



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



JANET T. MILLS  
GOVERNOR

MELANIE LOYZIM  
COMMISSIONER

August 13, 2024

Mr. Nick King  
General Manager  
Salmogen Company Inc.  
8 Taylor River Road  
Hampton Falls, N.H. 03844  
e-mail: [nickking@salmogencompany.com](mailto:nickking@salmogencompany.com)

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0110558  
Maine Waste Discharge License #W009258-6E-A-N  
**Proposed Draft Permit/License**

Dear Mr. King:

Attached is a **proposed draft** MEPDES permit and Maine WDL permit which the Department proposes to issue as a final document after opportunity for your review and comment. By transmittal of this letter, you are provided with an opportunity to comment on the proposed draft permit and its special and standard conditions. If it contains errors or does not accurately reflect present or proposed conditions, please respond to this Department so that changes can be considered.

By copy of this letter, the Department is requesting comments on the proposed draft permit from various state and federal agencies and from any other parties who have notified the Department of their interest in this matter.

The comment period begins today, Tuesday, August 13, 2024, and ends on Friday, September 13, 2024. All comments on the proposed draft permit must be received in the Department of Environmental Protection office on or before the close of business **Friday, September 13, 2024**. Failure to submit comments in a timely fashion may result in the proposed draft/license permit document being issued as drafted.

Comments in writing should be submitted to my attention at the following address:

Maine Department of Environmental Protection  
Bureau of Water Quality  
Division of Water Quality Management  
17 State House Station  
Augusta, ME 04333-0017

AUGUSTA  
17 STATE HOUSE STATION  
AUGUSTA, MAINE 04333-0017  
(207) 287-7688 FAX: (207) 287-7826

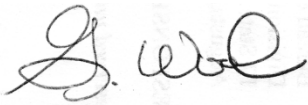
BANGOR  
106 HOGAN ROAD, SUITE 6  
BANGOR, MAINE 04401  
(207) 941-4570 FAX: (207) 941-4584

PORTLAND  
312 CANCO ROAD  
PORTLAND, MAINE 04103  
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE  
1235 CENTRAL DRIVE, SKYWAY PARK  
PRESQUE ISLE, MAINE 04769  
(207) 764-0477 FAX: (207) 760-3143

If you have any questions regarding the matter, please feel free to call me at 287-7693 or e-mail me at [gregg.wood@maine.gov](mailto:gregg.wood@maine.gov)

Sincerely,

A handwritten signature in black ink, appearing to read "G. Wood". The signature is fluid and cursive, with the first name "G." and the last name "Wood" clearly distinguishable.

Gregg Wood  
Division of Water Quality Management  
Bureau of Water Quality

Enc.

cc: Lori Mitchell, DEP/CMRO  
Irene Saumur, DEP/CMRO  
Gary Brooks, DEP/EMRO  
Lynne Jennings, USEPA  
Ellen Weitzler, USEPA  
Michael Cobb, USEPA  
Richard Carvalho, USEPA  
Maine IFW  
Maine DMR  
Christine Vaccaro, NMFS  
Anna Harris, USFWS  
Daniel Kuznierz, PIN



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

**IN THE MATTER OF**

SALMOGEN COMPANY INC	)	MAINE POLLUTANT DISCHARGE
OLD TOWN, PENOBSCOT COUNTY, MAINE	)	ELIMINATION SYSTEM PERMIT
FISH HATCHERY FACILITY	)	AND
ME0110558	)	WASTE DISCHARGE LICENSE
W009258-6E-A-N	)	<b>NEW</b>
		<b>APPROVAL</b>

In compliance with the applicable provisions of *Pollution Control*, 38 M.R.S. §§ 411 – 424-B, *Water Classification Program*, 38 M.R.S. §§ 464 – 470 and *Federal Water Pollution Control Act*, Title 33 U.S.C. § 1251, and applicable rules of the Department of Environmental Protection (Department) has considered the application of SALMOGEN COMPANY INC. (SalmoGen/permittee), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

**APPLICATION SUMMARY**

On June 27, 2024, the Department accepted as complete for processing, a new application from SalmoGen for the monthly average discharge of 100,000 gallons per day (gpd) of treated fish hatchery wastewater. SalmoGen is proposing to construct and operate a land-based recirculating aquaculture facility for the production of salmon broodstock and eggs, with an estimated annual production of 25 million eggs. Commencement of construction is scheduled for early 2025 with the completion of construction 14 months later. The application was assigned Maine Waste Discharge License (WDL) W009258-6E-A-N/Maine Pollutant Discharge Elimination System (MEPDES) permit ME0110558. See **Attachment A** of the Fact Sheet attached to this permit for maps and aerial photographs depicting the location of the facility and the outfall pipe.

SalmoGen has demonstrated that it has title, right or interest in the subject property by way of a lease agreement dated September 28, 2023, for a building owned by the Penobscot Indian Nation on Indian Island and has provided evidence that it is a duly organized business corporation under the laws of the state of Maine. SalmoGen states it has the technical and financial capacity to comply with all terms and conditions of the applicable permit and to satisfy all applicable statutory or regulatory criteria.

This permit authorizes SalmoGem to discharge a monthly average flow of 100,000 gpd of treated fish hatchery wastewater to the Penobscot River, Class B in Old Town, Maine.

## CONCLUSIONS

BASED on the findings in the attached and incorporated **PROPOSED DRAFT** Fact Sheet dated August 13 2024, and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.
2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with State law.
3. The provisions of the State's antidegradation policy, *Classification of Maine waters*, 38 M.R.S. § 464(4)(F), will be met, in that:
  - (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;
  - (b) Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected;
  - (c) Where the standards of classification of the receiving waterbody are not met, the discharge will not cause or contribute to the failure of the waterbody to meet the standards of classification;
  - (d) Where the actual quality of any classified receiving waterbody exceeds the minimum standards of the next highest classification that higher water quality will be maintained and protected; and
  - (e) Where a discharge will result in lowering the existing water quality of any waterbody, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.
4. The discharge will be subject to effluent limitations that require application of best practicable treatment as defined in 38 M.R.S. § 414-A(1)(D).
5. SalmGen has demonstrated that it has title, right or interest in the subject property by way of a deed for the property and has provided evidence that it is a duly organized business corporation under the laws of the State and has the technical and financial capacity to comply with all terms and conditions of the applicable permit and to satisfy all applicable statutory or regulatory criteria.

**ACTION**

THEREFORE, the Department APPROVES the application of SALMOGEN COMPANY INC. to discharge a monthly average flow of 100,000 gpd of treated fish hatchery wastewater to the Penobscot River, Class B, in Old Town, Maine, SUBJECT TO ALL APPLICABLE STANDARDS AND REGULATIONS AND THE FOLLOWING CONDITIONS:

1. “*Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable to All Permits*,” revised July 1, 2002, copy attached.
2. The attached Special Conditions, including any effluent limitations and monitoring requirements.
3. This permit becomes effective upon the date of signature below and expires at midnight five (5) years after that date. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of this permit, the terms and conditions of this permit and all subsequent modifications and minor revisions thereto remain in effect until a final Department decision on the renewal application becomes effective. [*Maine Administrative Procedure Act*, 5 M.R.S. § 10002 and *Rules Concerning the Processing of Applications and Other Administrative Matters*, 06-096 CMR 2(21)(A) (amended June 9, 2018)].

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT AUGUSTA, MAINE, THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ 2024.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
Melanie Loyzim, Commissioner

Date of initial receipt of application June 26, 2024

Date of application acceptance June 27, 2024

Date filed with Board of Environmental Protection \_\_\_\_\_

This Order prepared by Gregg Wood, Bureau of Water Quality

**SPECIAL CONDITIONS**

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

1. The permittee is authorized to discharge **treated fish hatchery wastewater from Outfall #001A** to the Penobscot River. Such discharges are limited and must be monitored by the permittee as specified below <sup>(1)</sup>:

**OUTFALL #001A – Effluent**

Effluent Characteristic	Discharge Limitations					Minimum Monitoring Requirements
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow <i>[50050]</i>	100,000 gpd <i>[07]</i>	Report gpd <i>[07]</i>	---	---	1/Month <i>[01/30]</i>	Measure <i>[MS]</i>
BOD5 <i>[00310]</i>	25 lbs./day <i>[26]</i>	42 lbs./day <i>[26]</i>	30 mg/L <i>[19]</i>	50 mg/L <i>[19]</i>	1/Month <i>[01/30]</i>	Composite <i>[24]</i>
TSS <i>[00530]</i>	25 lbs./day <i>[26]</i>	42 lbs./day <i>[26]</i>	30 mg/L <i>[19]</i>	50 mg/L <i>[19]</i>	1/Month <i>[01/30]</i>	Composite <i>[24]</i>
Temperature <i>[00011]</i>	---	68°F <i>[15]</i>	---	---	1/Month <i>[01/30]</i>	Measure <i>[MS]</i>
Total Phosphorus <sup>(2)</sup> <i>[00665]</i> <i>(May 1 – October 31)</i>	Report lbs./day <i>[26]</i>	Report lbs./day <i>[26]</i>	Report mg/L <i>[19]</i>	Report mg/L <i>[19]</i>	1/Month <i>[01/30]</i>	Composite <i>[24]</i>
pH (Std. Units) <i>[00400]</i>	The pH must not be less than 6.0 or greater than 9.0 at any time.				1/Month <i>[01/30]</i>	Grab <i>[GR]</i>

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

**FOOTNOTES:** See Pages 5 & 6 of this permit for applicable footnotes.

## SPECIAL CONDITIONS

### A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

#### Footnotes

1. **Monitoring** – All effluent monitoring shall be conducted at a location following the last treatment unit in the treatment process as to be representative of end-of-pipe effluent characteristics. **All effluent monitoring shall be conducted prior to co-mingling with the treated sanitary waste water discharged by the Penobscot Indian Nation regulated via ME0101311/WDL 002672.** A routine sampling program must be developed in which samples are taken at the same location, same time and same days of the week each month. Occasional deviations from the routine sampling program are allowed, but the reason for the deviation must be documented as an electronic attachment to the applicable discharge monitoring report.

Sampling and analysis must be conducted in accordance with: a) methods approved by 40 Code of Federal Regulations (CFR) Part 136; b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136; or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Health and Human Services. Samples that are sent to a publicly owned treatment works (POTW) licensed pursuant to *Waste discharge licenses*, 38 M.R.S. § 413 are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*, 10-144 CMR 263 (effective March 15, 2023). If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the DMR.

In accordance with 40 CFR § 122.44(i)(1)(iv), the permittee must monitor according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O, for the analysis of pollutants or pollutant parameters (except WET). A method is "sufficiently sensitive" when: 1) The method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or 2) The method has the lowest ML of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter. The term "minimum level" refers either to the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. Minimum levels may be obtained in the following ways: they may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a laboratory, by a factor.

## **SPECIAL CONDITIONS**

### **A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)**

#### **Footnotes**

- 2. Phosphorus (Total)** – Total phosphorus monitoring (**May – October of each year**) must be performed in accordance with **Attachment A** of this permit entitled, *Protocol for Total P Sample Collection and Analysis for Wastewater-May, 2014*, unless otherwise specified by the Department.

### **B. NARRATIVE EFFLUENT LIMITATIONS**

1. The permittee must not discharge effluent that contains a visible oil sheen, foam or floating solids at any time which would impair the uses designated for the classification of the receiving waters.
2. The permittee must not discharge effluent that contains materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the uses designated for the classification of the receiving waters.
3. The permittee must not discharge effluent that causes visible discoloration, taste, turbidity, radioactivity or other properties in the receiving waters that causes those waters to be unsuitable for the designated uses and characteristics ascribed to their class.
4. The permittee must not discharge effluent that lowers the quality of any classified body of water below such classification, or lowers the existing quality of any body of water if the existing quality is higher than the classification.

### **C. AUTHORIZED DISCHARGES**

The permittee is authorized to discharge only in accordance with: 1) the permittee's General Application for Waste Discharge Permit, accepted for processing on June 27, 2024; 2) the terms and conditions of this permit; and 3) only from Outfall #001A. Discharges of wastewater from any other point source are not authorized under this permit, and must be reported in accordance with Standard Condition D(1)(f), *Twenty-four-hour reporting*, of this permit.



## **SPECIAL CONDITIONS**

### **D. NOTIFICATION REQUIREMENT**

In accordance with Standard Condition D, the permittee must notify the Department of the following:

1. Any substantial change in the volume or character of pollutants being introduced into the wastewater collection and treatment system.
2. For the purposes of this section, adequate notice must include information on:
  - a. The quality and quantity of wastewater introduced to the wastewater collection and treatment system; and
  - b. Any anticipated change in the quality and quantity of the wastewater to be discharged from the treatment system.

### **E. MONITORING AND REPORTING**

#### Electronic Reporting

*NPDES Electronic Reporting*, 40 C.F.R. 127, requires MEPDES permit holders to submit monitoring results obtained during the previous month on an electronic discharge monitoring report to the regulatory agency utilizing the USEPA electronic system.

Electronic Discharge Monitoring Reports (DMRs) submitted using the USEPA NetDMR system, must be:

1. Submitted by a facility authorized signatory; and
2. Submitted no later than **midnight on the 15<sup>th</sup> day of the month** following the completed reporting period.

Documentation submitted in support of the electronic DMR may be attached to the electronic DMR. Toxics reporting must be done using the DEP Toxsheet reporting form. An electronic copy of the Toxsheet reporting document must be submitted to your Department compliance inspector as an attachment to an email. Documentation submitted electronically to the Department in support of the electronic DMR must be submitted no later than midnight on the 15<sup>th</sup> day of the month following the completed reporting period.

## SPECIAL CONDITIONS

### F. OPERATION & MAINTENANCE PLAN

The permittee must have a current written Operation & Maintenance (O&M) Plan for the facility. The plan must provide a systematic approach by which the permittee must at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit.

An acceptable O&M plan must ensure the following items are adequately addressed:

#### 1. Solids Control

- a. Methods and practices to ensure efficient feed management and feeding strategies that limit feed input to the minimum amount reasonably necessary to achieve production goals and sustain targeted rates of aquatic animal growth in order to minimize potential discharges to waters of the State.
- b. In order to minimize the discharge of accumulated solids from the settling basin, settling tanks, and production systems, identify and implement procedures for routine cleaning of rearing units and settling tanks, and procedures to minimize any discharge of accumulated solids during the inventorying, grading, and harvesting of aquatic animals in the production system.
- c. Procedure for removal and disposal of mortalities to prevent discharge to waters of the State.

#### 2. Materials Storage

- a. Ensure proper storage of drugs<sup>1</sup>, pesticides<sup>2</sup>, feed, and any petroleum and/or hazardous waste products in a manner designed to prevent spills that may result in the discharge of drugs, pesticides, or feed to waters of the State.
- b. Implement procedures for properly containing, cleaning, and disposing of any spilled material that has the potential to enter waters of the State.

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<sup>1</sup> **Drug.** “Drug” means any substance defined as a drug in section 201(g)(1) of the *Federal Food, Drug and Cosmetic Act* [21 U.S.C. § 321].

<sup>2</sup> **Pesticide.** “Pesticide” means any substance defined as a “pesticide” in section 2(u) of the *Federal Insecticide, Fungicide, and Rodenticide Act* [7 U.S.C. § 136 (u)].

## **SPECIAL CONDITIONS**

### **F. OPERATION & MAINTENANCE PLAN (cont'd)**

#### 3. Structural Maintenance

- a. Inspect the production system and the wastewater treatment system on a routine basis in order to identify and promptly repair any damage.
- b. Conduct regular maintenance of the production system and the wastewater treatment system in order to ensure that they are properly functioning.

#### 4. Recordkeeping

- a. Maintain records for fish rearing units documenting the feed amounts and estimates of the numbers and weight of fish.
- b. Maintain records that document the frequency of cleaning, inspections, repairs and maintenance.

#### 5. Training

- a. In order to ensure the proper clean-up and disposal of spilled material adequately, train all relevant personnel in spill prevention and how to respond in the event of a spill.
- b. Train staff on the proper operation and cleaning of production and wastewater treatment systems including training in feeding procedures and proper use of equipment to prevent unauthorized discharges.

**By December 31 of each year, or within 90 days of any process changes or minor equipment upgrades,** the permittee must evaluate and modify the O&M Plan including site plan(s) and schematic(s) for the wastewater treatment facility to ensure that it is up-to-date. The O&M Plan must be kept on-site at all times and made available to Department and USEPA personnel upon request.

**Within 90 days of completion of new and or substantial upgrades of the wastewater treatment facility,** the permittee must submit the updated O&M Plan to their Department inspector for review and comment.

## SPECIAL CONDITIONS

### G. USE OF DRUGS FOR DISEASE CONTROL

1. **General requirements.** All drugs used for disease prevention or control must be approved or authorized by the U.S. Food and Drug Administration (FDA), and all applications must comply with applicable FDA requirements.
2. **FDA-approved drugs.** Drugs approved by the FDA for fish culture purposes may be used in accordance with label instructions.
  - a. Preventative treatments: The discharge of any approved drug administered as a preventative measure is not authorized by this permit, unless the following conditions are met: the drug must be approved by FDA, and the treatment and route of administration must be consistent with the drug's intended use.
  - b. See **Attachment B** of this permit for a list of potential drugs to be used at the facility. Drugs not identified in the permittee's application - When the need to treat or control diseases requires the use of a FDA-approved drug not identified in the application, the permittee must notify the Department orally or by electronic mail prior to initial use of the drug.
    1. The notification must include a description of the drug, its intended purpose, the method of application, the amount, the concentration, the duration of the use, and information on aquatic toxicity.
    2. ***Within seven (7) days of*** the initial notification the permittee must submit a written report that includes all of the information outlined in Section G.2.c(1) above.
    3. The Department may require submission of an application for permit modification, including public notice requirements, if the drug is to be used for more than a 30-consecutive day period.
    4. If, upon review of information regarding the extralabel use of a drug pursuant to this section, the Department determines that significant adverse effects are likely to occur, it may deny, restrict or limit use of the drug.

## SPECIAL CONDITIONS

### G. USE OF DRUGS FOR DISEASE CONTROL (cont'd)

3. **Extralabel drug use.** Extralabel drug use is not authorized by this permit, unless in accordance with a specific prescription written for that use by a licensed veterinarian.
  - a. Notification. The permittee must notify the Department orally or by e-mail prior to initial extralabel use of a drug.
    1. The notification must include a description of the drug, its intended purpose, the method of application, the amount, concentration, and duration of the use, information on aquatic toxicity, and a description of how and why the use qualifies as an extralabel drug use under FDA requirements.
    2. ***Within seven (7) days of*** the initial notification the permittee must submit a written report that includes all of the information outlined in Section G.3.a(1) above. Notice must include documentation that a veterinarian has prescribed the drug for the proposed use. A copy of the veterinarian's prescription must be maintained on-site during treatment for Department review.
    3. If, upon review of information regarding the extralabel use of a drug pursuant to this section, the Department determines that significant adverse effects are likely to occur, it may deny, restrict or limit use of the drug.
4. **Investigational New Animal Drug (INAD).** The discharge of drugs authorized by the FDA for use during studies conducted under the INAD program is not authorized by this permit, unless in accordance with specific prior consent given in writing by the Department.
  - a. Initial report. The permittee must provide a written report to the Department for the proposed use of an INAD ***within seven (7) days*** of agreeing or signing up to participate in an INAD study. The written report must identify the INAD to be used, method of use, dosage, and disease or condition the INAD is intended to treat.
  - b. Evaluation and monitoring. ***At least ninety (90) days prior to initial use*** of an INAD at a facility, the permittee must submit for Department review and approval a study plan for the use of the drug that:
    1. Indicates the date the facility agreed or signed up to participate in the INAD study.
    2. Demonstrates that the minimum amount of drug necessary to evaluate its safety, efficacy, and possible environmental impacts will be used.

## **SPECIAL CONDITIONS**

### **G. USE OF DRUGS FOR DISEASE CONTROL (cont'd)**

3. Includes an environmental monitoring and evaluation program that at a minimum describes sampling strategies, analytical procedures, evaluation techniques and a timetable for completion of the program. Currently available data or literature that adequately characterizes the environmental fate of the INAD and its metabolite(s) may be proposed for consideration in determinations of environmental monitoring and evaluation programs required by the Department pursuant to this section.
- c. Notification. The permittee must notify the Department orally or by electronic mail *no more than forty-eight (48) hours after* beginning the first use of the INAD under the approved plan.

### **H. PESTICIDES AND OTHER COMPOUNDS**

All pesticides used at the facility must be applied in compliance with federal labeling restrictions and in compliance with applicable statute, Board of Pesticides Control rules and best management practices (BMPs). Chemicals or compounds not registered as pesticides and proposed for use at the facility must be identified in the permittee's application and may only be discharged to waters of the State with express approval in this permitting action. In accordance with Special Condition D of this permit, the permittee must notify the Department of any substantial change in the volume or character of pollutants being introduced into the wastewater collection and treatment system.

### **I. SPILLS**

In the event of a spill of drugs, pesticides, feed, petroleum and/or hazardous waste products that results in a discharge to waters of the State, the permittee must provide an oral report of the spill to the Department within 24 hours of its occurrence and a written report within 5 days to the Department. The report must include the identity and quantity of the material spilled.

## **SPECIAL CONDITIONS**

### **J. PROTECTION OF ATLANTIC SALMON**

The permittee is required to employ a fully functional Containment Management System (CMS) designed, constructed, operated, and audited so as to prevent the accidental or consequential escape of fish from the facility.

Each CMS plan must include:

1. a site plan or schematic;
2. site plan description;
3. procedures for inventory control, escape response; and unusual event management;
4. provisions for employee training, auditing methods, and record keeping requirements; and
5. the CMS must identify critical control points where escapes could potentially occur, specific control mechanisms for each of these points, and monitoring procedures to verify the effectiveness of controls.

The CMS site specific plan must also describe the use of effective containment barriers appropriate to the life history of the fish. The facility must have in place both a three-barrier system for fish up to 5 grams in size and a two-barrier system for fish 5 grams in size or larger.

The three-barrier system must include one barrier at the incubation/rearing unit, one barrier at the effluent from the hatch house/fry rearing area and a third barrier placed in line with the entire effluent from the facility. Each barrier must be appropriate to the size of fish being contained. The two-barrier system must include one barrier at the individual rearing unit drain and one barrier in line with the total effluent from the facility. Each barrier must be appropriate to the size of fish being contained. Barriers installed in the system may be of the screen type or some other similarly effective device used to contain fish of a specific size in a designated area. Barriers installed in the system for compliance with these requirements must be monitored daily.

Facility personnel responsible for routine operation must be properly trained and qualified to implement the CMS. Prior to any containment system assessment associated with this permit, the permittee must provide to the Department documentation of the employee's or contractor's demonstrated capabilities to conduct such work [*ICIS code 21599*].

## SPECIAL CONDITIONS

### J. PROTECTION OF ATLANTIC SALMON (cont'd)

**On or before six months following the effective date of this permit [ICIS code 53799]** the permittee must submit the CMS plan to the Department, NOAA, USFWS, DMR and the Penobscot Indian Nation for review and approval and must maintain a current copy of the plan at the facility. Final approval of the plan will be determined by the Department. **The permittee may not bring eggs or any size fish into the facility until the final CMS plan is approved by the Department.**

The CMS must be audited at least once per year and within 30 days of a reportable escape by a third party qualified to conduct CMS audits and approved by the Department [ICIS code 63899]. A written report of these audits must be provided to the facility and the Department for review and approval within 30 days of the audit being conducted [ICIS code 43699]. Any time that a CMS audit identifies deficiencies, the written report must contain a corrective action plan including a timetable for implementation and provisions for re-auditing, unless waived by the Department, to verify completion of all corrective actions.

Additional third party audits to verify correction of deficiencies must be conducted in accordance with the corrective action plan or upon request of the Department. The facility must notify the Department upon completion of corrective actions.

The permittee must maintain for a period of at least five (5) years complete records, logs, reports of internal and third party audits and documents related to the CMS for each facility.

**Compromised containment/Escape reporting.** The permittee must notify by electronic mail (e-mail) the Escape Reporting Contact List (provided in this subsection) of any known system failures that compromise fish containment or suspected escape of any fish within 24 hours of becoming aware of the known or suspected loss to the following persons listed under “Escape Reporting Contact List.”

The permittee must include in its e-mail notification the following information: 1) site location (town and waterbody); 2) date of event (or window of possible dates if exact date is unknown); 3) time of event (if known or specify "unknown"); 4) species (including strain); 5) estimated average weight; 6) age of escaped fish; 7) number of escaped fish (or if exact number is not possible, an estimate); 8) medication profile; 9) details of the escape; 10) corrective action(s) taken or planned; 11) and a contact person (including phone number) for the facility which is subject of the known or suspected escape.



## SPECIAL CONDITIONS

### J. PROTECTION OF ATLANTIC SALMON (cont'd)

#### Escape Reporting Contact List:

The agency contacts on this list may be revised by the state and/or federal agencies by provision of written notification to the permittee and the other agencies. Upon notice of any such change the permittee must notify all persons on the revised list in the same manner as provided in this protocol.

#### *Army Corps of Engineers*

Maine Project Office; Shawn Mahaney; [Shawn.B.Mahaney@usace.army.mil](mailto:Shawn.B.Mahaney@usace.army.mil)

#### *Maine Department of Environmental Protection*

Regional Compliance Inspector, Gary Brooks: [gary.r.brooks@maine.gov](mailto:gary.r.brooks@maine.gov)

#### *Maine Department Marine Resources*

Director, Bureau of Health, Kohl Kanwit, [Kohl.Kanwit@maine.gov](mailto:Kohl.Kanwit@maine.gov)

Director, Bureau of Sea-Run Fisheries, Sean Ledwin, [Sean.M.Ledwin@maine.gov](mailto:Sean.M.Ledwin@maine.gov)

#### *Maine Department of Inland Fisheries and Wildlife*

Commissioner, Judy A. Camuso, [Judy.camuso@maine.gov](mailto:Judy.camuso@maine.gov), or current Commissioner

#### *National Marine Fisheries Service*

Maine Field Station; David Bean, [David.Bean@noaa.gov](mailto:David.Bean@noaa.gov)

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#### *Penobscot Indian Nation*

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### K. FISH FEED

**On or before 90 days prior to stocking the site with fish feed**, the permittee must submit a detailed list of ingredients in the feed. If the list contains ingredients of concern, the Department reserves the right to reopen the permit pursuant to Special Condition L, *Reopening of Permit For Modifications*, to establish appropriate limits.

## **SPECIAL CONDITIONS**

### **L. REOPENING OF PERMIT FOR MODIFICATION**

In accordance with 38 M.R.S. § 414-A(5) and upon evaluation of the tests results in the Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at any time and with notice to the permittee, modify this permit to: (1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded; (2) require additional monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

### **M. COMMENCEMENT OF OPERATIONS**

The permittee must meet with the Department's permitting and compliance inspection staff **at a minimum of thirty (30) days prior to commencing production/operations** at the facility to review the applicability of the permit limitations, monitoring requirements, and reporting requirements. Should the Department determine that the proposed production/operations are significantly different from what was presented in the application materials or subsequently revised and included in permitting actions; the Department may require the applicable party to modify this permit or to file an application for a new permit.

### **N. SEVERABILITY**

In the event that any provision or part thereof, of this permit is declared to be unlawful by a reviewing court, the remainder of the permit must remain in full force and effect, and must be construed and enforced in all aspects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.



# **ATTACHMENT A**

## **Protocol for Total Phosphorus Sample Collection and Analysis for Waste Water and Receiving Water Monitoring Required by Permits**

Approved Analytical Methods: EPA 200.7 (Rev. 44), 365.1 (Rev. 2.0), (Lachat), 365.3, 365.4; SM 3120 B, 4500-P B.5, 4500-P E, 4500-P F, 4500-P G, 4500-P H; ASTM D515-88(A), D515-88(B); USGS I-4471-97, I-4600-85, I-4610-91; OMAAOAC 973.55, 973.56

**Sample Collection:** The Maine DEP is requesting that total phosphorus analysis be conducted on composite effluent samples, unless a facility's Permit specifically designates grab sampling for this parameter. Facilities can use individual collection bottles or a single jug made out of glass or polyethylene. Bottles and/or jugs should be cleaned prior to each use with dilute HCL. This cleaning should be followed by several rinses with distilled water. Commercially purchased, pre-cleaned sample containers are an acceptable alternative. The sampler hoses should be cleaned, as needed.

**Sample Preservation:** During compositing the sample must be at 0-6 degrees C (without freezing). If the sample is being sent to a commercial laboratory or analysis cannot be performed the day of collection then the sample must be preserved using H<sub>2</sub>SO<sub>4</sub> to obtain a sample pH of <2 su and refrigerated at 0-6 degrees C (without freezing). The holding time for a preserved sample is 28 days.

**Note:** Ideally, Total P samples are preserved as described above. However, if a facility is using a commercial laboratory then that laboratory may choose to add acid to the sample once it arrives at the laboratory. The Maine DEP will accept results that use either of these preservation methods.

**Laboratory QA/QC:** Laboratories must follow the appropriate QA/QC procedures that are described in each of the approved methods.

**Sampling QA/QC:** If a composite sample is being collected using an automated sampler, then once per month run a blank on the composite sampler. Automatically, draw distilled water into the sample jug using the sample collection line. Let this water set in the jug for 24 hours and then analyze for total phosphorus. Preserve this sample as described above.

# **ATTACHMENT B**

## Disinfectants/Cleaning Agents

Active Ingredients	Name	Description/Frequency of use	Concentration	Approx. Annual Use	Areas of Potential Use
PVP Iodine	Ovadine®	A buffered 1% Iodine solution (Iodophor) specifically formulated for use in disinfecting fish eggs upon arrival (approx. 1 x delivery every 2 months)	50-100ppm	63 gallons/year (240 L/year)	Hatchery
Potassium Peroxymonosulphate, 21.4%; Sodium Chloride, 1.50%	Virkon® Aquatic	Disinfectant for commercial livestock facilities, veterinary medical hospitals and farm premises. Used in accordance with label as a general cleaner and in entry-way footbaths.	0.5% - 2.0%	50-100kg/yr (110-220lbs/yr)	Hatchery/Growout/ Processing Plant
Sodium hydroxide (1-5%)	Aqualife Multipurpose Cleaner	A biodegradable, nonhazardous cleaner that is designed specifically for use in fish hatcheries, aquaculture facilities, fish & food processing plants, & agricultural farms. The product is phosphate free, contains no volatile organic compounds and is NSF certified for use in food processing facilities.	Used according to the label at dilutions of 1:20	890 gallons/year (3370 L/year)	Hatchery/Growout/ Processing Plant
Sodium Hydroxide (3-5%), Sodium Hypochlorite (1-3%), Sodium Xylenesulphonate, (1-5%)	Zep Apex Chloroam 14	A chlorine based foaming detergent, containing only biodegradable detergents. For use on food processing equipment, steel tables and floors. For manual cleaning or use in foam generating equipment.	Used according to label at dilutions of 5-6% (6 to 8 oz/ gal)	890 gallons/year (3370 L/year)	Processing Plant
Sodium hypochlorite (5-10%) and Sodium hydroxide (1-3%).	Zep FS Formula 12167 Chlorinated Disinfectant and Germicide	A liquid chlorine sanitizer and deodorant for use in all types of food-handling establishments. Authorized as no rinse sanitizer for equipment. Provides deodorizing activity by destroying bacteria which generate many disagreeable odors. Can also be used to sanitize commercial laundry. USDA applicable and EPA and Maine registered.	0.3% (1 oz/ 2 gallons)	790 gallons/year (2,990L/year)	Processing Plant
Sodium hydroxide (7-9%), Sodium hypochlorite (3-4%)	Gil Save®	High-foaming chlorinated, alkaline, liquid detergent, Gil Save is designed for foam and high pressure spray cleaning of meat and poultry plants, breweries, dairies and canneries. It is a complete product containing alkalis, water conditioners, chlorine and high-foaming wetting agents. Gil Save is an effective cleaner of food processing equipment by removing fatty and protein soils, pectin, mold, yeast and organic greases.	0.2-3% (¼-4 oz/gal)	270 gallons/year (1,022L/year)	Processing Plant
Sodium hypochlorite (8%)	Bleach	Used for general cleaning/disinfection.	100-1000ppm	2,280 gallons/year (8,630L/year)	Processing Plant
23% hydrogen peroxide and 5.3% peroxyacetic acid,	SaniDate 5.0	Labeled for hard surface sanitization and disinfection, as well as fruit and vegetable wash treatments to eliminate human health and plant spoilage pathogens on contact. SaniDate 5.0 is a registered Sanitizer/Disinfectant with the United States Environmental Protection Agency, is NOP compliant and OMRI Listed for organic production.	0.5-5.4 fl oz/5 gallons	TBD	Processing Plant
Ozone	Ozone	Ozone can be dissolved into water to provide an aqueous ozone solution that is stable, safe, easy to control, leaves no residue and has been granted GRAS approval by both the USDA and FDA for direct contact with food. This water containing ozone can replace chlorine as an antimicrobial agent or be used to supplement existing water rinses and achieve improved antimicrobial intervention. This is now a common application to sanitize fillet machines, cutting tables, knives, and all equipment that may be used in the seafood processing areas.	0 ppm - since ozone rapidly breaks down to oxygen and water	TBD	Hatchery/Growout/ Processing Plant
Sodium hydroxide (49%)	Gil Super CIP®	A heavy-duty, chelated-liquid caustic cleaner for use in CIP (Clean in Place), boil-out, soak, spray clean and atomization cleaning systems, Gil Super CIP is formulated to remove protein, fatty and carbonized soils typically found in dairy and food processing.	0.1-3% (1/8-4 oz/gal)	2,335 gallons/year (8,840 L/year)	CIP Equipment
Glycolic acid (29-31%)	Gil Hydrox®	A concentrated organic, liquid acid cleaner, Gil Hydrox rapidly removes milk/beer stone, alkaline/hard water film and stains/protein build-up from dairy and food processing equipment. It is specially formulated for use in CIP, spray and acid rinse operations.	0.1-3% (1/8-4 oz/gal)	2,335 gallons/year (8,840 L/year)	CIP Equipment
Hydrochloric acid	Muriatic acid	Used for pH balancing and cleaning of equipment		2 gallons/year (7.6 L/year)	Hatchery/Growout/ Processing Plant

Disclaimer: The quantities needed will be dependent on the site-specific conditions experienced which are difficult to establish prior to operations while the precise product brand preferred at the time of operation may be subject to change to a similar product with a comparable ingredient profile due to operational requirements and to reduce the risk of bacterial resistance. For this reason, more than one example of a product with the same intended use are listed above and annual usage estimates represent approximate quantities required given a product is the only one used for this application. All products listed will be used according to the label.

## List of drugs and/or therapeutic agents

Name	Active Ingredients	Description/frequency of use	Concentration	Approx. Annual Use
Parasite-S, Formalin-F, Paracide-F and Formacide-B	Formaldehyde	Infrequent use - may be used occasionally according to the label if needed to alleviate fish health issues due to <i>saprolegniasis</i> , external protozoa and monogenetic trematodes.	25 ppm to 1,000 ppm	0-925 gallons/year (0-3500 l/year)
Halamid® Aqua	Chloramine-T (Active Ingredients N-chloro, p-toluenesulfonamide and sodium salt trihydrate)	Infrequent use - may be used occasionally according to the label if needed to alleviate fish health issues due to bacterial gill disease.	12-20ppm	0-100kg/yr (0-220lbs/yr)
Salt	Sodium chloride	Infrequent use - may be used occasionally to treat bacterial and fungal infections as well as to alleviate fish welfare impacts caused by stressors.	3-30ppt	0-20,000kg (0-44,090lbs)
Perox-Aid®	Hydrogen Peroxide	Used as a disinfectant, external fish treatment or water remediation.	Up to 1,000ppm	TBD
Finquel®, MS-222 or Tricaine-S	Tricaine Methanesulfonate	Infrequent use - anaesthetic used periodically in accordance with the label to anesthetize fish when handling small numbers for examination.	15-330 mg/L	1.1-2.2lbs (0.5-1kg/year)
Potassium permanganate (97% active)	Potassium permanganate (97% active)	Emergency use only - can be used if fish are suffering from certain parasites and fungal infections, particularly in younger fish life-stages.	1.5-2.5ppm	Emergency use only according to label or as prescribed by a licensed veterinarian
Terramycin® 200	Oxytetracycline dehydrate (44% active)	Emergency use only - can be used as an in-feed treatment if fish are suffering from certain bacterial infections.	max of 0.08g active oxytetracycline/kg fish/day	Emergency use only according to label or as prescribed by a licensed veterinarian
Aquaflor®	Florfenicol (50% active)	Emergency use only - can be used as an in-feed treatment if fish are suffering from certain bacterial infections.	max of 15 mg/kg fish/day	Emergency use only according to label or as prescribed by a licensed veterinarian
Romet® 30/Romet® TC	Sulfadimethoxine/Ormetoprim (30% active or 20% active, respectively)	Emergency use only - can be used as an in-feed treatment if fish are suffering from certain bacterial infections.	max of 50 mg/kg fish/day	Emergency use only according to label or as prescribed by a licensed veterinarian

Disclaimer: Annual usage estimates represent approximate quantity required given a product is the only one used for this application. The quantities needed will be dependent on the site-specific conditions experienced which are difficult to establish prior to operations and are indicated as estimates only. Likely a fraction of the estimated annual use of each of these products will be used while many, particularly those listed for "Emergency use only", may never be used. All products listed will be used according to label or as prescribed by a licensed veterinarian.



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**A. GENERAL PROVISIONS**

**1. General compliance.** All discharges shall be consistent with the terms and conditions of this permit; any changes in production capacity or process modifications which result in changes in the quantity or the characteristics of the discharge must be authorized by an additional license or by modifications of this permit; it shall be a violation of the terms and conditions of this permit to discharge any pollutant not identified and authorized herein or to discharge in excess of the rates or quantities authorized herein or to violate any other conditions of this permit.

**2. Other materials.** Other materials ordinarily produced or used in the operation of this facility, which have been specifically identified in the application, may be discharged at the maximum frequency and maximum level identified in the application, provided:

- (a) They are not
  - (i) Designated as toxic or hazardous under the provisions of Sections 307 and 311, respectively, of the Federal Water Pollution Control Act; Title 38, Section 420, Maine Revised Statutes; or other applicable State Law; or
  - (ii) Known to be hazardous or toxic by the licensee.
- (b) The discharge of such materials will not violate applicable water quality standards.

**3. Duty to comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of State law and the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

- (a) The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act, and 38 MRSA, §420 or Chapter 530.5 for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
- (b) Any person who violates any provision of the laws administered by the Department, including without limitation, a violation of the terms of any order, rule license, permit, approval or decision of the Board or Commissioner is subject to the penalties set forth in 38 MRSA, §349.

**4. Duty to provide information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

**5. Permit actions.** This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

**6. Reopener clause.** The Department reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedule of compliance or other provisions which may be authorized under 38 MRSA, §414-A(5).

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**7. Oil and hazardous substances.** Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under section 311 of the Federal Clean Water Act; section 106 of the Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980; or 38 MRSA §§ 1301, et. seq.

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

**9. Confidentiality of records.** 38 MRSA §414(6) reads as follows. "Any records, reports or information obtained under this subchapter is available to the public, except that upon a showing satisfactory to the department by any person that any records, reports or information, or particular part or any record, report or information, other than the names and addresses of applicants, license applications, licenses, and effluent data, to which the department has access under this subchapter would, if made public, divulge methods or processes that are entitled to protection as trade secrets, these records, reports or information must be confidential and not available for public inspection or examination. Any records, reports or information may be disclosed to employees or authorized representatives of the State or the United States concerned with carrying out this subchapter or any applicable federal law, and to any party to a hearing held under this section on terms the commissioner may prescribe in order to protect these confidential records, reports and information, as long as this disclosure is material and relevant to any issue under consideration by the department."

**10. Duty to reapply.** If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

**11. Other laws.** The issuance of this permit does not authorize any injury to persons or property or invasion of other property rights, nor does it relieve the permittee of its obligation to comply with other applicable Federal, State or local laws and regulations.

**12. Inspection and entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the EPA Administrator), upon presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

**B. OPERATION AND MAINTENANCE OF FACILITIES**

**1. General facility requirements.**

- (a) The permittee shall collect all waste flows designated by the Department as requiring treatment and discharge them into an approved waste treatment facility in such a manner as to

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- maximize removal of pollutants unless authorization to the contrary is obtained from the Department.
- (b) The permittee shall at all times maintain in good working order and operate at maximum efficiency all waste water collection, treatment and/or control facilities.
  - (c) All necessary waste treatment facilities will be installed and operational prior to the discharge of any wastewaters.
  - (d) Final plans and specifications must be submitted to the Department for review prior to the construction or modification of any treatment facilities.
  - (e) The permittee shall install flow measuring facilities of a design approved by the Department.
  - (f) The permittee must provide an outfall of a design approved by the Department which is placed in the receiving waters in such a manner that the maximum mixing and dispersion of the wastewaters will be achieved as rapidly as possible.

**2. Proper operation and maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

**3. Need to halt or reduce activity not a defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

**4. Duty to mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

**5. Bypasses.**

- (a) Definitions.
  - (i) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
  - (ii) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- (b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this section.
- (c) Notice.
  - (i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

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- (ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph D(1)(f), below. (24-hour notice).
- (d) Prohibition of bypass.
  - (i) Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
    - (A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
    - (B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
    - (C) The permittee submitted notices as required under paragraph (c) of this section.
  - (ii) The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three conditions listed above in paragraph (d)(i) of this section.

**6. Upsets.**

- (a) Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- (b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (c) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- (c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - (i) An upset occurred and that the permittee can identify the cause(s) of the upset;
  - (ii) The permitted facility was at the time being properly operated; and
  - (iii) The permittee submitted notice of the upset as required in paragraph D(1)(f) , below. (24 hour notice).
  - (iv) The permittee complied with any remedial measures required under paragraph B(4).
- (d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

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**C. MONITORING AND RECORDS**

**1. General Requirements.** This permit shall be subject to such monitoring requirements as may be reasonably required by the Department including the installation, use and maintenance of monitoring equipment or methods (including, where appropriate, biological monitoring methods). The permittee shall provide the Department with periodic reports on the proper Department reporting form of monitoring results obtained pursuant to the monitoring requirements contained herein.

**2. Representative sampling.** Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. If effluent limitations are based wholly or partially on quantities of a product processed, the permittee shall ensure samples are representative of times when production is taking place. Where discharge monitoring is required when production is less than 50%, the resulting data shall be reported as a daily measurement but not included in computation of averages, unless specifically authorized by the Department.

**3. Monitoring and records.**

- (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- (b) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.
- (c) Records of monitoring information shall include:
  - (i) The date, exact place, and time of sampling or measurements;
  - (ii) The individual(s) who performed the sampling or measurements;
  - (iii) The date(s) analyses were performed;
  - (iv) The individual(s) who performed the analyses;
  - (v) The analytical techniques or methods used; and
  - (vi) The results of such analyses.
- (d) Monitoring results must be conducted according to test procedures approved under 40 CFR part 136, unless other test procedures have been specified in the permit.
- (e) State law provides that any person who tampers with or renders inaccurate any monitoring devices or method required by any provision of law, or any order, rule license, permit approval or decision is subject to the penalties set forth in 38 MRSA, §349.

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**D. REPORTING REQUIREMENTS**

**1. Reporting requirements.**

- (a) Planned changes. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
  - (i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
  - (ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under Section D(4).
  - (iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
- (b) Anticipated noncompliance. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- (c) Transfers. This permit is not transferable to any person except upon application to and approval of the Department pursuant to 38 MRSA, § 344 and Chapters 2 and 522.
- (d) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.
  - (i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Department for reporting results of monitoring of sludge use or disposal practices.
  - (ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Department.
  - (iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Department in the permit.
- (e) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
- (f) Twenty-four hour reporting.
  - (i) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance

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has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(ii) The following shall be included as information which must be reported within 24 hours under this paragraph.

(A) Any unanticipated bypass which exceeds any effluent limitation in the permit.

(B) Any upset which exceeds any effluent limitation in the permit.

(C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit to be reported within 24 hours.

(iii) The Department may waive the written report on a case-by-case basis for reports under paragraph (f)(ii) of this section if the oral report has been received within 24 hours.

(g) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (d), (e), and (f) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (f) of this section.

(h) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

**2. Signatory requirement.** All applications, reports, or information submitted to the Department shall be signed and certified as required by Chapter 521, Section 5 of the Department's rules. State law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan or other document filed or required to be maintained by any order, rule, permit, approval or decision of the Board or Commissioner is subject to the penalties set forth in 38 MRSA, §349.

**3. Availability of reports.** Except for data determined to be confidential under A(9), above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. As required by State law, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal sanctions as provided by law.

**4. Existing manufacturing, commercial, mining, and silvicultural dischargers.** In addition to the reporting requirements under this Section, all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Department as soon as they know or have reason to believe:

(a) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(i) One hundred micrograms per liter (100 ug/l);

(ii) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

(iii) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with Chapter 521 Section 4(g)(7); or

(iv) The level established by the Department in accordance with Chapter 523 Section 5(f).



MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

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- (b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
- (i) Five hundred micrograms per liter (500 ug/l);
  - (ii) One milligram per liter (1 mg/l) for antimony;
  - (iii) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with Chapter 521 Section 4(g)(7); or
  - (iv) The level established by the Department in accordance with Chapter 523 Section 5(f).

**5. Publicly owned treatment works.**

- (a) All POTWs must provide adequate notice to the Department of the following:
- (i) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA or Chapter 528 if it were directly discharging those pollutants.
  - (ii) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
  - (iii) For purposes of this paragraph, adequate notice shall include information on (A) the quality and quantity of effluent introduced into the POTW, and (B) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.
- (b) When the effluent discharged by a POTW for a period of three consecutive months exceeds 80 percent of the permitted flow, the permittee shall submit to the Department a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans.

**E. OTHER REQUIREMENTS**

**1. Emergency action - power failure.** Within thirty days after the effective date of this permit, the permittee shall notify the Department of facilities and plans to be used in the event the primary source of power to its wastewater pumping and treatment facilities fails as follows.

- (a) For municipal sources. During power failure, all wastewaters which are normally treated shall receive a minimum of primary treatment and disinfection. Unless otherwise approved, alternate power supplies shall be provided for pumping stations and treatment facilities. Alternate power supplies shall be on-site generating units or an outside power source which is separate and independent from sources used for normal operation of the wastewater facilities.
- (b) For industrial and commercial sources. The permittee shall either maintain an alternative power source sufficient to operate the wastewater pumping and treatment facilities or halt, reduce or otherwise control production and or all discharges upon reduction or loss of power to the wastewater pumping or treatment facilities.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

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**2. Spill prevention.** (applicable only to industrial sources) Within six months of the effective date of this permit, the permittee shall submit to the Department for review and approval, with or without conditions, a spill prevention plan. The plan shall delineate methods and measures to be taken to prevent and or contain any spills of pulp, chemicals, oils or other contaminates and shall specify means of disposal and or treatment to be used.

**3. Removed substances.** Solids, sludges trash rack cleanings, filter backwash, or other pollutants removed from or resulting from the treatment or control of waste waters shall be disposed of in a manner approved by the Department.

**4. Connection to municipal sewer.** (applicable only to industrial and commercial sources) All wastewaters designated by the Department as treatable in a municipal treatment system will be cosigned to that system when it is available. This permit will expire 90 days after the municipal treatment facility becomes available, unless this time is extended by the Department in writing.

**F. DEFINITIONS.** For the purposes of this permit, the following definitions shall apply. Other definitions applicable to this permit may be found in Chapters 520 through 529 of the Department's rules

**Average** means the arithmetic mean of values taken at the frequency required for each parameter over the specified period. For bacteria, the average shall be the geometric mean.

**Average monthly discharge limitation** means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. Except, however, bacteriological tests may be calculated as a geometric mean.

**Average weekly discharge limitation** means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

**Best management practices ("BMPs")** means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

**Composite sample** means a sample consisting of a minimum of eight grab samples collected at equal intervals during a 24 hour period (or a lesser period as specified in the section on monitoring and reporting) and combined proportional to the flow over that same time period.

**Continuous discharge** means a discharge which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.

**Daily discharge** means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the day.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

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**Discharge Monitoring Report ("DMR")** means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by approved States as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

**Flow weighted composite sample** means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.

**Grab sample** means an individual sample collected in a period of less than 15 minutes.

**Interference** means a Discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- (1) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
- (2) 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), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

**Maximum daily discharge limitation** means the highest allowable daily discharge.

**New source** means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

- (a) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or
- (b) After proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal.

**Pass through** means 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).

**Permit** means an authorization, license, or equivalent control document issued by EPA or an approved State to implement the requirements of 40 CFR parts 122, 123 and 124. Permit includes an NPDES general permit (Chapter 529). Permit does not include any permit which has not yet been the subject of final agency action, such as a draft permit or a proposed permit.

**Person** means an individual, firm, corporation, municipality, quasi-municipal corporation, state agency, federal agency or other legal entity.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

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**Point source** means any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft, from which pollutants are or may be discharged.

**Pollutant** means dredged spoil, solid waste, junk, incinerator residue, sewage, refuse, effluent, garbage, sewage sludge, munitions, chemicals, biological or radiological materials, oil, petroleum products or byproducts, heat, wrecked or discarded equipment, rock, sand, dirt and industrial, municipal, domestic, commercial or agricultural wastes of any kind.

**Process wastewater** means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

**Publicly owned treatment works ("POTW")** means any facility for the treatment of pollutants owned by the State or any political subdivision thereof, any municipality, district, quasi-municipal corporation or other public entity.

**Septage** means, for the purposes of this permit, any waste, refuse, effluent sludge or other material removed from a septic tank, cesspool, vault privy or similar source which concentrates wastes or to which chemicals have been added. Septage does not include wastes from a holding tank.

**Time weighted composite** means a composite sample consisting of a mixture of equal volume aliquots collected over a constant time interval.

**Toxic pollutant** includes any pollutant listed as toxic under section 307(a)(1) or, in the case of sludge use or disposal practices, any pollutant identified in regulations implementing section 405(d) of the CWA. Toxic pollutant also includes those substances or combination of substances, including disease causing agents, which after discharge or upon exposure, ingestion, inhalation or assimilation into any organism, including humans either directly through the environment or indirectly through ingestion through food chains, will, on the basis of information available to the board either alone or in combination with other substances already in the receiving waters or the discharge, cause death, disease, abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformations in such organism or their offspring.

**Wetlands** means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

**Whole effluent toxicity** means the aggregate toxic effect of an effluent measured directly by a toxicity test.

**MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT  
AND  
WASTE DISCHARGE LICENSE**

**FACT SHEET**

Date: **August 13, 2024**

MEPDES PERMIT: **ME0110558**  
WASTE DISCHARGE LICENSE: **W009258-6E-A-N**

NAME AND ADDRESS OF APPLICANT:

**SALMOGEN COMPANY INC.  
12 Reef Road  
Cape Elizabeth, ME. 04107**

COUNTY: **Penobscot**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

**Penobscot Indian Reservation  
Old Town, Maine**

OUTFALL LOCATION: **Latitude: 44°57'6"N Longitude: 68°38'47"W**

RECEIVING WATER / CLASSIFICATION: **Penobscot River, Class B**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER:

**Mr. Nick King, General Manager  
Salmogen Company Inc.  
8 Taylor River Road  
Hampton Falls, NH. 03844  
Tel: (603) 978-1311  
E-mail: [nickking@salmogencompany.com](mailto:nickking@salmogencompany.com)**

## 1. APPLICATION SUMMARY

- a. Application - On June 27, 2024, the Department accepted as complete for processing, a new application from SalmoGen Company Inc. (SalmoGen) for the monthly average discharge of 100,000 gallons per day (gpd) of treated fish hatchery wastewater. SalmoGen is proposing to construct and operate a land-based recirculating aquaculture facility for the production of salmon broodstock and eggs, with an estimated annual production of 25 million eggs. Commencement of construction is scheduled for early 2025 with the completion of construction 14 months later. The application was assigned Maine Waste Discharge License (WDL) W009258-6E-A-N/Maine Pollutant Discharge Elimination System (MEPDES) permit ME0110558. See **Attachment A** of this Fact Sheet for an aerial photograph depicting the location of the facility and the outfall location.

SalmoGen has demonstrated that it has title, right or interest in the subject property by way of a lease agreement dated September 28, 2023, for a building owned by the Penobscot Indian Nation on Indian Island and has provided evidence that it is a duly organized business corporation under the laws of the state of Maine. SalmoGen states it has the technical and financial capacity to comply with all terms and conditions of the applicable permit and to satisfy all applicable statutory or regulatory criteria.

- b. Source Description: Per their application, SalmoGen is proposing to construct and operate a land-based recirculating aquaculture facility for the production of salmon broodstock and eggs, with an estimated annual production of 25 million eggs. The facility will house a maximum of 920 fish as broodstock, along with 25,000 first-year fish and 25,000 second-year fish for a total mass of approximately 225,000 pounds.
- c. Wastewater Treatment: An on-site wastewater treatment plant will be designed to treat multiple constituents under varying operating conditions prior to discharge into the Penobscot River. The plant is designed to treat only dirty water (waste removed by the mechanical filters and other treatment steps in the recirculating aquaculture systems (RAS) system) whereas clean water (treated RAS overflow water) will bypass the WWTP process and ultimately blend with the treated permeate downstream of the plant before discharge to the river via shared outfall pipe associated with the Penobscot Indian Nation waste water treatment facility.

## 1. APPLICATION SUMMARY (cont'd)

The total effluent discharged from the SalmoGen facility will come from two main streams:

1. Dirty Water - influent to the WWTP will receive the waste stream filtrate from the RAS systems. This influent (38,500 gpd) to the wastewater treatment plant will contain elevated values of total suspended solids (TSS), total organic carbon (TOC), biochemical oxygen demand (BOD), nutrients, etc., requiring treatment in the WWTP prior to discharge.
2. Clean Water - the water that is displaced from the RAS system (due to new make-up water being added to that system) which has already gone through all the treatment processes is considered clean water. This 54,500 gpd of clean water combines with the treated WWTP permeate prior to discharge.

The inlet waste stream is collected in an equalization tank to buffer varying hydraulic and organic loads to the treatment system. The equalization tank will be equipped with a coarse bubble air diffuser to keep the wastewater aerated and minimize settling of solids inside the tank. Chemical conditioning can also be employed to facilitate the removal of TSS, TOC, and nutrients.

The chemically conditioned waste stream is then pumped to a DAF Unit. DAF is a method of separating and removing suspended solids from liquid. Air is dissolved under pressure in a clean liquid, usually recycled effluent from the DAF unit, and injected into the raw feed stream. Suspended materials attach to the anionically-charged bubbles that lower the specific gravity of the agglomerate solids to less than that of water, and raise suspended particles to the liquid surface, where they form a floating sludge layer for removal. Heavier solids settle to the bottom of the tank and are conveyed to a sludge pocket for removal and for further dewatering. DAF was selected based on light and heavy waste solids that will report to the downstream biological process. The use of DAF will take the constituent load off the biological plant making it more efficient to manage and provides a gross reduction in constituents like organics (BOD), insoluble total phosphorus (TP) and TSS.

## 1. APPLICATION SUMMARY (cont'd)

The Membrane Bioreactor (MBR) process combines a high rate suspended growth activated sludge bioreactor system with an ultrafiltration membrane unit to achieve an advanced level of organic, nutrient, and suspended solids removal. The Bioreactor consists of a series of aerobic and anoxic treatment tanks in which a biomass population is cultivated. In the Aerobic Bioreactor Tanks, dissolved oxygen is supplied to the biomass using air blowers and fine bubble diffusers. The dissolved oxygen in the biomass oxidizes organic carbon (BOD) as a food source, generating CO<sub>2</sub> and new biomass. In addition, within the aerobic biomass population, there is a specific group of microorganisms that use Ammonia-Nitrogen (NH<sub>3</sub>-N) as an energy source through the process of nitrification, producing Nitrate-Nitrogen (NO<sub>3</sub>-N) and Nitrite-Nitrogen (NO<sub>2</sub>-N). To achieve Total Nitrogen (TN) removal, Nitrate and Nitrite must also be removed from the water prior to discharge. This is accomplished in the Anoxic Bioreactor Tanks, where no diffused air is supplied, and the biomass is suspended using mechanical mixers. For the biomass to survive and grow in the absence of dissolved oxygen, it is forced to utilize other sources of oxygen to oxidize organic carbon as food. Certain microorganisms can use Nitrate and Nitrite for this purpose through the process of Denitrification, converting it to Nitrogen gas that bubbles out of the Bioreactor. Total phosphorus is removed via chemical precipitation using a coagulant and filtration by membranes as needed.

Once the removal of BOD and Nitrogen has been accomplished, the biomass and other suspended solids must be separated from the treated water. To accomplish this, the water is passed to a membrane unit having a pore size of 0.1-0.01 microns. Solids, pathogens, and other contaminants are blocked by the membrane and are retained on the surface, which is periodically cleaned.

Sludge solids generated from the above biological treatment steps will be recycled back to the anoxic tank and the surplus sludge will be intermittently wasted to a sludge holding tank before dewatering. Sludge will be transferred to a dewatering screw press or similar device to concentrate the wastes into high solids filter cakes for the purpose of waste minimization (reducing the volume and weight of the sludge) and making it easier and safer to handle.



## 1. APPLICATION SUMMARY (cont'd)

Downstream of the WWTP, the clean water overflow from the RAS system combines and blends with the treated permeate from the MBR membrane unit and is transferred to the final stage for UV disinfection to ensure pathogens of concern are destroyed. UV light inactivates microorganisms, altering their genetic (DNA, RNA) material so they can no longer reproduce. Because UV is a physical disinfectant (using UV energy), it does not alter the chemical makeup or affect the natural taste, odor, or color characteristics of the water during treatment. In addition, UV provides an effective disinfection solution without forming harmful disinfection by-products. A UV light intensity of  $>250\text{mJ}/\text{cm}^2$  is proposed for this facility.

See **Attachment B** of this Fact Sheet for a schematic of the treatment plant flow diagram.

## 2. CONDITIONS OF PERMIT

*Conditions of licenses*, 38 M.R.S. § 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require the application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, *Certain deposits and discharges prohibited*, 38 M.R.S. § 420 and Department rule *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective March 21, 2012), require the regulation of toxic substances not to exceed levels set forth in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (effective February 16, 2020), and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

## 3. RECEIVING WATER QUALITY STANDARDS

*Classification of major river basins*, 38 M.R.S. § 467(7)(A)(5-7) states in relevant part, "From the West Enfield Dam to a line extended in an east-west direction from a point 1.25 miles upstream of the confluence of Reeds Brook in Hampden are classified as Class B waters. Further, the Legislature finds that the free-flowing habitat of this river segment from the Maine Central Railroad bridge in Bangor to a line extended in an east-west direction from a point 1.25 miles upstream of the confluence of Reeds Brook in Hampden provides irreplaceable social and economic benefits and that this use must be maintained."

### 3. RECEIVING WATER QUALITY STANDARDS (cont'd)

*Standards for classification of fresh surface waters, 38 M.R.S. § 465(3) describes the standards for Class B waters as follows:*

- A. *Class B waters must be of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; navigation; and as habitat for fish and other aquatic life. The habitat must be characterized as unimpaired.*
- B. *The dissolved oxygen content of Class B waters may not be less than 7 parts per million or 75% of saturation, whichever is higher, except that for the period from October 1st to May 14th, in order to ensure spawning and egg incubation of indigenous fish species, the 7-day mean dissolved oxygen concentration may not be less than 9.5 parts per million and the one-day minimum dissolved oxygen concentration may not be less than 8.0 parts per million in identified fish spawning areas. Between April 15th and October 31st, the number of Escherichia coli bacteria in these waters may not exceed a geometric mean of 64 CFU per 100 milliliters over a 90-day interval or 236 CFU per 100 milliliters in more than 10% of the samples in any 90-day interval.*
- C. *Discharges to Class B waters may not cause adverse impact to aquatic life in that the receiving waters must be of sufficient quality to support all aquatic species indigenous to the receiving water without detrimental changes in the resident biological community.*
  - (1-A) *For the purpose of allowing the discharge of aquatic pesticides or chemicals approved by the department and conducted by the department, the Department of Inland Fisheries and Wildlife or an agent of either agency to restore resident biological communities affected by an invasive species, the department may find that the discharged effluent will not cause adverse impact to aquatic life as long as the materials and methods used do not cause a significant loss of any nontarget species and allow restoration of nontarget species. The department may find that an unavoidable, temporary loss of nontarget species does not constitute a significant loss of nontarget species.*
  - (2) *For the purpose of allowing the discharge of aquatic pesticides approved by the department for the control of mosquito-borne diseases in the interest of public health and safety, the department may find that the discharged effluent will not cause adverse impact to aquatic life as long as the materials and methods used provide protection for nontarget species. When the department issues a license for the discharge of aquatic pesticides authorized under this subparagraph, the department shall notify the municipality in which the application is licensed to occur and post the notice on the department's publicly accessible website.*

#### 4. RECEIVING WATER QUALITY CONDITIONS

The *State of Maine 2018/2020/2022 Integrated Water Quality Monitoring and Assessment Draft Report*, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists a 10.1-mile segment of the main stem of the Penobscot River from Main Stem (Penobscot), Veazie Dam to Reeds Brook as Integrated Assessment Unit ME0102000513\_234R02. This assessment unit is listed in the following categories of the 305(b) report:

“Category 5-D: Rivers and Streams Impaired by Legacy Pollutants” for polychlorinated biphenyls (PCBs). The report notes that “this legacy pollutant cannot be addressed with a TMDL or permit. Pollutant effects will continue to diminish naturally over time.”

“Category 4-B: Rivers and Streams Impaired by Pollutants – Pollution Control Requirements Reasonably Expected to Result in Attainment” for dissolved oxygen and nutrient/eutrophication biological indicators. The instantaneous data collected during 2013 – 2019 indicates attainment of DO criteria. Continuous data is still needed to confirm attainment. The 2011 WDL/MEPDES Permits (Millinocket to Veazie) providing nutrient limits are expected to correct aquatic life use impairments.

Category 4-B for Dioxin (including 2,3,7,8-TCDD). The report states “Fish tissue levels of dioxin measured in 2013 were slightly reduced from previous measures in 2002, and below the Maine Center for Disease Control and Prevention’s (MeCDC) Fish Tissue Action Level (FTAL). This segment is expected to attain standards for Dioxin (including 2,3,7,8-TCDD) in 2030.

The Report lists all of Maine’s fresh waters as, “Category 4-A: Waters Impaired by Atmospheric Deposition of Mercury.” Impairment in this context refers to a statewide fish consumption advisory due to elevated levels of mercury in some fish tissues. The Report states, “All freshwaters are listed in Category 4A (Total Maximum Daily Load (TMDL) Completed) due to USEPA approval of a Regional Mercury TMDL.” Maine has a fish consumption advisory for fish taken from all freshwaters due to mercury. Many fish from any given waters do not exceed the action level for mercury.

However, because it is impossible for someone consuming a fish to know whether the mercury level exceeds the action level, the Maine Department of Human Services decided to establish a statewide advisory for all freshwater fish that recommends limits on consumption. Maine has already instituted statewide programs for removal and reduction of mercury sources. Pursuant to 38 M.R.S. § 420(1-B)(B), “a facility is not in violation of the ambient criteria for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to section 413 subsection 11.” Pursuant to 06-096 C.M.R. ch. 519, the Department has established interim monthly average and daily maximum mercury concentration limits and requirements for this facility.

#### 4. RECEIVING WATER QUALITY CONDITIONS (cont'd)

The Department has made a best professional judgment determination based on information in the permittee's application and the Department knowledge of ambient conditions in the Penobscot River, that as permitted, the discharge will not cause or contribute the failure of the receiving water to meet the standards of its ascribed classification and the designated uses of the waterbody will continue to be maintained and protected. If future information determines that the discharge is causing or contributing to non-attainment, this permit will be re-opened per Special Condition L, *Reopening of The License For Modifications*, to impose more stringent limitations to meet water quality standards.

#### 5. REASONABLE POTENTIAL

Pursuant to 33 U.S.C. § 1311(b)(1)(C) and 40 C.F.R. § 122.44(d)(1), NPDES permits must contain any requirements in addition to technology based effluent limitations (TBELs) that are necessary to achieve water quality standards established under 33 U.S.C. § 1311(b)(1)(C). In addition, limitations "must control any pollutant or pollutant parameter (conventional, non-conventional, or toxic) which the permitting authority determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any water quality standard (WQS), including State narrative criteria for water quality." 40 C.F.R. § 122.44(d)(1)(i). To determine if the discharge causes, or has the reasonable potential to cause, or contribute to an excursion above any WQS, EPA considers: 1) existing controls on point and non-point sources of pollution; 2) the variability of the pollutant or pollutant parameter in the effluent; 3) the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity); and 4) where appropriate, the dilution of the effluent by the receiving water. *See* 40 C.F.R. § 122.44(d)(1)(ii).

If the permitting authority determines that the discharge of a pollutant will cause, has the reasonable potential to cause, or contribute to an excursion above WQSs, the permit must contain water quality-based effluent limitations (WQBELs) for that pollutant. *See* 40 C.F.R. § 122.44(d)(1)(i)

#### 6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

##### **Outfall #001A – Treated Hatchery/Fish Rearing Waste Water**

- a. Applicability of National Effluent Guidelines: The USEPA has promulgated national effluent guidelines for the *Concentrated Aquatic Animal Production Point Source Category* at 40 CFR 451 Subpart A, *Flow-Through and Recirculating Systems Subcategory*. This subpart is applicable to discharges from a concentrated aquatic animal production facility

## 6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

### Outfall #001A – Treated Hatchery/Fish Rearing Waste Water

that produces 100,000 pounds or more per year of aquatic animals in a flow-through or recirculating system. The facility's estimated annual quantity of fish on-site is approximately 225,000 pounds, therefore the facility is subject to regulation under this subpart.

- b. Flow: This permitting action establishes a monthly average flow limitation of 100,000 gpd for Outfall #001A based on information provided by the permittee. This permitting action is also establishing a daily maximum reporting requirement for flow.
- c. Dilution Factors: The Department established applicable dilution factors for the discharge in accordance with freshwater protocols established in *Surface Water Toxics Control Program*, 06-096 C.M.R. 530 (last amended March 21, 2012). The 1Q10 and 7Q10 data were last updated in November of 2023 by the Department. With a monthly average flow limit of 0.100 MGD, dilution factors for the facility were calculated as follows:

$$\text{Modified Acute} = 578 \text{ cfs} \Rightarrow \frac{(578 \text{ cfs})(0.6464^1) + (0.100 \text{ MGD})}{(0.100 \text{ MGD})} = 3,737:1$$

$$\text{Acute: 1Q10} = 2,311 \text{ cfs} \Rightarrow \frac{(2,311 \text{ cfs})(0.6464) + (0.100 \text{ MGD})}{(0.100 \text{ MGD})} = 14,939:1$$

$$\text{Chronic: 7Q10} = 2,554 \text{ cfs} \Rightarrow \frac{(2,554 \text{ cfs})(0.6464) + (0.100 \text{ MGD})}{(0.100 \text{ MGD})} = 16,510:1$$

$$\text{August median: 7Q10} = 5,018 \text{ cfs} \Rightarrow \frac{(5,018 \text{ cfs})(0.6464) + (0.100 \text{ MGD})}{(0.100 \text{ MGD})} = 32,437:1$$

$$\text{Harmonic Mean} = 6,872 \text{ cfs}^2 \Rightarrow \frac{(6,872 \text{ cfs})(0.6464) + (0.100 \text{ MGD})}{(0.100 \text{ MGD})} = 44,422:1$$

06-096 C.M.R. ch. 530(4)(B)(1) states that analyses using numeric acute criteria for aquatic life must be based on  $\frac{1}{4}$  of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone. The regulation goes on to say that where it can be

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<sup>1</sup> Conversion factor, cubic feet per second to million gallons per day.

<sup>2</sup> Based on a 2023 statistical evaluation of flows in the Penobscot River.

## 6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

demonstrated that a discharge achieves rapid and complete mixing with the receiving water by way of an efficient diffuser or other effective method, analyses may use a greater proportion of the stream design, up to including all of it. The outfall pipe extends out into the receiving water approximately 75 feet with approximately 10 feet of water over the crown of the pipe at normal low water levels. The end of the outfall pipe is not fitted with a diffuser to enhance mixing with the receiving waters but the discharge does receive rapid and complete mixing.

It is noted the discharge from the SalmoGen facility is co-mingled with secondary treated sanitary waste from the Penobscot Indian Nation (PIN) waste water treatment facility. The permitted discharge flow from the PIN facility is also limited to 0.100 MGD. Therefore, the combined waste streams have the following dilution factors:

$$\text{Modified Acute} = 578 \text{ cfs} \Rightarrow \frac{(578 \text{ cfs})(0.6464) + (0.200 \text{ MGD})}{(0.200 \text{ MGD})} = 1,869:1$$

$$\text{Acute: 1Q10} = 2,311 \text{ cfs} \Rightarrow \frac{(2,311 \text{ cfs})(0.6464) + (0.200 \text{ MGD})}{(0.200 \text{ MGD})} = 7,470:1$$

$$\text{Chronic: 7Q10} = 2,554 \text{ cfs} \Rightarrow \frac{(2,554 \text{ cfs})(0.6464) + (0.200 \text{ MGD})}{(0.200 \text{ MGD})} = 8,255:1$$

$$\text{August median: 7Q10} = 5,018 \text{ cfs} \Rightarrow \frac{(5,018 \text{ cfs})(0.6464) + (0.200 \text{ MGD})}{(0.200 \text{ MGD})} = 16,219:1$$

$$\text{Harmonic Mean:} = 6,872 \text{ cfs} \Rightarrow \frac{(6,872 \text{ cfs})(0.6464) + (0.200 \text{ MGD})}{(0.200 \text{ MGD})} = 22,211:1$$

- d. **BOD & TSS:** This permitting action establishes monthly average and daily maximum concentration limits of 30 mg/L and 50 mg/L respectively for BOD & TSS based on best professional judgement (BPJ) of best practicable treatment (BPT) and is consistent with limitations established for other recirculating aquaculture system permits in Maine.

Monthly average and daily maximum mass limits are based on the respective concentration limits, daily maximum flow limit and a standard pound/gallon conversion limit as noted below:

## 6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Daily Maximum mass limit  
 $30 \text{ mg/L} \times 0.100 \text{ MGD} \times 8.34 = \mathbf{25 \text{ lbs.}}$

Monthly Average mass limit  
 $50 \text{ mg/L} \times 0.100 \text{ MGD} \times 8.34 = \mathbf{42 \text{ lbs.}}$

- e. pH – This permitting action establishes a pH range limitation of 6.0 – 9.0 standard units, consistent with the pH limit established in discharge permits for aquaculture hatcheries and rearing facilities and considered by the Department as a best practicable treatment standard. This permitting action establishes a once per month (1/Month) effluent pH monitoring requirement.
- f. Total Phosphorus (P) - Pursuant to 40 C.F.R. §122.44(d)(1), and Department rule 06-096 CMR Chapter 523 §5(d) NPDES/MEPDES permits must contain any requirements in addition to TBELs necessary to achieve water quality standards established under § 303 of the CWA. In addition, limitations “must control any pollutant or pollutant parameter (conventional, non-conventional, or toxic) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any water quality standard, including State narrative criteria for water quality”. See 40 C.F.R. § 122.44(d)(1)(i) and Department rule 06-096 CMR Chapter 523 §5(d). There is reasonable potential to cause or contribute to an excursion if the projected or actual in-stream concentration exceeds the applicable criterion. If the permitting authority determines that a discharge causes, has the reasonable potential to cause, or contributes to such an excursion, the permit must contain WQBELs for the pollutant. See 40 C.F.R. 122.44(d)(1)(iii) and Department rule 06-096 CMR Chapter 523 §5(d).

*Classification of Maine Waters*, 38 M.R.S. § 464, sets forth provisions governing the states antidegradation policy and states in relevant part:

*3. The department may only issue a discharge license pursuant to section 414-A or approve water quality certification pursuant to the Federal Water Pollution Control Act, Section 401, Public Law 92-500, as amended, if the standards of classification of the water body and the requirements of this paragraph are met. The department may issue a discharge license or approve water quality certification for a project affecting a water body in which the standards of classification are not met if the project does not cause or contribute to the failure of the water body to meet the standards of classification.*

## 6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

*5. The department may only issue a discharge license pursuant to section 414-A or approve water quality certification pursuant to the United States Clean Water Act, Section 401, Public Law 92-500, as amended, which would result in lowering the existing quality of any water body after making a finding, following opportunity for public participation, that the action is necessary to achieve important economic or social benefits to the State and when the action is in conformance with subparagraph (3). That finding must be made following procedures established by rule of the board.*

*Conditions of licenses, 38 M.R.S. §414-A 1(D) states in relevant part:*

*The Department shall issue a license for a discharge of pollutants only if it finds that:*

*The discharge will be subject to effluent limitations that require application of the best practicable treatment. "Effluent limitations" means any restriction or prohibition including, but not limited to, effluent limitations, standards of performance for new sources, toxic effluent standards and other discharge criteria regulating rates, quantities and concentrations of physical, chemical, biological and other constituents that are discharged directly or indirectly into waters of the State. "Best practicable treatment" means the methods of reduction, treatment, control and handling of pollutants, including process methods, and the application of best conventional pollutant control technology or best available technology economically achievable, for a category or class of discharge sources that the department determines are best calculated to protect and improve the quality of the receiving water and that are consistent with the requirements of the Federal*

*Water Pollution Control Act, as amended, and published in 40 Code of Federal Regulations. If no applicable standards exist for a specific activity or discharge, the department must establish limits on a case-by-case basis using best professional judgment, after consultation with the applicant and other interested parties of record. In determining best practicable treatment for each category or class, the department shall consider the existing state of technology, the effectiveness of the available alternatives for control of the type of discharge and the economic feasibility of such alternatives.*

The calculations for reasonable potential are as follows:

Given:

Critical water quality threshold (draft criteria) - 0.030 mg/L

Background concentration – 0.017 mg/l

Proposed discharge concentration – 6.7 mg/L

August Median flow\*: 5,018 cfs or 3,244 MGD

\*Maine law 38 MRS §464(4)(D) authorizes the Department to use a different flow other than the 7Q10 for assessing nutrient impacts.



## 6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Find: Reasonable potential to exceed 20% of the remaining assimilative capacity?

Remaining Assimilative Capacity (RAC) Concentration of Receiving Water

Threshold – Background = RAC

0.030 mg/L – 0.017 mg/L = 0.013 mg/L

0.013 mg/L x 0.20\* = **0.0026 mg/L**

\*Anti-degradation threshold of 20%

$$(3,244 \text{ MGD})(0.017 \text{ mg/L}) + (0.100 \text{ MGD})(6.7 \text{ mg/L}) = x(3,244.10)$$

$$\frac{(3,244 \text{ MGD})(0.17 \text{ mg/L}) + (0.100 \text{ MGD})(6.7 \text{ mg/L})}{3,244.10} = x$$

X=0.0172 mg/L (in-stream concentration after reasonable opportunity for mixing)

0.0172 mg/L – 0.017 mg/L = Δ of 0.0002 mg/L above the ambient of 0.017 mg/L

0.0002 mg/L < 0.0026 mg/L ⇒ **No reasonable potential to increase the ambient concentration of the receiving water by more than 20% of the remaining assimilative capacity for total phosphorus.**

However, a seasonal (May – October) monitoring requirement is being established in this permit to verify the calculated discharge value of 6.7 mg/L by the permittee.

- g. Temperature: The permittee's application stated that effluent being discharged to the Penobscot River will 18°C (68°F) on a year-round basis.

*Regulations Relating to Temperature, 06-096 C.M.R. ch. 582 (5), states in relevant part:*

*Freshwater Thermal Discharges - No discharge of pollutants shall cause the ambient temperature of any freshwater body, as measured outside a mixing zone, to be raised more than 5 degrees Fahrenheit or more than 3 degrees Fahrenheit in the epilimnion (upper mixed layer) of any lake or pond. In no event shall any discharge cause the temperature of any freshwater body to exceed 85 degrees Fahrenheit at a point outside a mixing zone established by the Board, nor shall such discharge cause the temperature of any waters to exceed the U.S. Environmental Protection Agency's national ambient water quality criteria established to protect all species of fish that are indigenous to the receiving waters at any point outside a mixing zone established by the Board. Site specific criteria, generated from a study conducted according to DEP approved methods for indigenous species of fish as defined in 38 M.R.S.A. Sec. 466, may be substituted for national ambient water quality criteria, so long as the site specific criteria are no less protective of species found to be*

## 6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

*indigenous to those waters, and so long as the public participation requirements of federal and state law, including those found at 40 CFR Part 25, have been met. When the ambient temperature of any body of water naturally exceeds the limits set forth in this section, no thermal discharge may be allowed which alone or in combination with other discharges would raise the ambient temperature of the receiving water more than 0.5 Degrees Fahrenheit above the temperature which would naturally occur outside a mixing zone established by the Board.*

### **Summer season (June 1 – September 30)**

During the summer month, Chapter 582 limits thermal discharges to an in-stream temperature increase ( $\Delta T$ ) of  $0.5^{\circ}$  F above the ambient receiving water temperature when the weekly average temperature of the receiving water is greater than or equal to  $66^{\circ}$  F or when the daily maximum temperature is greater than or equal to  $73^{\circ}$  F. The temperature thresholds are based on EPA water quality criterion for the protection of brook trout and Atlantic salmon (both species indigenous to the Penobscot River). The weekly average temperature of  $66^{\circ}$  F was derived to protect for normal growth of the brook trout and the daily maximum threshold temperature of  $73^{\circ}$  F protects for the survival of juveniles and adult Atlantic salmon during the summer months. The Department interprets the term "weekly average temperature" to mean a seven (7) day rolling average. To promote consistency, the Department also interprets the  $\Delta T$  of  $0.5^{\circ}$  F as a weekly rolling average criterion when the receiving water temperature is  $>66^{\circ}$  F and  $<73^{\circ}$  F.

The assimilative capacity of the Penobscot River during the summer months (thermal load that would cause the stream to increase by  $0.5^{\circ}$ F) at the critical 7Q10 low flow can be calculated as follows:

$$(2,554 \text{ cfs})(0.6464)(0.5^{\circ}\text{F})(8.34 \text{ lbs/day})(10^6 \text{ gallons}) = 7.88 \times 10^9 \text{ Btu/day}$$

The permittee's application states the year-round temperature of the discharge will be  $68^{\circ}$ F. The impact of said discharge can be calculated as follows;

$$(0.10 \text{ MGD})(68^{\circ}\text{F} - 66^{\circ}\text{F})(8.34 \text{ lbs/day})(10^6 \text{ gallons}) = 1.67 \times 10^6 \text{ Btu/day}$$

$$1.67 \times 10^6 \text{ Btu/Day} < 7.88 \times 10^9 \text{ Btu/day}$$

$$\frac{1.67 \times 10^6 \text{ Btu/Day}}{7.88 \times 10^9 \text{ Btu/day}} \times 100\% = 0.021\% \text{ of the remaining assimilative capacity}$$

## 6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

or

$$2,554 \text{ cfs}(0.6464) = 1,651 \text{ MGD}$$

$$\frac{(1,651 \text{ MGD})(66^\circ\text{F}) + (0.10 \text{ MGD})(68^\circ\text{F})}{(1,651.10 \text{ MGD})} = 66.0001^\circ\text{F}$$

The calculated  $\Delta T$  is not measurable and therefore the impact to the receiving water is considered to be zero.

### Winter season (October 1 – May 31)

The assimilative capacity of the Penobscot River during the winter months (thermal load that would cause the stream to increase by  $5.0^\circ\text{F}$ ) at the critical 7Q10 low flow can be calculated as follows:

$$(2,554 \text{ cfs})(0.6464)(5.0^\circ\text{F})(8.34 \text{ lbs/day})(10^6 \text{ gallons}) = 7.88 \times 10^9 \text{ Btu/day}$$

The permittee's application states the year-round temperature of the discharge will be  $68^\circ\text{F}$ . The impact of said discharge can be calculated as follows;

$$(0.10 \text{ MGD})(68^\circ\text{F} - 32^\circ\text{F})(8.34 \text{ lbs/day})(10^6 \text{ gallons}) = 3.0 \times 10^7 \text{ Btu/day}$$

$$3.0 \times 10^7 \text{ Btu/Day} < 7.88 \times 10^9 \text{ Btu/day}$$

$$\frac{3.0 \times 10^7 \text{ Btu/Day}}{7.88 \times 10^9 \text{ Btu/day}} \times 100\% = 0.38\% \text{ of the remaining assimilative capacity}$$

or

$$2,554 \text{ cfs}(0.6464) = 1,644 \text{ MGD}$$

$$\frac{(1,644 \text{ MGD})(32^\circ\text{F}) + (0.100 \text{ MGD})(68^\circ\text{F})}{(1,644.10 \text{ MGD})} = 32.002^\circ\text{F}$$

The calculated  $\Delta T$  is not measurable and therefore the impact to the receiving water is considered to be zero.

## 6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Based on Department's staff review and analysis and the record information as described in this Fact Sheet, the Department finds that this worst-case scenario during the critical period of June 1 to September 30 would be a  $\Delta T$  of 0.0001°F and for the non-summer season the change of 0.002°F thus meets the criteria in 06-096 C.M.R ch, 582 criteria of 0.5°F and 5.0°F, respectively . Therefore, this permit is establishing a year-round daily maximum temperature limit of 68°F along with a 1/Month monitoring frequency.

## 7. ANTIDegradation/DISCHARGE IMPACT ON RECEIVING WATER QUALITY

The State of Maine's antidegradation policy states that water quality that exceeds the minimum applicable standards will be managed by the Department for the environmental, economic, and social benefit of the State. *See* 38 M.R.S. §§414-A(1)(C), 464(4)(F)(5) and the Conclusions section of this Permit. Where a new or increased discharge is proposed, the Department determines whether the discharge will result in a lowering of existing water quality. Pursuant to the policy, the Department must:

- A. Determine whether the discharge will use greater than 20% of the remaining assimilative capacity for a water quality parameter. If the Department finds that the discharge does use greater than 20% of the remaining assimilative capacity for that water quality parameter, then,
- B. The Department must determine whether the discharge will result in a lowering of existing water quality.

The Department has made a best professional judgment determination that the discharge from the permittee's facility will not use more than 20% of the remaining assimilative capacity for dissolved oxygen, temperature or total phosphorus in the receiving water after reasonable opportunity for dilution with the receiving water. As permitted, the Department has determined the existing water uses will be maintained and protected provided and the discharge will not cause or contribute to the failure of Penobscot River to meet standards for Class B classification.

## 8. PUBLIC COMMENTS

Public notice of this application was made in the Bangor Daily News newspaper on or about May 29, 2024. The Department receives public comments on an application until the date a final agency action is taken on the application. Those persons receiving copies of draft permits must have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to *Application Processing Procedures for Waste Discharge Licenses*, 06-096 CMR 522 (effective January 12, 2001).

## **9. DEPARTMENT CONTACTS**

Additional information concerning this permitting action may be obtained from, and written comments sent to:

Gregg Wood  
Division of Water Quality Management  
Bureau of Water Quality  
Department of Environmental Protection  
17 State House Station  
Augusta, Maine 04333-0017 Telephone: (207) 287-7693  
e-mail: [gregg.wood@maine.gov](mailto:gregg.wood@maine.gov)

## **10. RESPONSE TO COMMENTS**

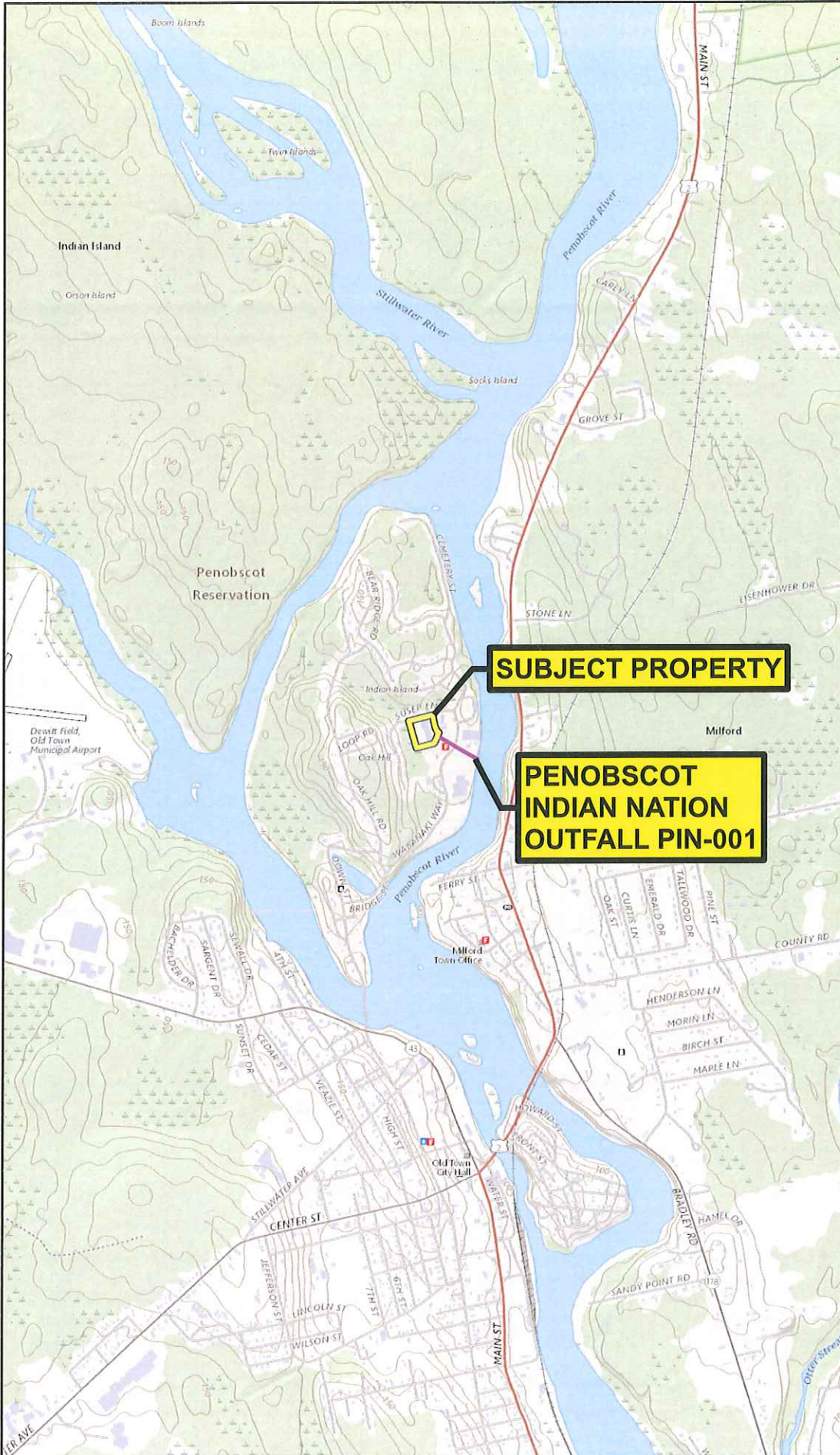
*Reserved to the close of the 30-day public comment period.*

# **ATTACHMENT A**

# Attachment 3



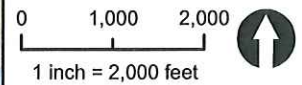
## Regional Locator Map



### Notes

1. Data Source: Copyright: © 2013 National Geographic Society, i-cubed
2. USGS Quad Names Old Town, Maine
3. Latitude: 44°57'7"N  
Longitude: 68°38'56"W

### Scale and Orientation



### Prepared For

SalmoGen Company, Inc.  
12 Reef Road  
Cape Elizabeth, ME

### Subject Property Address

16-22 Susep Lane  
Indian Island, ME

222.05025.100 April 2024

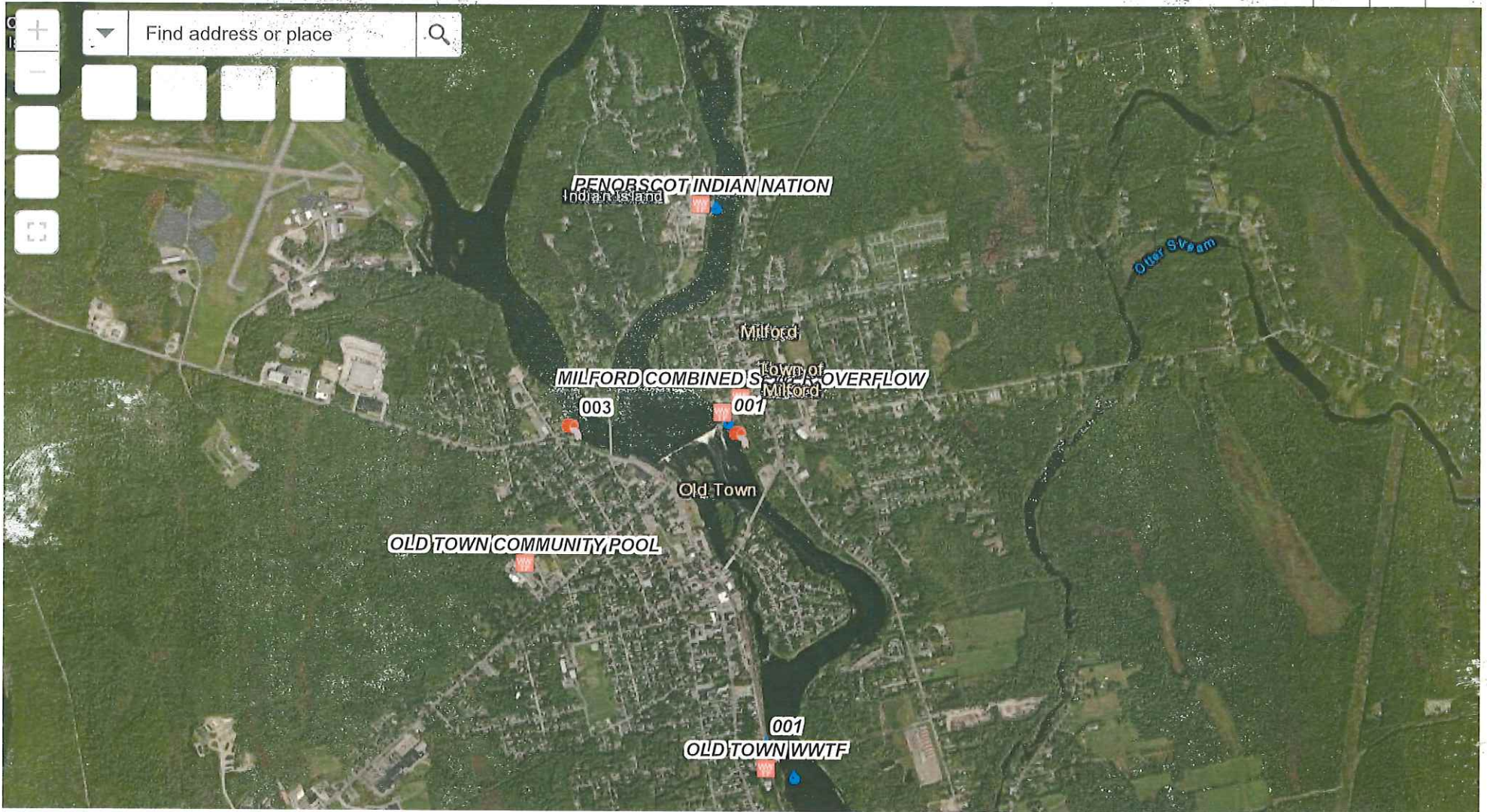
**Figure 1**  
Subject Property  
Location Map



Attachment 4







0.4mi

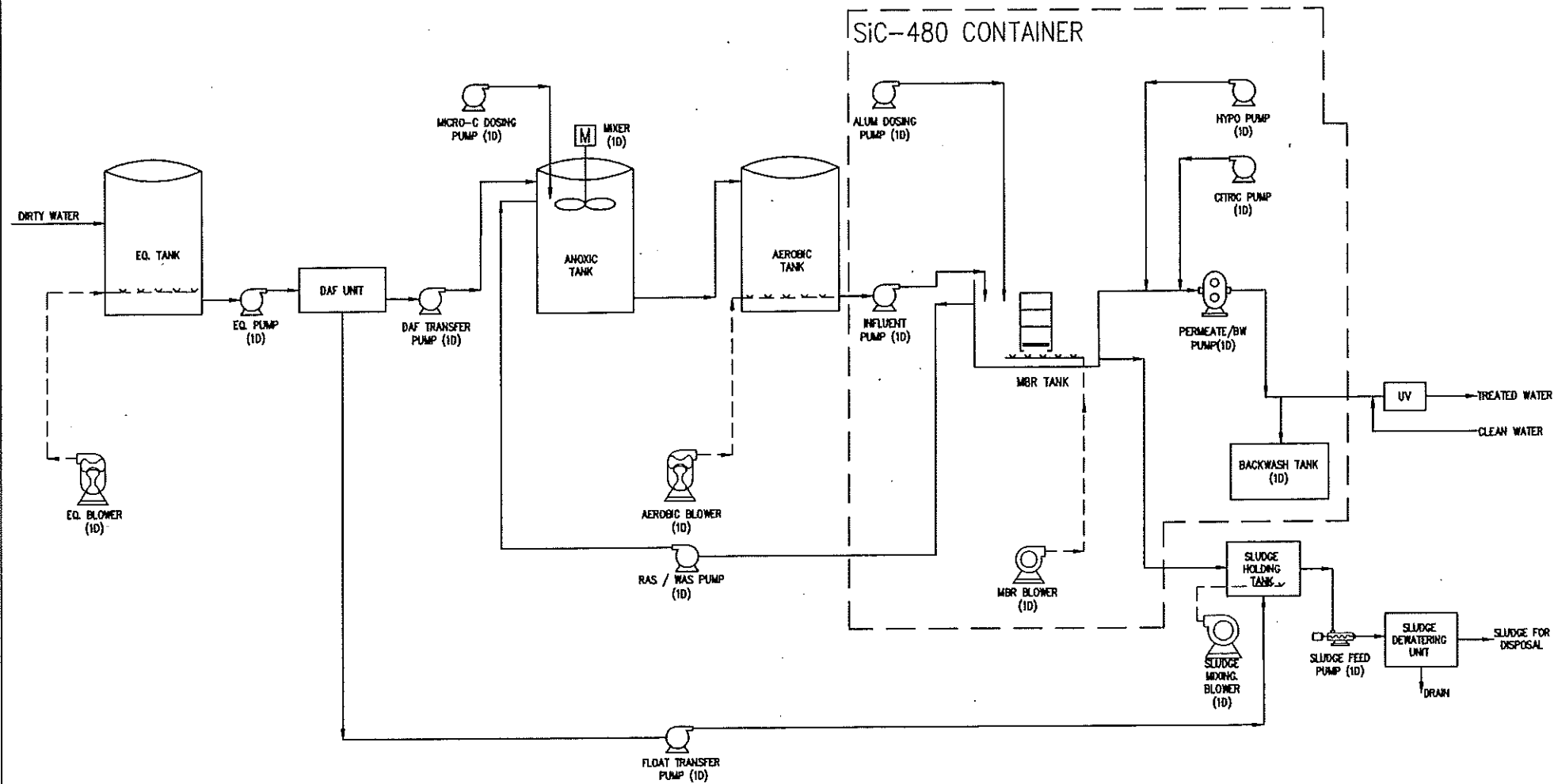
-68.672 44.947 Degrees





# **ATTACHMENT B**

Figure 1. Wastewater Treatment Plant Process Flow Diagram



- NOTES:
- 1) PRELIMINARY CONCEPTUAL PROCESS FLOW DIAGRAM.
  - 2) NUMBER AND TYPE OF EQUIPMENT MAY CHANGE DURING DETAILED DESIGN & ENGINEERING.
  - 3) INTERCONNECTING PIPING IS IN CLIENT SCOPE.
  - 4) AS AN EQUIPMENT SUPPLIER, OVIVO'S SCOPE OF RESPONSIBILITY IS LIMITED TO THE EQUIPMENT THAT IT SUPPLIES AND ITS ABILITY TO MEET THE AGREED UPON PROJECT SPECIFICATIONS. UNLESS EXPRESSLY STATED IN ITS PROPOSAL DOCUMENT, OVIVO IS NOT RESPONSIBLE FOR A TREATMENT PLANT'S PROCESS PERFORMANCE, ENGINEERING DECISION IN RELATION TO PLANT'S CONSTRUCTION OR OPERATION NOR THE APPROPRIATENESS OR COMPATIBILITY OF OVIVO'S EQUIPMENT WITH SUCH PLANT.
  - 5) OVIVO PROPRIETARY AND CONFIDENTIAL.



THIS DRAWING CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION OF OVIVO AND ITS AFFILIATES AND IS NOT TO BE DISCLOSED NOR TO BE USED EXCEPT FOR EVALUATING PROPOSALS OF OVIVO OR INSTALLING, OPERATING OR MAINTAINING OVIVO EQUIPMENT UNLESS OTHERWISE AUTHORIZED IN WRITING BY OVIVO. UNCONTROLLED COPY IF PRINTED.

**PROCESS FLOW DIAGRAM**  
**SalmoGen Company Inc.**  
 PARTIAL FLOW TREATMENT  
 ( DIRTY WW )

REV	DATE	DESCRIPTION	BY	CHK
A	24/01/23	INITIAL RELEASE	DK	DK
REV		DESCRIPTION	BY	CHK

23011IS