

# Fact Sheet for State Waste Discharge Permit ST0007380

SeaCast, Inc.

Date of Public Notice: November 8, 2022

Permit Effective Date: February 1, 2023

## 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 SeaCast, Inc. (SeaCast) that will allow discharge of wastewater to the City of Marysville sanitary sewer system.

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 SeaCast, Inc., permit no. ST0007380, was available for public review and comment from November 8, 2022 until the close of business December 8, 2022. For more details on preparing and filing comments about these documents, please see **Appendix A - Public Involvement Information**.

SeaCast 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

Ecology reevaluated the industrial processes and wastewater generation for SeaCast. Based on this evaluation, SeaCast is no longer considered a categorical industrial user under 40 CFR 433 or 464. Therefore, Ecology has revised effluent limits for several sample points accordingly and removed the total toxic organics management plan reporting option.

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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 - Facility Information**

Applicant	SeaCast, Inc.
Facility Name and Address	SeaCast, Inc. 6130 31 <sup>st</sup> Avenue NE Marysville, WA 98271
Contact at Facility	Name: Jerry McCaslin Title: Corporate EHS Manager Telephone #: (360) 386-1628

Responsible Official	Name: Michael Robins Title: President
Industrial User Type	Minor industrial user
Industry Type	Investment casting foundry
Type of Treatment by Industry	pH neutralization
Fee Category (WAC 173-224)	Facilities Not Otherwise Classified – Individual Permit Coverage; b. 10,000 -< 50,000 gpd
SIC Codes	3324
NAIC Codes	331512
Facility Location (NAD83/WGS84 reference datum)	Latitude: 48.05178 Longitude: -122.19076
Treatment Plant Receiving Discharge	City of Marysville Wastewater Treatment Plant NPDES Permit No. WA0022497
Discharge Location of Receiving Treatment Plant (NAD83/WGS84 reference datum)	Steamboat Slough (Outfall 001) Latitude: 48.035556 Longitude: -122.172222 Port Gardner Bay-Puget Sound (Outfall 002) Latitude: 47.969444 Longitude: -122.246667

### **Permit Status**

Issuance Date of Previous Permit: July 28, 2016

Application for Permit Renewal Submittal Date: May 13, 2021

Date of Ecology Acceptance of Application: June 10, 2021

### **Inspection Status**

Date of Last Inspection: February 8, 2021



**Figure 1 – Facility Location Map**

*(Source: Google Maps)*

## **A. Facility description**

SeaCast produces steel, aluminum, and bronze metal castings. Steel and stainless steel castings comprise approximately 95% of production. Aluminum castings comprise approximately 3% of production. Carnuba wax forms are produced for each cast part, by injecting wax into aluminum dies. The wax form is coated (invested) in fused silica. Wax is melted from the fused silica shell and molten alloy is poured into the shell to form the parts being cast. The shell is then removed from the casting, the cast parts are cut off the tree that they were cast on and the excess metal is recycled and re-melted. The cast parts

themselves are subjected to grinding, cutting, and sandblasting or shotblasting, to remove gates, burrs, and other non-conformities. Parts may also be subjected to heat treating, machining, and non-destructive testing procedures, including x-ray, liquid dye penetrant and magnetic particle penetrant.

The operations at the facility that use and generate wastewater are explained below.

*Wax Pattern Cleaning (Sample Point 001 & Sample Point 002):* A die press machine employing aluminum dies is used to form wax into the shape of the finished casting. A paraffin and hydrocarbon wax is used for this process. The wax used contains 4,4'-Isopropylidenediphenol (bisphenol A or BPA). Wax patterns for small parts are placed on a "tree," the "trunk" and sprue "branches" which are also made of wax. Patterns for complex castings which include cavities are produced with soluble wax cores which are removed by acid washing. The patterns are washed in a sink to remove impurities which adhere to the surface.

Pattern cleaner is used when the wax patterns are dipped in pattern release. This wastewater is expected to contain small amounts of the pattern release agent and minute amounts of wax, as well as dilute terpene/citric acid-based pattern cleaner components.

For some jobs, the wax pattern/mold forming process described above is also performed with a portion of the wax pattern system consisting of a water-soluble wax. This technique is typically used for patterns requiring cores, such as pump impellers. The water-soluble wax is paraffin-based, with a sodium bicarbonate filler. This process is used only for pump impellers and other special products which require this method. A dilute hydrochloric acid solution is used to dissolve the water-soluble wax. This process is performed in two tanks of approximately 110 gallons capacity each, into which the pattern is submerged. When the remaining water-insoluble portion of the mold is removed, the acid is rinsed off into the sink. The rinse water is used at a rate of approximately five gallons per minute for a maximum of approximately fifteen minutes for each batch. The acid dip tanks, following neutralization, are pumped to the sewer through the central rinse sink approximately once every two weeks. The water from the dip tanks is neutralized prior to disposal with soda ash (anhydrous sodium carbonate). The neutralization/discharge from the dip tanks is performed on a batch basis. The water is also filtered to remove the "dissolved" wax. The wax is not actually dissolved, but wax particles are dissociated after the sodium carbonate binder is dissolved. Therefore, the wax is filterable.

*Penetrant Testing (Non-Destructive Testing-Sample Point 003):* The Magnaflux penetrant testing line is now seldom used. Monitoring results, conducted in a previous permit cycle, have indicated concentrations of Total Petroleum Hydrocarbons (TPHs) to be below the detection limit. Most penetrant testing is now performed using the Zyglo system. There is no discharge from the Zyglo system to the sanitary sewer.

*Boiler Water (Sample Point 004):* The next step in the production process is to form a silica binder coating of approximately one-quarter-inch thickness on the surface of the wax pattern. Sand is applied between each coat by means of a rainfall sander. The wax is then melted out of the shell mold by means of an autoclave. A boiler located near the autoclave provides steam for the autoclave. Normally Ecology does not require permits for boiler blowdown discharges from small boilers. However, since the facility must have a State Waste Discharge Permit to cover the other discharges from the plant, Ecology has listed this discharge in the proposed permit (Sample Point 004) in order to completely enumerate and authorize the industrial discharges from this plant.

*Heat Exchanger and Cooling Tower (Sample Point 005):* SeaCast melts metal at both atmospheric pressure and under vacuum. SeaCast employs induction furnaces (one-each 800-pound vacuum, three-each 375-pound vacuum, one-each 50-pound air (atmospheric) melt furnaces which operate at approximately 3000 degrees Fahrenheit). In addition, SeaCast employs one 500-pound electric coil furnace for melting aluminum. Each induction furnace employs cooling coils. The water in the cooling coils is run through heat exchangers located at ground level outside the building. The maximum volume of cooling tower blowdown (Sample Point 005) is less than 50 gallons per day, during those days in which routine blowdown occurs. However, the occasional maintenance drawdowns may reach volumes of up to 1000 gallons per day. Furnaces are not equipped with gas scrubbers. When the required molten metal temperature is achieved and the alloy composition is verified, the metal is poured into a transfer ladle, which is used to transfer the metal to the preheated ceramic shells for pouring.

*Kolene Treatment Area Floor Wash Water (Sample Point 006):* A Kolene molten salt (sodium hydroxide) dip system is also located on-site. The system is used for removal of ceramic mold residual which adheres to castings. No wastewater is discharged from the actual Kolene system. However, during an inspection in February 2021, Ecology discovered that SeaCast employees periodically wash down the floors in the Kolene treatment area. Prior to washing down the floors, the area is dry swept and accumulated ceramic, sodium and potassium hydroxide salts, and dirt are disposed of in a 55 gallon drum. The floor cleaning water is accumulated in a cistern and discharged to the sanitary sewer system about every 3 months. Analytical reports for the wastestream taken in 2019 show the wastewater to contain mercury (0.001 mg/L), arsenic (0.046 mg/L), cadmium (0.023 mg/L), chromium (0.270 mg/L), copper (1.4 mg/L), lead (0.12 mg/L), nickel (0.45 mg/L), silver (0.29 mg/L), and zinc (3.0 mg/L), with the concentrations for copper and zinc above the City of Marysville local limits, 0.50 mg/L and 1.67 mg/L respectively. SeaCast submitted information in the recent permit application to transition this discharge point, SP006, from the Kolene process wastewater to the cleaning water discharge. In the application materials, SeaCast proposed to pretreat the wastewater through pH neutralization, which provides for some metal precipitation, settling, and filtration. SeaCast also proposed to sample the cistern after



pretreatment and prior to discharging. If the wastewater does not meet applicable limits, SeaCast will ship the wastewater offsite as waste.

*Pressure Washing of Castings (Sample Point 007):* The pressure wash water process is employed for the removal of ceramic material from castings. The pressure wash process is used very minimally but is retained in the permit to authorize discharge on an as needed basis.

*Photographic Darkroom (Sample Point 008):* SeaCast operates a photographic dark room in the penetrant testing room. Wastewater from this process is subjected to treatment by two silver removal cartridges in series, therefore silver is not expected to be present.

Additional processes at the facility are as follows,

*Quenching:* Although the SeaCast plant is largely a steel foundry, very few cast parts are subjected to heat treatment. Of those parts subjected to heat treatment, only a minority (2% to 5%) require water quenching. Half-a-dozen parts might be quenched in a busy water-quench heat-treat week. The water used for quenching is reused indefinitely, with substantial losses to evaporation. Several different types of furnaces are utilized to heat castings prior to the quenching operations. There are no wastewater discharges associated with these furnaces. SeaCast also operates two Integral Quench Furnaces (endothermic). These furnaces contain a tank of quench oil or antifreeze within the furnace. Parts quenched using this system undergo oil removal in a parts washer which operates at approximately 175 degrees Fahrenheit. The water in this machine is reused, resulting in no wastewater discharge. Vacuum furnaces are for quenching of castings for which contaminant-free surfaces have been specified. The vacuum furnace walls are cooled with a closed-loop antifreeze heat exchange system. Discharge of quench wastewater is not authorized by the proposed permit.

*Machining Centers:* Two machining centers are used in this plant with no discharge to the sanitary sewer. The machining centers are equipped with an engine lathe and milling machines.

*Welding Operations:* TIG and MIG welding, as well as carbon arc welding, are employed to touch up defects in castings. These processes are not associated with a wastewater discharge.

*Pattern-Making Shop:* A pattern-making shop is employed in building wood patterns. There is no apparent discharge of wastewater from this portion of the plant. This shop uses conventional pattern making consisting of fabrication of the original pattern, as opposed to the production of wax molds/patterns as described in the section above dealing with die-press production of wax patterns.

A water balance and system diagram is included in Appendix D.

## B. Discharge location to the City of Marysville

SeaCast discharges to the City of Marysville sewer system and ultimately to the Marysville WWTP. The Marysville WWTP treatment process consist of partially aerated facultative lagoons, sand filters, and UV disinfection with a current capacity of 12.7 million gallons per day. Treated and disinfected effluent is discharged to Steamboat Slough or to Port Gardner via the City of Everett outfall pipe.

## C. Wastewater characterization

SeaCast reported the concentration of pollutants in the permit application and in discharge monitoring reports. The following tabulated data also includes Ecology inspection monitoring results for SP#7 on February 8, 2021. The tabulated data represents the quality of the effluent discharged from August 2016 through April 2022. SeaCast did not discharge process wastewater from the Kolene system (SP#006) during this permit cycle. The effluent is characterized as follows:

**Table 2 - Wastewater Characterization**

Sample Point	Parameter	Units	# of Samples	Average Value	Minimum Value	Maximum Value
001	Flow	gpd	1514	592	1	1,495
002	Flow	gpd	228	153	60	475
002	pH	standard units	227	N/A	6.8	8.1
003	Flow	gpd	1592	785	2	4,652
004	Flow	gpd	1518	168	1	848
005	Flow	gpd	1076	164	1	1,398
007	Flow	gpd	722	229	1	2,817
007	Chromium	mg/L	10	0.041	ND: RL=0.002	0.12
007	Copper	mg/L	10	0.019	0.006	0.055
007	Nickel	mg/L	10	0.041	0.005	0.12
007	Zinc	mg/L	10	0.24	0.062	0.49

Sample Point	Parameter	Units	# of Samples	Average Value	Minimum Value	Maximum Value
008	Flow	gpd	1519	854	1	3,233

ND = non detect

RL = reporting limit

## D. Summary of compliance with previous permit issued

SeaCast has complied with the effluent limits and permit conditions throughout the duration of the permit issued on July 28, 2016 with the exceptions listed below. Ecology assessed compliance based on its review of the facility's discharge monitoring reports (DMRs), review of submittals, and on inspections.

**Table 3 – Late Permit Submittals**

Name of Report	Due Date	Date Received	Ecology Action
Monthly DMR – October 2018	11/28/2018	11/30/2018	No further action.
Permit Application	4/30/2021	5/13/2021	The application was submitted within 2 weeks and before permit expiration. No further action.
Semiannual DMR – July-December 2021	1/28/2022	2/9/2022	No further action.

During an inspection on February 8, 2021, it was discovered that SeaCast was discharging Kolene treatment area floor wash water that may exceed the City of Marysville local limits. Floor wash water is contained in a cistern and when full is pumped to a pH neutralization tank. When wastewater is neutralized, wastewater is passed through a filter prior to discharge to the sanitary sewer. An analytical sample of the neutralized wastewater prior to filtration taken on December 18, 2019 showed detection of mercury, arsenic, cadmium, chromium, copper, lead, nickel, silver, and zinc. The copper and zinc values, 1.4 mg/L and 3.0 mg/L respectively, were above the City's local limits, 0.5 mg/L and 1.48 mg/L respectively. The previous permit required compliance with local limits for all process wastewater discharges.

SeaCast immediately took corrective action and stopped any further discharges of this wastestream. SeaCast subsequently requested authorization to discharge this wastestream

in the permit modification submitted to Ecology on June 9, 2021, as long as compliant with effluent limits. SeaCast confirmed that if accumulated floor wash water was out of compliance with limits, the wastewater would be shipped off site through the contracted waste hauler.

## **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. This permit is for an existing discharge and all permit limits meet federal and state regulations.

## **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 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**

Waste discharge permits issued by Ecology specify conditions requiring all available and reasonable methods of prevention, control, and treatment (AKART) of discharges to waters of the state (RCW 90.48). Ecology considers applicable federal categorical standards to be consistent with state AKART requirements.

### *Evaluation of Applicable Federal Categorical Standards*

#### *40 CFR Part 420*

40 CFR Part 420 sets forth the standards applicable to the Iron and Steel Manufacturing Point Source Category. Subpart D includes provisions applicable to the discharges from steel making operations conducted in furnaces. Since the furnace operations at SeaCast do not involve water, there are no wastewater discharges from these processes and this subpart does not apply. Subpart H includes provisions applicable to discharges from salt bath descaling. The “Development Document for Final Effluent Limitations Guidelines and Standards for the Iron and Steel Manufacturing Point Source Category” (EPA, April 2022) states,

*“Salt bath descaling, a surface treatment operation, processes stainless or alloy steel products in molten salt solutions. This operation uses the physical and chemical properties of molten salt baths to loosen heavy scale from selected stainless and high-alloy steels.”*

The “Development Document” goes on to list process wastewater sources from salt bath descaling to include rinse waters, fume scrubber water, quench water, and drag-out and other losses from salt baths. SeaCast employs a molten salt bath, referred to as Kolene treatment, to dissolve any remaining ceramic mold material from hard to reach internal chambers of cast parts. The product used in the Kolene treatment is Seacast K Blend (contains sodium hydroxide, potassium hydroxide, sodium fluoride, and sodium chloride). Steam and caustic vapors from this process are vented outside to a water scrubber. SeaCast does not discharge any wastewater from the water scrubber. Instead, most water evaporates or, once per year, the water bath is drained and disposed of properly through the contracted waste management company. No wastewater is discharged directly from the Kolene treatment process, including rinse waters. The previous permit authorized this discharge under SP#006, however SeaCast did not discharge any wastewater from this source during the previous permit cycle. However, during a site inspection in February 2021, SeaCast disclosed that wastewater generated from floor cleaning in the Kolene treatment area is collected in a cistern and periodically discharged to the sanitary sewer. During permit reapplication, SeaCast requested the authorization to discharge the Kolene treatment area floor wash water.

Although the “Development Document” lists drag-out and other losses from salt baths as a process wastewater for salt bath descaling subpart (Subpart H), Ecology believes the resulting floor wash water is outside the scope of coverage for the following reasons,

- SeaCast maintains a process to dry sweep the Kolene treatment area floor and dispose of particulate ceramic, residual sodium and potassium hydroxide salts, and dirt in a regulated manner. Only after dry sweeping does SeaCast periodically wash down the floors.
- The pretreatment standards outlined in Subpart H are based on kkg of product and shape of product processed through the salt bath. This inherently assumes the wastewater generated from this process is a direct result of the salt bath process itself. There is no method of correlating kkg of product processed and the possible minimal residual present in the floor wash water.

Therefore, Ecology is making the determination that 40 CFR Part 420 Subpart H does not apply to the discharge of the floor wash water. Ecology believes the floor wash water waste stream is more appropriately managed through compliance with local limits.

#### *40 CFR Part 464*

40 CFR Part 464 sets forth the standards applicable to the Metal Molding and Casting Point Source Category. Part 464 applies to aluminum, copper, ferrous, and zinc casting. There is no applicable subpart for nonferrous metals casting. Despite this, all subparts of Part 464 states that processing operations following the cooling of castings are not covered under this part, except for grinding scrubber operations, and are covered under the metal finishing point source categories. SeaCast does not have a grinder scrubber and there is no contact process wastewater from molten metal casting operations, therefore Part 464 does not apply.

#### *40 CFR Part 433*

Finally, as outlined in 40 CFR Part 433, the Metal Finishing Point Source Category may apply to operations post cooling of castings. 40 CFR Part 433 sets forth the standards applicable to the Metal Finishing Point Source Category. §433.10 states that the provisions of this part apply to plants which perform any of the following six metal finishing operations on any basis material: Electroplating, Electroless Plating, Anodizing, Coating, Chemical Etching or Milling, and Printed Circuit Board Manufacture. SeaCast does not conduct any of the six listed metal finishing operations, therefore Part 433 does not apply.

#### *Determination of industrial user classification*

Based on the discussion of the possible applicable federal categorical standards, Ecology does not find any of the above categories apply to the operations which discharge process wastewater at SeaCast. In addition, the average daily flow is significantly less than 25,000 gpd. Since no categorical standards apply (not a categorical industrial user) and the flow

volume threshold is not met for significant industrial user classification, Ecology considers SeaCast to be a minor industrial user.

*Other State and Federal Technology Based Standards Considerations*

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.
- Discharge is authorized by a permit (WAC 173-216-060).

Federal regulations (40 CFR 403.5b) also prohibits 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.

Since there is no significant pretreatment processes other than pH neutralization and some filtration, Ecology did not receive an engineering report for SeaCast. It is assumed SeaCast meets the minimum requirements demonstrating compliance with the AKART standard without pretreatment if the limits applied in the permit are met.

**Table 4 – Technology Based Effluent Limits**

Parameter	Daily Minimum	Daily Maximum
pH	5.0 standard units	11.0 standard units

## **B. Effluent limits based on local limits**

To protect the Marysville 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 Marysville and codified in ordinance (Ord. 2072 § 2.4, 1996). 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 - Limits Based on Local Limits**

<b>Parameter</b>	<b>Daily Maximum</b> (24-hour composite)	
Arsenic	0.71 mg/L	
Cadmium	0.70 mg/L	
Chromium	1.47 mg/L	
Copper	0.50 mg/L	
Lead	0.52 mg/L	
Mercury	0.10 mg/L	
Nickel	1.48 mg/L	
Zinc	1.67 mg/L	
Silver	0.47 mg/L	

<b>Parameter</b>	<b>Daily Minimum</b>	<b>Daily Maximum</b>
pH	5.5 standard units	10.0 standard units

For pH, Ecology applies the more stringent of the local and technology based limits.

Ecology proposes to apply specific local limits to certain sample points based on information on the respective processes available in the permit application, inspections, and monitoring data during the previous permit cycle. Ecology evaluates the potential of each respective process to be known, or have the reasonable potential, to discharge contaminants.

Ecology does not anticipate wastewater discharged through sample points 001 (pattern washing), 002 (acid rinse tank), 003 (penetrant dye testing), 004 (boiler wastewater), 005 (heat exchanger and cooling tower blowdown) to be sources of metals, and therefore, will not apply those limits. Ecology will apply pH limits to sample point 002.

For sample point 006 (Kolene treatment area floor wash water), Ecology proposes to apply the local limits for chromium, copper, lead, nickel, silver, zinc, and pH because of the presence and reasonable potential to exceed the local limits. Due to the relatively low concentrations of arsenic, cadmium, and mercury expected to be present, Ecology will not apply these local limits to sample point 006.



For sample point 007 (pressure washing of castings), Ecology proposes to apply the local limits for chromium, copper, nickel and zinc because of the composition of base metals used at this facility.

For sample point 008 (photographic process), Ecology proposes to apply the local limits for silver. A silver recovery unit is in place to remove silver in this wastestream for recycling.

Ecology does not expect arsenic, cadmium, lead, or mercury to be present in the regulated waste streams.

### C. Comparison of effluent limits with the previous permit issued on July 28, 2016

**Table 6 - Comparison of Existing and Proposed Limits**

Parameter	Sample Point	Basis of Limit	Existing permit limit	Proposed permit limit
Flow (gpd)	001	Local	1,500	1,500
Flow (gpd)	002	Local	500	500
pH (standard units)	002	Local	5.5 – 10.0	5.5 – 10.0
Flow (gpd)	003	Local	8,000	8,000
Flow (gpd)	004	Local	1,000	1,000
Flow (gpd)	005	Local	1,500	1,500
Flow (gpd)	006	Local	250	250
Cadmium (mg/L)	006	Technology	0.11 (max daily) 0.07 (average monthly)	N/A
Chromium (mg/L)	006	Local	1.47 (max daily) 1.47 (average monthly)	1.47 (max daily)
Copper (mg/L)	006	Local	0.50 (max daily) 0.50 (average monthly)	0.50 (max daily)
Lead (mg/L)	006	Technology	0.52 (max daily) 0.43 (average monthly)	0.52 (max daily)
Nickel (mg/L)	006	Local	1.48 (max daily) 1.48 (average monthly)	1.48 (max daily)
Silver (mg/L)	006	Technology	0.43 (max daily) 0.24 (average monthly)	0.47 (max daily)
Zinc (mg/L)	006	Local	1.67 (max daily) 1.48 (average monthly)	1.67 (max daily)
Cyanide (mg/L)	006	Technology	1.20 (max daily) 0.65 (average monthly)	N/A

Parameter	Sample Point	Basis of Limit	Existing permit limit	Proposed permit limit
TTOs (mg/L)	006	Technology	2.13 (max daily)	N/A
pH (standard units)	006	Local	5.5 – 10.0	5.5 – 10.0
Flow (gpd)	007	Local	3,000	3,000
Chromium (mg/L)	007	Local	1.47 (max daily) 1.47 (average monthly)	1.47 (max daily)
Copper (mg/L)	007	Local	0.50 (max daily) 0.50 (average monthly)	0.50 (max daily)
Nickel (mg/L)	007	Local	1.48 (max daily) 1.48 (average monthly)	1.48 (max daily)
Zinc (mg/L)	007	Local	1.67 (max daily) 1.48 (average monthly)	1.67 (max daily)
Flow (gpd)	008	Local	4,000	4,000
Silver (mg/L)	008	Local	N/A	0.47 (max daily)

The limits applied to sample points 006 and 007 in the proposed permit have changed from the previous permit. As outlined in Section III.A of this fact sheet, Ecology has made the determination that 40 CFR 433 Metal Finishing Point Source Category effluent guidelines do not apply to this discharge. The limits applied in the previous permit, both the maximum daily and average monthly, were based on the technology standards required in this regulation. Since the regulation does not apply, Ecology has removed those limits and replaced them with applicable local limits. There are only maximum daily local limits.

## 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.

# **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 under 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).

## **C. Prohibited discharges**

Ecology prohibits certain pollutants from being discharged to a 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).

## **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. 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 wastewater.
- Require the facility to treat the wastewater.
- Require the facility to reuse the wastewater.

## **F. Slug discharge plan**

Ecology determined that SeaCast 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 [(40 CFR 403.8 (f)(I) (iii)(B)(6) and (f) (2)(vi)]. SeaCast maintains a slug discharge control plan as a component of the “Emergency Action Plan Marysville Foundry”

## **G. 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 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

SeaCast Inc.

Application for State Waste Discharge Permit to Discharge Industrial Wastewater to a POTW. Available on [PARIS](https://apps.ecology.wa.gov/paris/FacilitySummary.aspx?FacilityId=33759529),  
(<https://apps.ecology.wa.gov/paris/FacilitySummary.aspx?FacilityId=33759529>)

Addendum for the Kolene Process Cistern Wastewater Discharge – Permit # ST0007380.  
Available on [PARIS](https://apps.ecology.wa.gov/paris/FacilitySummary.aspx?FacilityId=33759529),  
(<https://apps.ecology.wa.gov/paris/FacilitySummary.aspx?FacilityId=33759529>)

Kolene Cistern Cleanout Analytical Data Report. ALS Environmental for SeaCast Inc.  
December 23, 2019.

Washington State Department of Ecology.

[Laws, Rules & Rulemaking](https://ecology.wa.gov/About-us/How-we-operate/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) (<https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance>)

[Permit Writer's Manual](https://apps.ecology.wa.gov/publications/documents/92109.pdf), July 2018. Publication Number 92-109  
(<https://apps.ecology.wa.gov/publications/documents/92109.pdf>)

Inspection Report, February 8, 2021. Available on [PARIS](https://apps.ecology.wa.gov/paris/FacilitySummary.aspx?FacilityId=33759529),  
(<https://apps.ecology.wa.gov/paris/FacilitySummary.aspx?FacilityId=33759529>)

## **Appendix A - Public Involvement Information**

Ecology proposes to issue a permit to SeaCast. 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 Draft on November 8, 2022 in the Everett 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 (the closest Regional or Field Office and posted on Ecology's 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.

Ecology has published a document entitled [Frequently Asked Questions about Effective Public Commenting](https://apps.ecology.wa.gov/publications/documents/0307023.pdf), available at <https://apps.ecology.wa.gov/publications/documents/0307023.pdf>.

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  
PO Box 330316  
Shoreline, WA 98133-9716

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

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

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

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

**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.

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



**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.

**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.

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

**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.

**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.

**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.

**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.

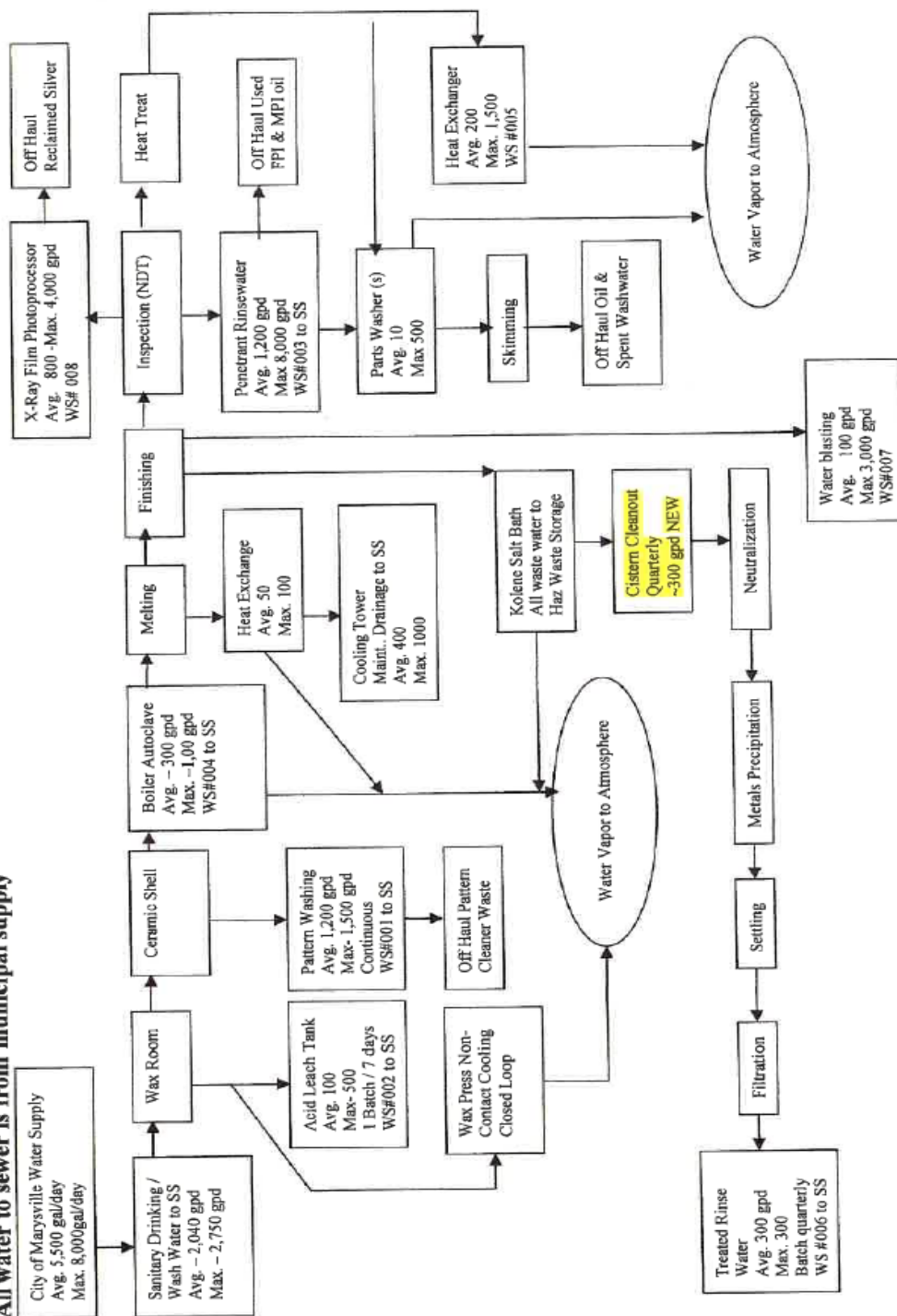
**Technology-based effluent limit** - A permit limit based on the ability of a treatment method to reduce the pollutant.

**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 – Diagrams**

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**Figure 2 – Facility process schematic and wastewater generation**

## **Appendix E - Response to Comments**

Ecology did not receive any comments during the comment period.