/L	40	80
Fats, Oil, Grease (FOG)	40 mg/L	80 mg/L
Total Nitrogen (TKN + NO_3-N), mg/L	35 mg/L	70 mg/L
Total Kjeldahl Nitrogen, mg/L	30	60
Total Dissolved Solids (TDS), mg/L	1,000 mg/L	2,000 mg/L
Conductivity	1,600 umhos/cm	3,200 umhos/cm
pH s.u. (min/max)	5.5-8.0	5.0-9.0
Sodium Adsorption ratio (f)	6	12
Aluminium, mg/L	5	10
Arsenic, mg/L	0.1	0.2
Beryllium, mg/L	0.1	0.2
Boron, mg/L	0.35	0.7
Cadmium, mg/L	0.1	0.2
Chromium, mg/L	0.1	0.2
Cobalt, mg/L	0.05	0.1
Copper, mg/L	2.5	5.
Fluoride, mg/L	4	8
Iron, mg/L	50	100
Lead, mg/L	1.0	2.0
Lithium, mg/L	2.0	4.0
Manganese, mg/L	1.0	2.0

Parameter	6-Month Average Discharge Limits	Maximum Daily
Mercury, mg/L	0.05	0.1
Molybdenum, mg/L	0.05	0.1
Nickel mg/L,	0.3	0.6
Selenium, mg/L	0.3	0.6
Vanadium, mg/L	0.1	0.2
Zinc, mg/L	9.0	18

Table 6: Effluent Limits based on Port of Moses Lake revisd agreement (Aug 11, 2021)

	Current Effluent Limits	Outfall 001	Proposed Effluent Limits	Outfall 001
Parameter	**Daily Average**	**Daily Maximum**	**Daily Average**	**Daily Maximum**
Flow, gpd	69,004	82,805	69,004	82,805
pH s.u.	10	10	10	10
$BOD_{5,}$ mg/L	90	135	600	600
Total Dissolved Solids (TDS), mg/L	1,634	1,634	2200	2200
Molybdenum, mg/L	0.10	0.11	1.0	1.0
Boron, mg/L	0.50	2.0	2.0	2.0
Chloride, mg/L	132	158	500	500
Sodium, mg/L	140	140	200	200
Total Phosphorous mg/L	22	26	30	30
Total Nitrogen (TKN+NO_3-N), mg/L	7	11	15	15

C. Permit Effluent Limits

Ecology based the effluent limits in the table below on one or more of the following: technology, Local Limits: Industrial Process Water Treatment, Port of Moses Lake revised agreement (Aug 11, 2021) and permit renewal application approved by the reciving POITW, Port of Moses Lake. The following limits only included constituents with local limits and identified in the discharge by the facility (Appendix D).

Table 9: Permit Effluent Limits: Outfall #001

Parameter	Basis of Limit	Average Monthly	Maximum Daily
Flow	Port of Moses Lake revised agreement (Aug 11, 2021)	69,004 gpd	82,805 gpd
BOD_5	Port of Moses Lake revised agreement (Aug 11, 2021)	600 mg/L	600 mg/L
Total Dissolved Solids (TDS)	Port of Moses Lake revised agreement (Aug 11, 2021)	2,200 mg/L	2,200 mg/L
Molybdenum	Port of Moses Lake revised agreement (Aug 11, 2021)	1.0 mg/L	1.0 mg/L
Boron	Port of Moses Lake revised agreement (Aug 11, 2021)	2.0 mg/L	2.0 mg/L
Chloride	Port of Moses Lake revised agreement (Aug 11, 2021)	500 mg/L	500 mg/L
Sodium	Port of Moses Lake revised agreement (Aug 11, 2021)	200 mg/L	200 mg/L
Total Phosphorous	Port of Moses Lake revised agreement (Aug 11, 2021)	30 mg/L	30 mg/L
Total Nitrogen (TKN+NO_3-N)	Port of Moses Lake revised agreement (Aug 11, 2021)	15 mg/L	15 mg/L
Total Kjeldahl Nitrogen	Local limits	15 mg/L	15 mg/L

Parameter	Basis of Limit	Average Monthly	Maximum Daily
Conductivity	Local limits	3,200 Micromhos/cm	3,200 Micromhos/cm
Fats, Oil, Grease	Local limits	40 mg/L	40 mg/L
Manganese	Local limits	1.0 mg/L	2.0 mg/L

Table 10: Permit Effluent Limits: Outfall 001 (pH)

Parameter	Basis of limit	Daily Minimum	Daily Maximum
pH	Port of Moses Lake revised agreement (Aug 11, 2021)	5.0 standard units	10.0 standard units

D. Comparison of effluent limits with the previous permit issued

Table 11: Comparison of Effluent Limits of modified permit on May 28, 2015 and proposed permit (based on Port of Moses Lake revisd agreement, Aug 11, 2021).

	Current Effluent Limits	Outfall 001	Proposed Effluent Limits	Outfall 001
Parameter	**Average Monthly**	**Maximum Daily**	**Average Monthly**	**Maximum Daily**
BOD_5, mg/L	90	135	600	600
Temperature, Fahrenheit, ^oF	---	104	---	dropped
Total Dissolved Solids (TDS), mg/L	1,634	1,634	2,200	2,200
Molybdenum, mg/L	0.10	0.11	1.0	1.0
Boron, mg/L	0.50	2.0	2.0	2.0
Chloride, mg/L	132	158	500	500
Sodium, mg/L	140	140	200	200
Total Phosphorous mg/L	22	26	30	30
Total Nitrogen (TKN+NO3-N), mg/L	7	11	15	15

	Current Effluent Limits	Outfall 001	Proposed Effluent Limits	Outfall 001
Parameter	**Average Monthly**	**Maximum Daily**	**Average Monthly**	**Maximum Daily**
Total Kjeldahl Nitrogen, mg/L	4	9	15	15
Manganese, mg/L	0.2	10	1.0	1.0
Fats, Oil, Grease, mg/L	20	40	40	40

Table 12: Comparison of Current and Proposed Wastewater Effluent Monitoring

Parameter	Based on 3-years data: Average Monthly	Current Effluent Monitoring	Proposed Effluent Monitoring
Molybdenum, mg/L	0.068 – 0.254	2/month	1/month
Boron, mg/L	0.172 – 0.4	2/month	1/month
Chloride, mg/L	111.40 - 301	2/month	1/month
Sodium, mg/L	66.73 – 128.10	2/month	1/month
Total Phosphorus, mg/L	4.85 – 17.25	2/month	1/month
Total Nitrogen (TKN+NO_3), mg/L	3.84 – 6.0	2/month	1/month
Total Kjeldahl Nitrogen (TKN), mg/L	3.3 – 5.9	2/month	1/month
Manganese, mg/L	0.05 – 0.2	2/month	1/month
Fats, Oil, Grease (FOG), mg/L	18.21 – 68.7	2/month	1/month
Aluminum, mg/L	0.345 -1.28	2/year	1/year
Arsenic, mg/L	0.0027 - 0.004	2/year	1/year
Beryllium, mg/L	0.0003 (max)	2/year	1/year
Cadmium, mg/L	0.0004 (max)	2/year	1/year

Parameter	Based on 3-years data: Average Monthly	Current Effluent Monitoring	Proposed Effluent Monitoring
Calcium, mg/L	104.4 -164	2/year	1/year
Chromium, mg/L	0.0474 (max)	2/year	1/year
Cobalt, mg/L	0.005 (max)	2/year	1/year
Copper, mg/L	0.022 - 0.050	2/year	1/year
Fluoride, mg/L	4.39 - 21.2	2/year	1/year
Iron, mg/L	0.123 - 0.398	2/year	1/year
Lead, mg/L	0.0009 (max)	2/year	1/year
Lithium, mg/L	0.047 - 0.105	2/year	1/year
Magnesium, mg/L	---	2/year	1/year
Nickel, mg/L	0.0237 (max)	2/year	1/year
Selenium, mg/L	0.002 (max)	2/year	1/year
Sodium Adsorption Ratio (SAR), Ratio	9.2 – 32.2	2/year	1/year
Vanadium, mg/L	0.0167- 0.025	2/year	1/year
Zinc, mg/L	0.015 - 0.024	2/year	1/year
S7.C.1. Solid Waste Control	No process solid waste is produced	1/permit cycle	dropped

IV. Monitoring Requirements

Ecology requires monitoring, recording, and reporting (WAC 173-216-110) to verify that the treatment process functions correctly 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.

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 (with the exception of certain parameters).

B. Wastewater monitoring

Ecology details the proposed monitoring schedule under Special Condition S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

The proposed permit requires additional monitoring to further characterize the facility's wastewater. This/These pollutant(s) could have a significant impact on the receiving POITW.

V. Other Permit Conditions

A. Reporting and recordkeeping

Ecology based Special Condition S3 on its authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges [WAC 173-216-110 and CFR 403.12 (e), (g), and (h)].

B. Operations and maintenance

Ecology requires dischargers to take all reasonable steps to properly operate and maintain their wastewater treatment system in accordance with state regulations (WAC 173-240-080 and WAC 173-216-110). The facility must prepare and submit an update of an operation and maintenance (O&M) manual as required by state regulation for the construction of wastewater treatment facilities (WAC 173-240-150). Implementation of the procedures in the operation and maintenance manual ensures the facility's compliance with the terms and limits in the permit. The proposed permit requires submission of an updated O&M manual for the entire wastewater system.

C. Prohibited discharges

Ecology prohibits certain pollutants from being discharged to the POITW. These include substances which cause pass-through or interference, pollutants which may cause damage to the POITW or harm to the POITW workers and the discharge of designated dangerous wastes not authorized by this permit based on the professional judgement.

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.

E. Solid waste control plan

AstaReal, Inc. does not produce process based solid wastes. The empty drums and containers of raw material and chemicals are disposed off-site by a facility contractor.

This proposed permit does not requires the solid waste control plan based on the best professional judgement.

F. Non routine and unanticipated wastewater

Occasionally, this facility may generate wastewater not characterized in the permit application because it is not a routine discharge and the facility did not anticipate it at the time of application. These wastes typically consist of waters used to pressure-test storage tanks or fire water systems or of leaks from drinking water systems.

The permit authorizes the discharge of non-routine and unanticipated wastewater under certain conditions. The facility must characterize these waste waters for pollutants and examine the opportunities for reuse. Depending on the nature and extent of pollutants in this wastewater and on any opportunities for reuse, Ecology may:

- Authorize the facility to discharge the water.
- Require the facility to treat the wastewater.
- Require the facility to reuse the wastewater.

G. Spill plan

This facility stores a quantity of chemicals on-site that have the potential to cause water pollution and/or interference or pass through at the receiving POITW if accidentally released. Ecology can require a facility to develop best management plans to prevent this accidental release.

AstaReal Inc. developed a plan for preventing the accidental release of pollutants to state waters, to the receiving treatment plant, and for minimizing damages if such a spill occurs. Based on the best professional judgement, the proposed permit requires the facility to update this plan and submit it to Ecology.

H. Slug discharge plan

Ecology determined that AstaReal, Inc. has the potential for a batch discharge or a spill that could adversely affect the treatment plant, therefore the proposed permit requires a slug discharge control plan based on the best professional judgement.

I. General conditions

Ecology bases the standardized general conditions on state 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

A. Permit modifications

Ecology may modify this permit to impose or change the numerical 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. It may also modify this permit to comply with new or amended state or federal regulations.

B. Proposed permit issuance

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limits and conditions believed necessary to control toxics. Ecology proposes that the permit be issued for five years.

VIII. References for Text and Appendices

Washington State Department of Ecology.

Laws, Rules & Rulemaking (https://ecology.wa.gov/About-us/How-we-operate/rulemaking)

Permit and Wastewater Related Information (https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance)

Permit Writer's Manual, January 2015. Publication Number 92-109 (https://fortress.wa.gov/ecy/publications/documents/92109.pdf)

Focus Sheet on Developing a Solid Waste Control Plan for Industrial Wastewater Discharge Permittees, February 2007. Publication Number 07-10-024. (https://fortress.wa.gov/ecy/publications/documents/0710024.pdf)

Appendix A - Public Involvement Information

Ecology proposes to reissue a permit to AstaReal, Inc. 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 January 21, 2021 and January 28, 2021 in the Columbia Basin Herald to inform the public about the submitted application and to invite comment on the reissuance of this permit.

Ecology will place a Public Notice of Draft on February 3, 2022 in the Columbia Basin Herald to inform the public and to invite comment on the proposed draft State Waste Discharge permit and fact sheet.

The notice:

- Tells where copies of the draft Permit and Fact Sheet are available for public evaluation (a local public library, 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 state waste discharge permit.
- Explains the next step(s) in the permitting process.

For frequently asked questions about public comments, Publication #03-07-023, **Effective Public Commenting,** is available on Ecology's website at https://fortress.wa.gov/ecy/publications/documents/0307023.pdf.

For more information, call the Department of Ecology Eastern Regional Office at (509) 329-3400 or visit Ecology's webpage at www.ecy.wa.gov.

The primary author of this permit and fact sheet is Vijay Kubsad.

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.
- Serve a copy of your appeal and this permit on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in chapter 43.21B RCW and chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	**Department of Ecology** Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel RD SW STE 301 Tumwater, WA 98501	**Pollution Control Hearings Board** PO Box 40903 Olympia, WA 98504-0903

Appendix C - Glossary

1-DMax or 1-day maximum temperature -- The highest water temperature reached on any given day. This measure can be obtained using calibrated maximum/minimum thermometers or continuous monitoring probes having sampling intervals of thirty minutes or less.

7-DADMax or 7-day average of the daily maximum temperatures - The arithmetic average of seven consecutive measures of daily maximum temperatures. The 7-DADMax for any individual day is calculated by averaging that day's daily maximum temperature with the daily maximum temperatures of the three days prior and the three days after that date.

Acute toxicity - The lethal effect of a compound on an organism that occurs in a short time period, usually 48 to 96 hours.

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 520, WAC 173-200-030(2)(c)(ii), and WAC 173-216-110(1)(a).

Alternate point of compliance - An alternative location in the groundwater from the point of compliance where compliance with the groundwater standards is measured. It may be established in the groundwater at locations some distance from the discharge source, up to, but not exceeding the property boundary and is determined on a site specific basis following an AKART analysis. An "early warning value" must be used when an alternate point is established. An alternate point of compliance must be determined and approved in accordance with WAC 173-200-060(2).

Ambient water quality - The existing environmental condition of the water in a receiving water body.

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.

Annual average design flow (AADF) - Average of the daily flow volumes anticipated to occur over a calendar year.

Average monthly (intermittent) discharge limit - The average of the measured values obtained over a calendar month's time taking into account zero discharge days.

Average monthly discharge limit - The average of the measured values obtained over a calendar month's time.

Background water quality - The concentrations of chemical, physical, biological or radiological constituents or other characteristics in or of groundwater at a particular point in time upgradient of an activity that has not been affected by that activity, [WAC 173-200-020(3)]. Background water quality for any parameter is statistically defined as the 95% upper tolerance interval with a 95% confidence based on at least eight hydraulically upgradient water quality samples. The eight samples are collected over a period of at least one year, with no more than one sample collected during any month in a single calendar year.

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 BOD_5 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.

Chlorine - A chemical used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic toxicity - The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

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.

Composite sample - A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

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.

Continuous monitoring - Uninterrupted, unless otherwise noted in the permit.

Critical condition - The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

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 limit - The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the pollutant concentration is above zero and is determined from analysis of a sample in a given matrix containing the pollutant.

Dilution factor (DF) - A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the percent effluent fraction, for example, a dilution factor of 10 means the effluent comprises 10% by volume and the receiving water 90%.

Distribution uniformity - The uniformity of infiltration (or application in the case of sprinkle or trickle irrigation) throughout the field expressed as a percent relating to the average depth infiltrated in the lowest one-quarter of the area to the average depth of water infiltrated.

Early warning value - The concentration of a pollutant set in accordance with WAC 173-200-070 that is a percentage of an enforcement limit. It may be established in the effluent, groundwater, surface water, the vadose zone or within the treatment process. This value acts as a trigger to detect and respond to increasing contaminant concentrations prior to the degradation of a beneficial use.

Enforcement limit - The concentration assigned to a contaminant in the groundwater at the point of compliance for the purpose of regulation, [WAC 173-200-020(11)]. This limit assures that a groundwater criterion will not be exceeded and that background water quality will be protected.

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 173-240-130.

Fecal coliform bacteria - Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

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.

Major 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.

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 the maximum discharge of a pollutant measured during a calendar day.

Maximum day design flow (MDDF) - The largest volume of flow anticipated to occur during a one-day period, expressed as a daily average.

Maximum month design flow (MMDF) - The largest volume of flow anticipated to occur during a continuous 30-day period, expressed as a daily average.

Maximum week design flow (MWDF) - The largest volume of flow anticipated to occur during a continuous 7-day period, expressed as a daily average.

Method detection level (MDL) - See Detection Limit.

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) - The NPDES (Section 402 of the Clean Water Act) is 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 permit writers 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.

Peak hour design flow (PHDF) - The largest volume of flow anticipated to occur during a one-hour period, expressed as a daily or hourly average.

Peak instantaneous design flow (PIDF) - The maximum anticipated instantaneous flow.

Point of compliance - The location in the groundwater where the enforcement limit must not be exceeded and a facility must comply with the Ground Water Quality Standards. Ecology determines this limit on a site-specific basis. Ecology locates the point of compliance in the groundwater as near and directly downgradient from the pollutant source as technically, hydrogeologically, and geographically feasible, unless it approves an alternative point of compliance.

Potential significant industrial user (PSIU) - A potential significant industrial user is defined as an Industrial User that does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

a. Exceeds 0.5 % of treatment plant design capacity criteria and discharges <25,000 gallons per day or;

b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g. facilities which develop photographic film or paper, and car washes).Ecology may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

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

Reasonable potential - A reasonable potential to cause 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) --

1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N and;

2) 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 paragraph 2, above, 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.

Soil scientist - An individual who is registered as a Certified or Registered Professional Soil Scientist or as a Certified Professional Soil Specialist by the American Registry of Certified Professionals in Agronomy, Crops, and Soils or by the National Society of Consulting Scientists or who has the credentials for membership. Minimum requirements for eligibility are: possession of a baccalaureate, masters, or doctorate degree from a U.S. or Canadian institution with a minimum of 30 semester hours or 45 quarter hours professional core courses in agronomy, crops or soils, and have 5, 3, or 1 years, respectively, of professional experience working in the area of agronomy, crops, or soils.

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.

Soluble BOD_5 - Determining the soluble fraction of Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of soluble organic material present in an effluent that is utilized by bacteria. Although the soluble BOD_5 test is not specifically described in Standard Methods, filtering the raw sample through at least a 1.2 um filter prior to running the standard BOD_5 test is sufficient to remove the particulate organic fraction.

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 coliform bacteria - A microbiological test, which detects and enumerates the total coliform group of bacteria in water samples.

Total dissolved solids - That portion of total solids in water or wastewater that passes through a specific filter.

Total maximum daily load (TMDL) - A determination of the amount of pollutant that a water body can receive and still meet water quality standards.

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.

Water quality-based effluent limit - A limit imposed on the concentration of an effluent parameter to prevent the concentration of that parameter from exceeding its water quality criterion after discharge into receiving waters.

Appendix D - Technical Calculations

- Figure D1 – AstaReal Inc. Production Flow Chart
- Figure D2 – AstaReal Inc. Wastewater Flow Diagram
- Figure D3 – Letter from the Port of Moses Lake with Limit Allowances (Page 1)

Figure D1: AstaReal, Inc. Production Flow Chart

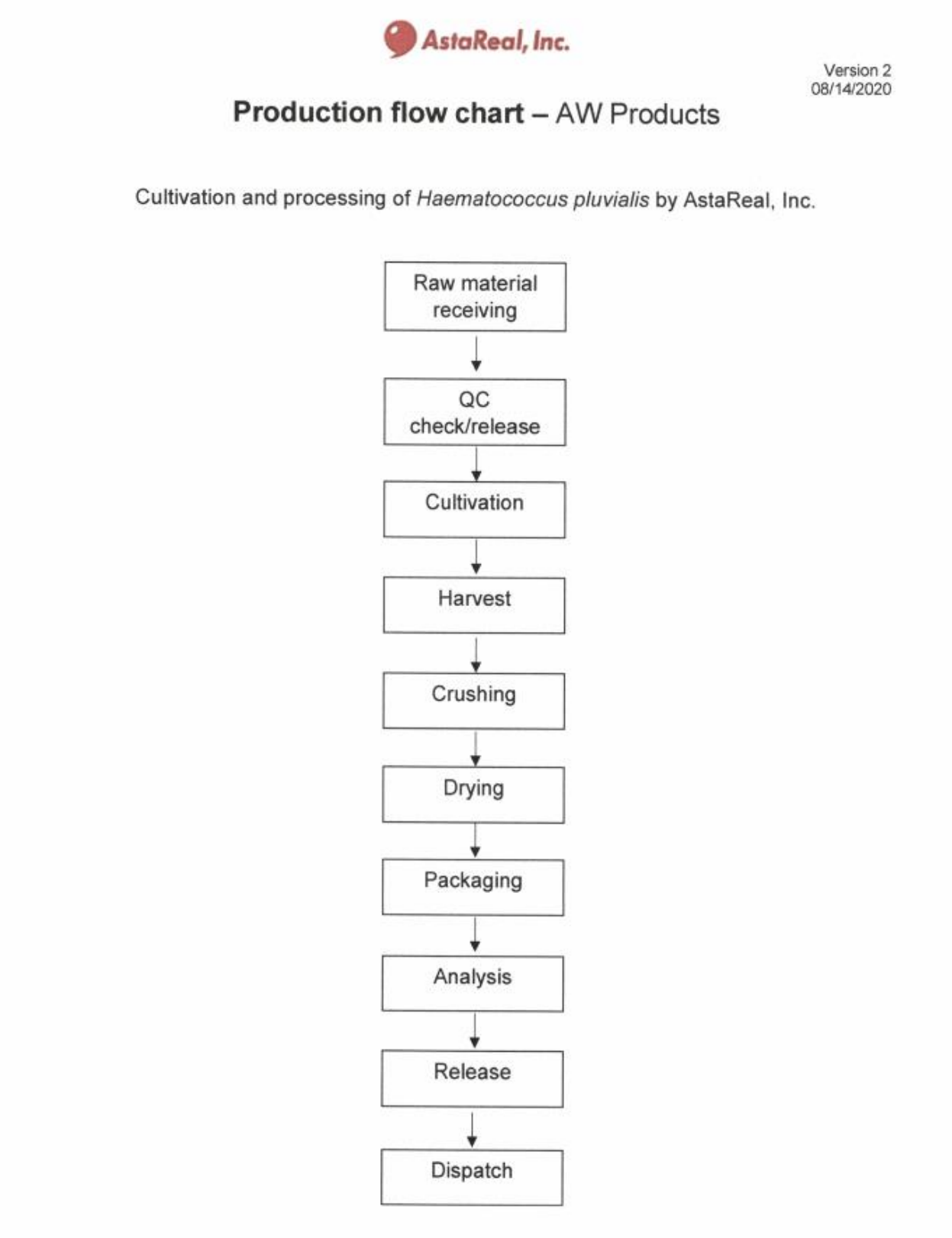

Figure D2: Wastewater Flow Diagram

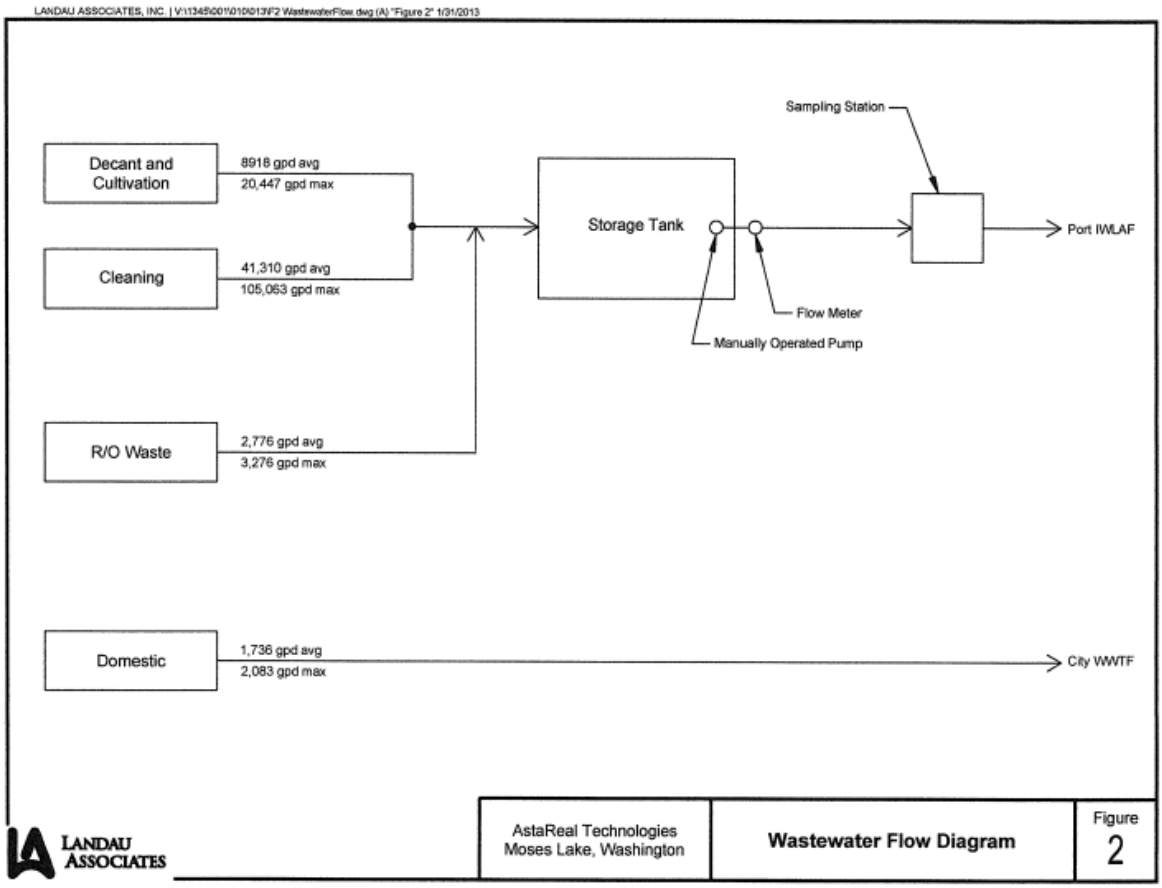

Figure D3: Port of Moses Lake Letter with Summary of Proposed Limit Allowances (Page 1)

PORT OF MOSES LAKE
GRANT COUNTY INTERNATIONAL AIRPORT
Foreign Trade Zone #203

7810 Andrews St. N.E., Suite 200
Moses Lake, WA, USA 98837-3204
PHONE 509-762-5363
FAX 509-762-2713
E-MAIL info@portofmoseslake.com
WEB SITE www.portofmoseslake.com

RECEIVED 3-18-14

March 17, 2014

Mr. Tatsuma Okubo
Project Manager
AstaReal Technologies, Inc.
210 E Third Avenue, Suite C
Moses Lake, WA.98837

Dear Mr. Okubo:

This is in reference to AstaReal's request to use the Port of Moses Lake Industrial Waste Water Treatment facility. In response to this interest, we are enclosing two copies of the 'Subscription Agreement' for the use of the facility. This agreement allows AstaReal to discharge an average of 69,004 gallons per day (GPD) to the Port's Water Treatment Facility. This is approximately 27.6% of the facilities capacity. The following is a summary of the proposed allowances in both mg/l and lbs. to the Port system:

	ANNUAL MAX	MONTHLY MAX	MONTHLY AVG	DAILY MAX	DAILY AVG
	MG	MG	MG	gal.	gal.
FLOW	25.19	2.52	2.10	82,805	69,004
	ANNUAL MAX	MONTHLY MAX	MONTHLY AVG	DAILY MAX	DAILY AVG
	LBS	LBS	LBS	mg/l	mg/l
TDS	342,407	28,533	28,533	1,634	1,634
SODIUM	29,408	2,451	2,451	140	140
NITROGEN	1,470	184	123	11	7
BOD	18,905	2,363	1,575	135	90
MOLYBDENUM	21	1.9	1.8	.11	.10
BORON	105	17.5	8.8	2.00	.50
CHLORIDE	27,727	2,773	2,311	158	132
PHOSPHORUS	4,621	462	385	26	22
	MONTHLY AVERAGE		DAILY or BATCH		
	MAX	MIN	MAX	MIN	
pH	8.5	5.5	9.0	5.0	

Appendix E - Response to Comments

Ecology did not receive comments on the draft permit following the 30-day public comment period.