



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE  
GOVERNOR

PATRICIA W. AHO  
COMMISSIONER

July 10, 2015

Mr. Greg Lambert  
Cooke Aquaculture USA Inc.  
P.O. Box 528  
Bingham, ME 04920  
[greg.lambert@cookeaqua.com](mailto:greg.lambert@cookeaqua.com)

*Sent via electronic mail  
Delivery confirmation requested*

**RE: *Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0110159  
Maine Waste Discharge License (WDL) # W007577-6F-J-R  
Proposed Draft MEPDES Permit Renewal***

Dear Mr. Lambert:

Attached is a proposed draft MEPDES permit and Maine WDL which the Department proposes to issue for your facility 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 conditions (special conditions specific to this permit are enclosed; standard conditions applicable to all permits are available upon request). 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.

If you have any questions regarding the matter, please feel free to call me.

AUGUSTA  
17 STATE HOUSE STATION  
AUGUSTA, MAINE 04333-0017  
(207) 287-7688 FAX: (207) 287-7826  
RAY BLDG., HOSPITAL ST.

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 04679-2094  
(207) 764-0477 FAX: (207) 760-3143

Letter to Cooke Aquaculture  
July 10, 2015  
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The comment period begins on July 10, 2015 and ends on August 10, 2015. All comments must be received in the Department of Environmental Protection office on or before the close of business **Monday, August 10, 2015**. Failure to submit comments in a timely fashion will result in the final 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  
[bill.hinkel@maine.gov](mailto:bill.hinkel@maine.gov)

Sincerely,



Bill Hinkel  
Division of Water Quality Management  
Bureau of Water Quality  
[bill.hinkel@maine.gov](mailto:bill.hinkel@maine.gov)  
ph: 207.485.2281

Enc.

cc: Matt Young, MDEP  
Lori Mitchell, MDEP  
Dave Pincumbe, USEPA  
Olga Vergara, USEPA  
Marelyn Vega, USEPA  
Alex Rosenberg, USEPA  
David Pincumbe, USEPA  
Maine Dept. Inland Fisheries and Wildlife Environmental Review  
Maine Dept. Marine Resources Environmental Review  
Max Tritt, NMFS  
Laury Zicari, USFWS  
Ivy Frignoca, CLF



DEPARTMENT ORDER

IN THE MATTER OF

COOKE AQUACULTURE USA INC.	)	MAINE POLLUTANT DISCHARGE
BINGHAM FISH HATCHERY	)	ELIMINATION SYSTEM PERMIT
BINGHAM, SOMERSET COUNTY, MAINE	)	AND
#ME0110159	)	WASTE DISCHARGE LICENSE
#W007577-6F-J-R	)	<b>RENEWAL</b>
<b>APPROVAL</b>	)	

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

**APPLICATION SUMMARY**

On December 8, 2014, the Department accepted as complete for processing, a renewal application from Cooke for Waste Discharge License (WDL) #W007577-6F-H-R / Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0110159, which was issued on July 1, 2010 for a five-year term. The July 1, 2010 permit authorized Cobscook Bay Salmon to discharge a monthly average of 11.25 million gallons per day (MGD) of treated fish hatchery wastewater from Cooke’s Bingham Fish Hatchery to the Kennebec River, Class A, in Bingham, Maine. The July 1, 2010 permit also authorized the discharge of 5.7 MGD of non-contact cooling water, which is required only on a seasonal (summer-fall) basis. The July 1, 2010 permit was transferred to Cooke on February 10, 2012 by way of WDL #W007577-6F-I-T.

**PERMIT SUMMARY**

This permitting action is carrying forward all the terms and conditions of the July 1, 2010 permitting action except that it is:

1. Eliminating the effluent limitations and monitoring requirements for biochemical oxygen demand (BOD<sub>5</sub>) based on new information;
2. Eliminating the monthly average concentration and mass limitations for total phosphorous based on new information;
3. Eliminating the monthly average reporting requirement for fish on hand;

**PERMIT SUMMARY (cont'd)**

4. Eliminating the daily maximum concentration limitations for formalin based on new information;
5. Eliminating the pH limitation and monitoring requirements based on this new information;
6. Revising Special Condition F, *Operation and Maintenance (O&M) Plan*, to include specific best practicable control technology currently available (BPT) practices pursuant to 40 CFR 451.11;
7. Eliminating previous Special Condition H, *Settling Basin Cleaning*, based on revisions to Special Condition F, *Operation and Maintenance (O&M) Plan*;
8. Restructuring and consolidating previous Special Condition I, *Disease and Pathogen Control and Reporting*, Special Condition J, *Therapeutic Agents*, and Special Condition K, *Disinfecting/Sanitizing Agents*, as new Special Condition G, *Use of Drugs for Disease Control*, and Special Condition H, *Pesticides and Other Compounds*, for consistency with the conditions established in other MEPDES permits; and
9. Restructuring and consolidating previous Special Condition M, *Salmon Genetic Testing and Escape Prevention*, to for consistency with the conditions established in other MEPDES permits.

## CONCLUSIONS

Based on the findings summarized in the attached Fact Sheet dated July 10, 2015, and subject to the special and standard conditions that follow, 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.A. § 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 natural resource, that water quality will be maintained and protected;
  - (c) Where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;
  - (d) Where the actual quality of any classified receiving water body 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 water body, 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 discharges will be subject to effluent limitations that require application of best practicable treatment as defined in *Conditions of license*, 38 M.R.S.A. § 414-A(1)(D).
5. The applicant has objectively demonstrated to the Department's satisfaction that the discharge is necessary and that there are no other reasonable alternatives available, as required by *Standards for classification of fresh surface waters*, 38 M.R.S.A. § 465(2), for the discharge to Class A waters.

**ACTION**

Based on the findings and conclusions as stated above, the Department APPROVES the above noted application of COOKE AQUACULTURE USA INC. to discharge a monthly average of 11.25 MGD of treated fish hatchery wastewater via Outfall #001A, and the daily maximum discharge of 5.7 MGD of non-contact cooling water (administrative Outfall #002A) to the Kennebec River, Class A, in Bingham, Maine, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

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 and the authorization to discharge become effective upon the date of signature below and expire at midnight five (5) years from the effective date. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of this permit, the authorization to discharge and the terms and conditions of this permit and all 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.A. § 10002 and *Rules Concerning the Processing of Applications and Other Administrative Matters*, 06-096 CMR 2(21)(A) (amended August 25, 2013)]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT BINGHAM, MAINE, THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ 2015.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
PATRICIA W. AHO, Commissioner

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

Date of initial receipt of application: December 8, 2014

Date of application acceptance: December 8, 2014

This Order prepared by Bill Hinkel, BUREAU OF WATER QUALITY

**SPECIAL CONDITIONS**

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

- The permittee is authorized to discharge **fish hatchery wastewater from Outfall #001A (fish hatchery and rearing station)** to the Kennebec River in Bingham, Maine. Such discharges are limited and must be monitored by the permittee as specified below<sup>(1)</sup>:

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements		
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Daily Minimum	Measurement Frequency	Sample Type
Flow [50050]	11.25 MGD <i>[03]</i>	---	---	---	---	Daily <i>[01/01]</i>	Estimated <i>[ES]</i>
TSS [00530]	396 lbs./day <i>[26]</i>	Report lbs./day <i>[26]</i>	6 mg/L <i>[19]</i>	10 mg/L <i>[19]</i>	---	2/Month <i>[02/30]</i>	Composite <sup>(2)</sup> <i>[CP]</i>
Fish on Hand [45604]	---	Report lbs./day <i>[26]</i>	---	---	---	1/Week <i>[01/07]</i>	Calculate <i>[CA]</i>
Formalin <sup>(3)</sup> [51064]	Report lbs./day <i>[26]</i>	228 lbs./day <i>[26]</i>	---	---	---	1/Occurrence <i>[01/OC]</i>	Calculate <i>[CA]</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 Page 6 of this permit for applicable footnotes.

## SPECIAL CONDITIONS

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

#### FOOTNOTES

- 1. Sampling** – All effluent monitoring must be conducted at a location following the last treatment unit in the treatment process, as to be representative of end-of-pipe effluent characteristics. Any change in sampling location must be approved by the Department in writing. The permittee must conduct sampling and analysis 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 must be analyzed by a laboratory certified by the State of Maine's Department of Health and Human Services for wastewater. Samples that are sent to a publicly owned treatment works (POTW) licensed pursuant to *Waste discharge licenses*, 38 M.R.S.A. § 413 are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*, 10-144 CMR 263 (effective date April 1, 2010). 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 Discharge Monitoring Report (DMR).
- 2. Composite Samples** – Samples must consist of 24-hour composites collected with an automatic composite sampler. Alternatively, when weather conditions and/or equipment prevents automatic compositing and upon Department approval, the permittee may manually composite a minimum of four grab samples collected at two-hour intervals during the working day at the facility. The permittee must indicate the type of sample collected on the DMR.
- 3. Formalin** – Formalin monitoring must be conducted when in use at the facility and must consist of a calculated effluent mass value. Therefore, the following calculation must be applied to assess the total mass of formalin discharged per day (lbs./day):  
$$\text{Formalin applied (gallons)} \times 9.03^1 \text{ (lbs./gallon)} = \text{Total formalin in effluent (lbs./day)}$$

The permittee must provide this information and calculations to the Department in a document accompanying the monthly DMR. The formalin limit corresponds to two types of treatments:

1. One hour per day treatment typical of hatchery and rearing facility discharges; and
2. Maximum of up to 24 hours of treatment and discharge for addressing emergency conditions at the facility.

**Formalin treatments greater than 1-hour in duration must be conducted no more frequently than once every four days. The permittee must provide a list of dates on which treatments greater than 1-hour were performed, and the length of time of each such treatment, with each monthly DMR.**

For instances when a permittee has not used formalin for an entire reporting period, the permittee must report "NODI-9" for this parameter on the monthly DMR or "N9" if the submittal is an electronic DMR.

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<sup>1</sup> Per Material Safety Data Sheet, Parasite-S has a specific gravity of 1.0775-1.0865 giving it an average density of 9.03 lbs./gallon.

## **SPECIAL CONDITIONS**

### **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 or turbidity 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 the permittee's General Application for Waste Discharge Permit, accepted for processing on December 8, 2014 and the terms and conditions of this permit; and only from Outfalls #001A (treated fish hatchery wastewater) and #002A (non-contact cooling water). Discharges of wastewater from any other point source(s) are not authorized under this permit, and must be reported in accordance with Standard Condition B(5), *Bypasses*, of this permit.

### **D. NOTIFICATION REQUIREMENTS**

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 or quantity of wastewater introduced to the wastewater collection and treatment system; and
  - b. Any anticipated impact of the change in the quantity or quality of the wastewater to be discharged from the treatment system.

## SPECIAL CONDITIONS

### E. MONITORING AND REPORTING

Monitoring results obtained during the previous month must be summarized for each month and reported on separate DMR forms provided by the Department and **postmarked on or before the thirteenth (13<sup>th</sup>) day of the month or hand-delivered to the Department's Regional Office such that the DMRs are received by the Department on or before the fifteenth (15<sup>th</sup>) day of the month** following the completed reporting period. A signed copy of the DMR and all other reports required herein must be submitted to the Department assigned inspector (unless otherwise specified by the Department) at the following address:

Department of Environmental Protection  
Eastern Maine Regional Office  
Bureau of Land and Water Quality  
Division of Water Quality Management  
106 Hogan Road  
Bangor, Maine 04401

Alternatively, if the permittee submits an electronic DMR (eDMR), the completed eDMR must be electronically submitted to the Department by a facility authorized DMR Signatory not later than close of business on the **15<sup>th</sup> day of the month** following the completed reporting period. Hard copy documentation submitted in support of the eDMR must be postmarked on or before the **thirteenth (13<sup>th</sup>) day of the month or hand-delivered** to the Department's Regional Office such that it is received by the Department on or before the fifteenth (15<sup>th</sup>) day of the month following the completed reporting period. Electronic documentation in support of the eDMR must be submitted not later than close of business on the 15<sup>th</sup> day of the month following the completed reporting period.

### F. OPERATIONS AND MAINTENANCE (O&M) 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.

## SPECIAL CONDITIONS

### F. OPERATIONS AND MAINTENANCE (O&M) PLAN (cont'd)

- 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.
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.

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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. OPERATIONS AND MAINTENANCE (O&M) PLAN (cont'd)

**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.

### 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. Discharges may occur through direct application of a drug or indirectly through feed, injection, ingestion, or immersion at the facility.
  - b. FDA-approved drugs identified in the permittee's application that may be used in accordance with label at the Bingham Fish Hatchery during the term of the permit.
    1. Formalin (Parasite-S®) – In accordance with label, up to 250 ppm for 1-hour bath, and up to 2,000 ppm on a charged flow-through treatment.
    2. Tricaine methanesulfonate (Finquel® or Tricane-S) – In accordance with label, maximum of 330 ppm in a static bath solution.
    3. Hydrogen Peroxide (35% Perox-Aid®) – In accordance with label, up to 100 ppm on fish in a bath or flow-through setting; up to 1,000 ppm on eggs on a charged flow-through treatment.
    4. Chloramine-T (Halamid® Aqua) – In accordance with label, up to 20 ppm in a static bath solution.
    5. Oxytetracycline Dihydrate (Terramycin® 200 for Fish) – In accordance with label, maximum of 3.75 g/100 lb fish/day as an in-feed treatment.
    6. Oxytetracycline Hydrochloride for Skeletal Marking (Pennox® 343, Oxytetracycline HCL Soluble Powder-343, Terramycin-343, Tetroxy® Aquatic Soluble Powder.) – In accordance with label, up to 700 ppm as a static bath treatment.
    7. Florfenicol (Aquaflor®) – Maximum of 15 mg/kg fish/day as needed in feed.
    8. Sulfadimethoxine & Ormetoprim (Romet® 30 & Romet® TC) – In accordance with label, 50 mg/kg fish as an in feed treatment.

## SPECIAL CONDITIONS

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

- c. 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 an 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 use of a drug pursuant to this section, the Department determines that significant adverse effects are likely to occur, it may restrict or limit use of the drug.
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.

## SPECIAL CONDITIONS

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

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.
    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 characterize 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.
  - d. INADs identified in the permittee's application proposed for use at the Bingham Fish Hatchery during the term of the permit subject to all approval terms and conditions specified in this section.
    1. Emamectin benzoate (Slice®) – Maximum of 0.05 mg/kg fish body mass as needed in feed.
    2. Diquat (Reward®) – In accordance with label, up to 28 ppm as a static bath solution.
    3. Oxytetracycline immersion (Pennox 343) – Maximum of 20 ppm as a static bath.
    4. AQUI-S® 20E – Maximum of 100 ppm as a static batch for sedation purposes.

## SPECIAL CONDITIONS

### H. PESTICIDES AND OTHER COMPOUNDS

1. **General requirements.** 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.

a. Pesticides identified in the permittee's application. The following pesticides were identified in the permittee's application as currently being or potentially being in use:

<u>Name</u>	<u>Freq. of Use</u>	<u>Concentration</u>	<u>Qty. Used/Year</u>
Virkon Aquatic	Daily	2% solution	100 lbs.

b. Other compounds identified in the permittee's application. The following compounds were identified in the permittee's application as currently being or potentially being in use. The permittee is authorized to discharge the following compounds. It is the Department's Best Professional Judgment (BPJ) that the incidental discharge of these chemicals will not cause or contribute to non-attainment of applicable water quality standards.

<u>Name</u>	<u>Freq. of Use</u>	<u>Concentration</u>	<u>Qty. Used/Year</u>
Ovadine Iodine	12 times/Year	100 – 200 ppm	15 gallons
Sodium Chloride	As needed	3 ppm	60,000 kg
Calcium Carbonate	Daily	75 ppm	1,000 kg
Calcium Chloride	As needed	75 ppm	Minimal, if needed
Magnesium Chloride	As needed	75 ppm	Minimal, if needed

### I. 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, predator control, escape response; unusual event management, and severe weather;
4. provisions for employee training, auditing methods, and record keeping requirements; and 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.

## SPECIAL CONDITIONS

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

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 contractor's demonstrated capabilities to conduct such work.

The permittee must submit the CMS plan to the Department for review and approval **on or before six months following the effective date of this permit [ICIS code 53799]** and must maintain a current copy of the plan at the facility.

The CMS must be audited at least once per year and within 30 days of a reportable escape (more than 50 fish) by a party other than the facility operator or owner qualified to conduct such audits and approved by the Department. 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.

**Escape reporting.** The permittee must notify by electronic mail (e-mail) the Escape Reporting Contact List provided in this subsection of any known or suspected escape of more than 50 fish within 24 hours of becoming aware of the known or suspected loss to the following persons listed under "Escape Reporting Contact List."

## SPECIAL CONDITIONS

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

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.

#### 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; Jay Clement; [Jay.L.Clement@usace.army.mil](mailto:Jay.L.Clement@usace.army.mil)

#### *Maine Department of Environmental Protection*

Commissioner, Patricia Aho; [Patricia.aho@maine.gov](mailto:Patricia.aho@maine.gov), or current Commissioner

#### *Maine Department of Marine Resources*

Policy Development Specialist; Chris Vonderweidt; [Chris.vonderweidt@maine.gov](mailto:Chris.vonderweidt@maine.gov)

Secretary to the Commissioner; Jessica McKay; [Jessica.mckay@maine.gov](mailto:Jessica.mckay@maine.gov)

Sea-Run Fisheries and Habitat Division Director; Oliver Cox; [Oliver.n.cox@maine.gov](mailto:Oliver.n.cox@maine.gov)

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

Commissioner, Chandler Woodcock; [Chandler.Woodcock@maine.gov](mailto:Chandler.Woodcock@maine.gov), or current Commissioner

#### *National Marine Fisheries Service*

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

#### *United States Fish & Wildlife Service*

Maine Field Office; Wende Mahaney; [Wende\\_mahaney@fws.gov](mailto:Wende_mahaney@fws.gov)

Personnel from the Department, the MeDMR, the USEPA, and the Services, may inspect the facility during normal operation hours. Upon request by the permittee, government officials will provide credentials attesting to their position and will follow the facility's biosecurity procedures. Operational records regarding compliance with this condition must be made available to personnel from the Department, the MeDMR, the USEPA, and the Services for inspection upon request.

## **SPECIAL CONDITIONS**

### **J. ALTERNATIVE DISCHARGE STUDY**

**On or before six-months prior to expiration of this permit**, the permittee must submit to the Department for review, an Alternative Discharge Study (ADS) report to objectively demonstrated to the Department's satisfaction that the discharge is necessary and that there are no other reasonable alternatives available, as required by *Standards for classification of fresh surface waters*, 38 M.R.S.A. § 465(2), for the discharge to Class A waters. **[ICIS code 34099]**

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

In accordance with 38 M.R.S.A. § 414-A(5) and upon evaluation of the tests results or monitoring requirements specified in 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.

### **L. SEVERABILITY**

In the event that any provision(s), 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.

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

**FACT SHEET**

DATE: **JULY 10, 2015**

PERMIT NUMBER: **#ME0110159**

WASTE DISCHARGE LICENSE: **#W007577-6F-J-R**

NAME AND ADDRESS OF APPLICANT:

**COOKE AQUACULTURE USA INC.  
BINGHAM FISH HATCHERY  
P.O. BOX 528  
BINGHAM, MAINE 04920**

COUNTY: **SOMERSET**

NAME AND ADDRESS WHERE DISCHARGE(S) OCCUR(S):

**COOKE AQUACULTURE USA INC.  
BINGHAM FISH HATCHERY  
P.O. BOX 528 36 RIVER STREET  
BINGHAM, MAINE 04920**

RECEIVING WATER CLASSIFICATION: **KENNEBEC RIVER/CLASS A**

COGNIZANT OFFICIAL CONTACT INFORMATION:

**GREG LAMBERT  
207-446-6295  
[greg.lambert@cookeaqua.com](mailto:greg.lambert@cookeaqua.com)**

**1. APPLICATION SUMMARY**

Application: On December 8, 2014, the Maine Department of Environmental Protection (Department) accepted as complete for processing, a renewal application from the Cooke Aquaculture USA Inc. (Cooke) Waste Discharge License (WDL) #W007577-6F-H-R / Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0110159, which was issued on July 1, 2010 for a five-year term. The July 1, 2010 permit authorized Cobscook Bay Salmon to discharge a monthly average of 11.25 million gallons per day (MGD) of treated fish hatchery wastewater from Cooke's Bingham Fish Hatchery to the Kennebec River, Class A, in Bingham, Maine. The July 1, 2010 permit also authorized the discharge of 5.7 MGD of non-contact cooling water, which is required only on a seasonal (summer-fall) basis. The July 1, 2010 permit was transferred to Cooke on February 10, 2012 by way of WDL #W007577-6F-I-T.

## 2. PERMIT SUMMARY

- a. Terms and Conditions: This permitting action is carrying forward all the terms and conditions of the July 1, 2010 permitting action except that it is:
1. Eliminating the effluent limitations and monitoring requirements for biochemical oxygen demand (BOD<sub>5</sub>) based on new information;
  2. Eliminating the monthly average concentration and mass limitations for total phosphorous based on new information;
  3. Eliminating the monthly average reporting requirement for fish on hand;
  4. Eliminating the daily maximum concentration limitations for formalin based on new information;
  5. Eliminating the pH limitation and monitoring requirements based on this new information;
  6. Revising Special Condition F, *Operation and Maintenance (O&M) Plan*, to include specific best practicable control technology currently available (BPT) practices pursuant to 40 CFR 451.11;
  7. Eliminating previous Special Condition H, *Settling Basin Cleaning*, based on revisions to Special Condition F, *Operation and Maintenance (O&M) Plan*;
  8. Restructuring and consolidating previous Special Condition I, *Disease and Pathogen Control and Reporting*, Special Condition J, *Therapeutic Agents*, and Special Condition K, *Disinfecting/Sanitizing Agents*, as new Special Condition G, *Use of Drugs for Disease Control*, and Special Condition H, *Pesticides and Other Compounds*, for consistency with the conditions established in other MEPDES permits; and
  9. Restructuring and consolidating previous Special Condition M, *Salmon Genetic Testing and Escape Prevention*, to for consistency with the conditions established in other MEPDES permits.
- b. History: This section provides a summary of recent/significant licensing and permitting actions and other significant regulatory actions completed for the Bingham Fish Hatchery. The fact sheet associated with the July 1, 2010 permit contains additional history for this facility.

January 12, 2001 – The Department received authorization from the U.S. Environmental Protection Agency (USEPA) to administer the National Pollutant Discharge Elimination System (NPDES) permit program in Maine, excluding areas of special interest to Maine Indian Tribes. From that point forward, the program has been referred to as the Maine Pollutant Discharge Elimination System (MEPDES) program, and MEPDES permit #ME0110159 has been utilized for this facility.

## 2. PERMIT SUMMARY (cont'd)

July 1, 2010 – The Department issued WDL #W007577-6F-H-R to Cobscook Bay Salmon for a five-year term. The July 1, 2010 permit superseded WDL #W007577-5Q-E-R issued to Stolt Sea Farm, Inc. on April 6, 2005, #W007577-5Q-D-R issued to Bingham Hatchery, Inc. on August 24, 1999, and #W007577-41-A-N issued to Mariculture Products, Ltd. on May 31, 1988. It is noted the Department issued several WDL transfers and modifications of WDLs issued prior to July 1, 2010.

February 10, 2012 – The Department issued WDL #W007577-6F-I-T thereby transferring the July 1, 2010 permit from Cobscook Bay Salmon to Cooke Aquaculture USA Inc.

December 8, 2014 – Cooke submitted a timely and complete General Application to the Department for renewal of the July 1, 2010 permit (including the subsequent transfer). The application was accepted for processing on December 8, 2014 and was assigned WDL #W007577-6F-J-R / MEPDES #ME0110159.

- c. Source Description: The following is a general description of the Bingham Hatchery provided by Cooke as part of its December 8, 2014 General Application for Waste Discharge Permit. A map showing the location of the treatment facility is included as Fact Sheet **Attachment A**.

Influent Water: The Bingham Hatchery obtains influent water for the facility from underground aquifers. The facility uses up to 4 well pumps at any one time to pump an average of 6,000 gpm and a maximum of 7,600 gpm through the facility for the culture of Atlantic salmon. Water temperature of the wells is fairly constant at between 6.8 and 11 degrees Celsius, depending on well location and season. The well water is heated or chilled, as needed, for the different life stages and desired holding patterns of incubated eggs and fish. Since all water is sourced from underground areas, it must be degassed to remove excess nitrogen and other gasses naturally found in ground water.

The Bingham Hatchery is broken up into several clusters which are used for different rearing operations and life stages of the salmon cultured at the facility.

A-Building comprises the main cinder-blocked building and houses the hatchery offices, lunch room, twelve operational 12-foot diameter fiberglass first feeding tanks, sixty-eight operational 5-foot fiberglass combi-tanks where eggs are incubated and hatched, multiple egg incubation trays, and cylinders used for egg incubation. Multiple other tanks exist in this building but are not currently utilized in the current hatchery configuration.

B-Building is comprised of twenty-eight 12-foot diameter fiberglass tanks. All tanks in this unit are part of the hatchery recirculation system of which approximately 95% of the water is treated by filtration through a 60-micron drum filter, ultraviolet radiation, ozonation, and fluidized sand filters. Water in this rearing unit is heated via a propane-fired boiler to maximize the growth potential of fish in this unit. This unit is capable of housing various life stages of fish from fry through smolt stage.

## 2. PERMIT SUMMARY (cont'd)

C-Building is comprised of twenty-four 26-foot diameter concrete rearing tanks. These tanks are in a flow-through configuration and can contain various life stages of fish fry through 2<sup>nd</sup> year brood.

D & E Buildings are identical in layout phase. Both units are comprised of twelve 32-foot diameter concrete tanks and are flow-through in nature. These units are used to hold various stages of fish ranging from fry through brood stock. Six tanks in E Building are enclosed via an aluminum-framed black tarp and are photo-period manipulated to allow spawning to be drawn out over a longer length of time.

During the summer and early fall, the permittee may withdrawal up to 5.7 MGD of Kennebec River to be conveyed through a heat exchanger to increase the temperature of the water used for fish rearing. The water does not come into contact with any pollutants and is discharged approximately 4-5 degrees Fahrenheit below the ambient river (intake) temperature. Outfall #002A is a 14-inch diameter PVC pipe that extends approximately one foot below the mean low water level of the Kennebec River.

- d. Wastewater Treatment: Wastewater from all buildings is collected in concrete trenches and routed through three 60-micron drum filters with a capacity of 6,000 gpm each. In addition to these three drum filters, B-Building houses a separate 60-micron drum filter used in the recirculation portion of the facility. Filtered effluent is sent to a 175-foot x 15-foot x 4-foot polishing pond prior to conveyance to the Kennebec River via a 30-foot wide by 130-foot long open channel/conveyance system. Drum filter backwash water is sent to concrete holding pond. The sludge pond is drained and pumped periodically prior to the sludge being spread on agricultural fields.

In accordance with Special Condition D of the 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. Use of agents for therapeutic and disinfecting/sanitizing purposes are addressed in subsequent Fact Sheet sections titled accordingly. A process flow diagram submitted by the permittee is included as Fact Sheet **Attachment B**.

## 3. CONDITIONS OF PERMIT

*Conditions of licenses*, 38 M.R.S.A. § 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require 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.A. § 420 and *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 July 29, 2012), and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

#### 4. RECEIVING WATER QUALITY STANDARDS

*Classification of major river basins*, 38 M.R.S.A. § 467(4)(A)(7) classifies the Kennebec River from the Wyman Dam to its confluence with the impoundment formed by the Williams Dam, which includes the river at the point of Cooke's discharge, as Class A. *Standards for classification of fresh surface waters*, 38 M.R.S.A. § 465(2) describes the standards for Class A waters. Relevant standards for Class A waters are as follows:

- Designated Uses. Class A waters must be of such quality that they are suitable for the designated uses of drinking water after disinfection, fishing; agriculture, recreation in and on the water, industrial process and cooling water supply, hydroelectric power recreation, and as habitat for aquatic life.
- Water Quality Criteria. The dissolved oxygen content of Class A waters may be not less than 7 parts per million or 75% of saturation, whichever is higher. The aquatic life and bacteria content of Class A waters shall be as naturally occurs.
- Antidegradation Policy. State waters are protected by the State's antidegradation policy which provides that certain existing in-stream water uses and the level of water quality necessary to protect those existing uses must be maintained and protected. 38 M.R.S.A. § 464(4)(F).

Except as provided at 38 M.R.S.A. § 465(2)(C), direct discharges to Class A waters licensed after January 1, 1986 are permitted only if, in addition to satisfying all the requirements of the Water Classification Program, the discharged effluent will be equal to or better than the existing water quality of the receiving waters. Prior to issuing a discharge license, the Department shall require the applicant to objectively demonstrate to the Department's satisfaction that the discharge is necessary and that there are no other reasonable alternatives available.

The classification of this reach of the Kennebec River was upgraded from Class B to Class A by the Maine Legislature in 1989 (effective date of change was September 30, 1989), a year after the initial license was issued by the Department for the discharge from the Bingham Fish Hatchery. In a letter from the Department to the Maine Department of Inland Fisheries and Wildlife, dated January 24, 1996, the Department addressed the issue of the discharge from the Bingham Fish Hatchery to the Class A reach of the Kennebec River. In the January 24, 1996 letter, the Department states that its interpretation of the Legislature's intent was to "grandfather" the discharge existing at that time from the Class A requirement that the effluent be of equal to or better than the existing water quality of the receiving waters. The requirement to objectively demonstrate to the Department's satisfaction that the discharge is necessary and that there are no other reasonable alternatives available stands.

Cooke included with its December 8, 2014 General Application for Waste Discharge Permit "*Alternative Discharge Study Bingham Hatchery November 21, 2014*" to comply with Special Condition G of the July 1, 2010 permit and the governing statute at 38 M.R.S.A. § 465(2)(C). Cooke evaluated 1) piping effluent to a receiving water classified as Class B or C; 2) use of an existing publically owned treatment works; 3) retrofitting the current facility into a recirculation facility; 4) land application via spray irrigation; and 5) additional wastewater filtration/treatment.

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

The Department concludes that there are no other reasonable alternatives to eliminate the discharge from the Bingham Fish Hatchery to the Class A reach of the Kennebec River due to reasonability of cost, technical limitations, and availability of resources. The Department concludes that Cooke has objectively demonstrated to the Department's satisfaction that the discharge is necessary and that there are no other reasonable alternatives.

The Department must make a finding that the discharge is necessary and that there are no other reasonable alternatives for each permit renewal. Therefore, this permitting action is carrying forward a requirement to submit an alternative discharge study on or before six months prior to the expiration date of this permit. The permittee may utilize the November 21, 2014 study after making any applicable revisions to make the information current and to account for any new options not previously evaluated and discussed. See Special Condition J of the permit.

#### 5. RECEIVING WATER QUALITY CONDITIONS

*The State of Maine 2012 Integrated Water Quality Monitoring and Assessment Report (Report)*, prepared by the Department pursuant to Sections 303(d) and 305(b) of the *Federal Water Pollution Control Act*, lists Kennebec River from Wyman Dam to Carrabassett River (Segment ID ME0103000312\_337R) as "Category 2: Rivers and Streams Attaining Some Designated Uses – Insufficient Information for Other Uses.

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 (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 waters, and many fish from any given water, 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 Health and 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."

#### 6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- 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 that produces 100,000 pounds or more per year of aquatic animals in a flow-through or recirculating system. The Bingham Fish Hatchery produces 100,000 pounds or more per year of aquatic animals in a flow-through or recirculating system and is therefore subject to regulation under this subpart.

**6 EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)**

40 CFR 451.11 states that any existing point source subject to the *Flow-Through and Recirculating Systems Subcategory* must meet the following requirements, expressed as practices, representing the application of best practicable control technology currently available (BPT): 1) solids control; 2) materials storage; 3) structural maintenance; 4) recordkeeping; and 5) training. While 40 CFR 451.11 does not establish numeric technology-based effluent limitation guidelines for this subcategory, it does provide that the permitting authority may require any modification to the BPT guidelines based on its exercise of its best professional judgment. The BPT requirement identified in #1-5 on this paragraph are incorporated into the permit as Special Condition F. The basis statement for all other effluent limitations and monitoring requirements is explained in this section of this fact sheet.

The previous permitting action established Special Condition L, *Minimum Treatment Technology Requirement*, to specify that the permittee must provide treatment equal to or better than 60-micron microscreen filtration. The Department is not prescribing the type of treatment that the permittee must provide. The permittee is responsible for ensuring compliance with the technology-based and water quality-based effluent limitations established in this permit. Therefore, the Department concludes that previous Special Condition L is not necessary and it is being eliminated in this permitting action.

- b. Flow: The previous permitting action established, and this permitting action is carrying forward, a monthly average discharge flow limitation of 11.25 million gallons per day (MGD) which is based on pump curve data provided by the applicant in the September 28, 2001 General Application for Waste Discharge Permit. The daily estimated minimum monitoring frequency requirement is also being carried forward this permitting action. The following table summarizes effluent data reported on Discharge Monitoring Reports (DMRs) for the period of August 2010 through February 2015.

**Flow (DMRs=55) Outfall #001A**

Value	Limit (MGD)	Range (MGD)	Mean (MGD)
Monthly Average	11.25	3.60– 10.50	8.89

- c. Dilution Factors: Dilution factors associated with the permitted discharge flow of 11.25 MGD from the Bingham Fish Hatchery and the 7Q10 and 1Q10 low flow values for the Kennebec River were derived in accordance with 06-096 CMR 530(4)(A) as follows:

Mod. Acute:  $\frac{1}{4}$  1Q10 = 127 cfs  $\Rightarrow \frac{(127 \text{ cfs})(0.6464) + 11.25 \text{ MGD}}{11.25 \text{ MGD}} = 8.3:1$

Acute: 1Q10 = 508 cfs  $\Rightarrow \frac{(508 \text{ cfs})(0.6464) + 11.25 \text{ MGD}}{11.25 \text{ MGD}} = 30.2:1$

Chronic: 7Q10 = 1,280 cfs  $\Rightarrow \frac{(1,280 \text{ cfs})(0.6464) + 11.25 \text{ MGD}}{11.25 \text{ MGD}} = 74.5:1$

Harmonic Mean = 2,777 cfs  $\Rightarrow \frac{(2,777 \text{ cfs})(0.6464) + 11.25 \text{ MGD}}{11.25 \text{ MGD}} = 160.6:1$

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

06-096 CMR 530(4)(B)(1) states,

*Analyses using numerical acute criteria for aquatic life must be based on 1/4 of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone and to ensure a zone of passage of at least 3/4 of the cross-sectional area of any stream as required by Chapter 581. Where it can be 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 flow, up to and including all of it, as long as the required zone of passage is maintained.*

Final effluent from the Bingham Fish Hatchery is directed to an approximately 30-foot wide by 130-foot long open channel that conveys the wastewater to the bank of the Kennebec River. The Department is making a best professional judgment that this discharge does not achieve complete and rapid mixing of the effluent with the receiving waters. Therefore, the Department is utilizing the default stream flow of 1/4 of the 1Q10 in acute evaluations pursuant to 06-096 CMR 530

- d. Biochemical Oxygen Demand (BOD<sub>5</sub>) and Total Suspended Solids (TSS): Neither the USEPA nor Department has promulgated effluent limitation guidelines for BOD<sub>5</sub> or TSS that are applicable to the discharge from the Bingham Fish Hatchery. The previous permitting action established monthly average and daily maximum concentration limitations of 6 mg/L and 10 mg/L, respectively, for BOD<sub>5</sub> and TSS based on best professional judgment (BPJ) of best practicable treatment (BPT). The previous permit also established monthly average mass limitations of 528 lbs./day and 396 lbs./day, respectively, for BOD<sub>5</sub> and TSS based on BPJ. These limits were initially established in WDL #W007577-5Q-E-R issued on April 6, 2005. See the fact sheet associated with that permitting action for additional discussion regarding these limits.

The Department's Division of Environmental Assessment (DEA) reviewed fish hatchery information in consideration of using TSS as a surrogate for BOD<sub>5</sub>. It should be noted that TSS is more closely related to problems most commonly encountered at aquatic animal facilities, such as phosphorus enrichment and solids control, than is BOD<sub>5</sub>. BOD can cause depressed dissolved oxygen in the receiving waters and increased carbon levels may create a favorable environment for nuisance bacterial/fungal growth such as *Sphaerotilus natans* that may result in non-attainment of narrative water quality standards. As documented in the fact sheet associated with the July 1, 2010 permit, the Department concluded based on a report entitled, *Stolt Sea Farm 2005 Ambient Water Quality Monitoring Report*, the Department concluded that the discharge from the Bingham Fish Hatchery was not causing or contributing to a violation of narrative water quality standards from the presence of *Sphaerotilus natans*. Therefore, the Department concludes that Kennebec River does not exhibit BOD-related impacts as a result of the discharge from the Bingham Fish Hatchery.

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

After reviewing approximately 6 years of BOD<sub>5</sub> and TSS and data, the Department concluded that the results of the two parameters showed a strong correlation. Therefore, the Department concluded that TSS could be relied upon to reflect BOD<sub>5</sub> conditions. Whereas: 1) the Bingham Fish Hatchery operations and processes are not likely to change; 2) the Department has a statistically significant BOD<sub>5</sub> data set from this and multiple similar hatcheries; 3) neither the USEPA nor Department have promulgated numeric effluent guidelines for BOD<sub>5</sub> for the *Flow-Through and Recirculating Systems Subcategory*; and 4) in the best professional judgment of the Department, effluent limitations for BOD<sub>5</sub> are not necessary to ensure compliance with water quality standards, this permitting action is eliminating the effluent limitations and monitoring requirements for BOD<sub>5</sub> based on this new information that was not available at the time the previous permit was issued.

Section 402(o) of the Clean Water Act contains prohibitions for anti-backsliding. Generally, anti-backsliding prohibits the issuance of a renewed permit with less stringent limitations than were established in the previous permit. The Clean Water Act contains certain exceptions to anti-backsliding at Section 402(o)(2). In the case of Cooke's Bingham Fish Hatchery and the concentration and mass limitations for BOD<sub>5</sub>, the Department has determined that these limitations would not have been established at the time the previous permit was issued based on the new information that has been obtained since issuance of the previous permit. Section 402(o)(2)(B)(i) of the Clean Water Act contains an exception to anti-backsliding for information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance. Therefore, this permitting action is eliminating the limitations for BOD<sub>5</sub>. [It is noted that anti-backsliding prohibitions and exceptions are mirrored in Chapter 523 of the Department's rules and at 40 CFR 122.44(l)(2)(i)(B)(1).]

A summary of the effluent TSS data as reported on the DMRs submitted to the Department for the period August 2010 through February 2015 follows.

### TSS Mass (DMRs=55)

Value	Limit (lbs./day)	Range (lbs./day)	Mean (lbs./day)
Monthly Average	396	26 – 370	107
Daily Maximum	Report	36 – 571	132

### TSS Concentration (DMRs=55)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	6	1 – 5	1.5
Daily Maximum	10	1 – 7.7	1.8

This permitting action is carrying forward the monthly average mass and concentration limits for TSS, the daily maximum mass reporting requirement, and the previously established monitoring frequency of twice per month for TSS based on Department BPJ.

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

- e. Total Phosphorus: Previous permitting action established seasonal (June 1 – September 30, of each year) monthly average concentration and mass limitations of 2.6 mg/L and 22 lbs./day, respectively, for total phosphorus. These limitations were initially established in WDL #W007577-5Q-E-R issued on April 6, 2005 and were derived as water quality-based limits. More specifically, the limitations were derived based on the Department's best professional judgment of the protective in-stream ambient water quality threshold of 0.035 mg/L for total phosphorous.

*Waste Discharge License Conditions*, 06-096 CMR 523 (effective January 12, 2001) specifies that water quality based limits are necessary when it has been determined that a discharge has a reasonable potential to cause or contribute to an excursion above any State water quality standard including State narrative criteria.<sup>1</sup> In addition, 06-096 CMR 523 specifies that water quality-based limits may be based upon criterion derived from a proposed State criterion, or an explicit State policy or regulation interpreting its narrative water quality criterion, supplemented with other relevant information which may include: *EPA's Water Quality Standards Handbook, October 1983*, risk assessment data, exposure data, information about the pollutant from the Food and Drug Administration, and current USEPA criteria documents.<sup>2</sup>

*USEPA's Quality Criteria for Water 1986* (Gold Book) puts forth an in-stream phosphorus concentration goal of less than 0.1 mg/L in streams or other flowing waters not discharging directly to lakes or impoundments, to prevent nuisance algal growth. The use of the 0.1 mg/L Gold Book value is consistent with the requirements of 06-096 CMR 523 noted above for use in a reasonable potential (RP) calculation.

Based on the above rationale, the Department has chosen to utilize the Gold Book value of 0.1 mg/L. It is the Department's intent to continue to make determinations of actual attainment or impairment based upon environmental response indicators from specific water bodies. The use of the Gold Book value of 0.1 mg/L for use in the RP calculation will enable the Department to establish water quality based limits in a manner that is reasonable and that appropriately establishes the potential for impairment, while providing an opportunity to acquire environmental response indicator data, numeric nutrient indicator data, and facility data as needed to refine the establishment of site specific water quality based limits for phosphorus. This permit may be reopened during the term of the permit to modify any reasonable potential calculations, phosphorus limits, or monitoring requirements based on new site-specific data.

The Bingham Fish Hatchery has been conducting total phosphorus monitoring since no later than 2005 for permit compliance. A summary of the effluent total phosphorus data as reported on the DMRs submitted to the Department for the seasonal monitoring period from 2010 through 2014 follows.

<sup>1</sup> *Waste Discharge License Conditions*, 06-096 CMR 523(5)(d)(1)(i) (effective date January 12, 2001)

<sup>2</sup> 06-096 CMR 523(5)(d)(1)(vi)(A)

**6 EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)**

**Total-P Mass (DMRs=18)**

Value	Limit (lbs./day)	Range (lbs./day)	Mean (lbs./day)
Monthly Average	22	4 – 14	7.5
Daily Maximum	Report	4.2 – 19	8.9

**Total-P Concentration (DMRs=18)**

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	Report	0.09 – 0.17	0.12
Daily Maximum	Report	0.10 – 0.23	0.15

For the background concentration in the Kennebec River, the Department is using an ambient concentration of 0.004 mg/L based on ambient water quality monitoring data collected in September 2014 (n = 2) from the Kennebec River upstream from the point of discharge. The Department’s draft ambient water quality criterion for Class A waters is 0.018 mg/L for phosphorus.

Using the following calculation and criteria, Bingham Fish Hatchery does not have a reasonable potential to exceed either the USEPA’s Total P Ambient Water Quality Goal of 0.1 mg/L (100 ug/L) for phosphorus for rivers and streams not feeding lakes, or the Department’s draft ambient water quality criteria of 0.018 mg/L for phosphorus:

Reasonable Potential Analysis

$$Cr = \frac{QeCe + QsCs}{Qr}$$

- Qe = effluent flow = 11.25 MGD
- Ce = effluent pollutant concentration = 0.12 mg/L
- Qs = 7Q10 flow of receiving water = 827 MGD
- Cs = upstream concentration = 0.004 mg/L
- Qr = receiving water flow (827 MGD + 11.25 MGD) = 838.25 MGD
- Cr = receiving water concentration

$$Cr = \frac{(11.25 \text{ MGD} \times 0.12 \text{ mg/L}) + (827 \text{ MGD} \times 0.004 \text{ mg/L})}{838.25 \text{ MGD}} = 0.013 \text{ mg/L}$$

- Cr = 0.013 mg/L < 0.1 mg/L ⇒ **No Reasonable Potential**
- Cr = 0.013 mg/L < 0.018 mg/L ⇒ **No Reasonable Potential**

Based on this reasonable potential calculation and conclusion that the discharge of treated wastewater from the Bingham Fish Hatchery does not have a reasonable potential to exceed applicable water quality thresholds for phosphorous, this permitting action is eliminating the monthly average concentration and mass limitations for phosphorous. The mean effluent mass discharged from this facility (7.5 lbs./day) is approximately one-third of the previously established limitation (22 lbs./day). The Department is making a best professional judgment determination that routine effluent monitoring for total phosphorous is not necessary. The

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

permittee must notify the Department of any substantial change in the volume or character of pollutants, including but not limited to an increase in the phosphorous content in the effluent, being introduced into the wastewater collection and treatment system. Elimination of these limitations based on new information regarding characterization of the effluent based on recent data is an allowable exception to anti-backsliding at 40 CFR 122.44(l)(2)(i)(B)(1).

- f. Fish on Hand: Previous permitting action established daily maximum and monthly average fish on hand mass reporting requirements. The fact sheet associated with the previous permit states, that the fish on hand monitoring and reporting requirement “is intended to enable both the Department and the permittee in evaluating management practices at the facility and trends in effluent quality and receiving water impacts.”

A summary of the fish on hand data as reported on the DMRs submitted to the Department for the period August 2010 through February 2015 follows.

### Fish on Hand Mass (DMRs=55)

Value	Limit (lbs./day)	Range (lbs./day)	Mean (lbs./day)
Monthly Average	Report	162.77 – 354,012	207,858
Daily Maximum	Report	165.70 – 360,490	224,871

The permittee is required to maintain records for fish rearing units documenting the feed amounts and estimates of the numbers and weight of fish pursuant to Special Condition F of the permit. The Department considers direct reporting of fish on hand data on monthly Discharge Monitoring Reports valuable for purposes of assisting in the diagnosis of operational/effluent problems and ultimately to effectively and efficiently respond to compliance problems at fish hatcheries, when they occur. However, after review of the data, the Department believes that a once per month daily maximum mass reporting requirement is sufficient for purposes of assisting in compliance evaluations. Therefore, the daily maximum fish on hand mass reporting requirement is being carried forward in this permitting action and the monthly average reporting requirement is being eliminated.

- g. Formalin: Formalin is a drug used to treat fungal infections and external parasites of finfish and finfish eggs. The previous permitting action established daily maximum concentration and mass effluent limitations of 374 mg/L and 228 lbs./day, respectively, for 1-hour formalin treatments and 208 mg/L and 228 lbs./day, respectively, for 24-hour formalin treatments.

Neither the Department nor USEPA have promulgated ambient water quality criteria for formalin. Using best professional judgment, the Department has established water quality-based thresholds for formalin based on Whole Effluent Toxicity (WET) testing on the water flea (*Ceriodaphnia dubia*) for 48-hour acute toxicity. For one-hour treatments, which are typical of most hatchery and rearing facility operations, the Department has established an ambient water quality threshold of 45 mg/L. Rarely, certain circumstances require use of formalin to control disease on additional rearing structures which results in the discharge of formalin for periods longer than the typical one-hour period for normal disease treatment. To ensure water quality standards are met and that formalin is not discharged at levels that would be toxic to aquatic life in the receiving water, the

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

Department has established an ambient water quality threshold of 25 mg/L based on best professional judgment for a maximum 24-hour treatment period.

Water quality-based effluent limitations for formalin were calculated as follows:

45 mg/L (1-hour acute criteria) x 8.3 (effluent dilution) = 374 mg/L formalin limit  
25 mg/L (24-hour acute criteria) x 8.3 (effluent dilution) = 208 mg/L formalin limit

The fact sheet associated with the April 6, 2005 MEPDES permit issued for this facility provides the following basis statement for the daily maximum mass limitation:

*The daily maximum mass limit is calculated based on the permittee's projected maximum amount of formalin used per day (5 gallons per 32-foot diameter tank times 5 tanks = 25 gallons) times the specific gravity of formalin (9.13 lbs./gal), resulting in a value of 228 lbs./day. This method was used to provide for flexibility in management of necessary treatments and to ensure that formalin is not discharged in toxic amounts.*

This permitting action is carrying forward the daily maximum mass limitation of 228 lbs./day for formalin to ensure the discharge does not violate receiving water quality standards. The Department is identifying in this permitting action that the concentration limitations are not necessary to ensure water quality standards are achieved and has determined that these limitations would not have been established at the time the previous permit was issued based on the new information that has been obtained since issuance of the previous permit. 40 CFR 122.44(l)(2)(i)(B)(1) contains an exception to anti-backsliding for information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance. Therefore, this permitting action is eliminating the concentration limitations for formalin.

This permitting action is carrying forward the minimum monitoring frequency requirement of once per occurrence for formalin.

The effluent quantity of formalin, as reported on the DMRs submitted to the Department for the period August 2010 through February 2015, ranged from 109 lbs./day to 219.2 lbs./day with a mean of 211 lbs./day (n = 33).

- h. **pH:** The previous permitting action established a pH range limitation of 6.0 – 8.5 standard units (SU), pursuant to 38 M.R.S.A. § 464(4)(A)(5), which states that the Department may not issue a waste discharge permit for a discharge that causes the pH of fresh waters to fall outside of the 6.0 to 8.5 range.

The effluent pH, as reported on the DMRs submitted to the Department for the period August 2010 through February 2015, ranged from 6.0 SU to 6.9 SU (n = 55). The Bingham Fish

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

Hatchery does not actively control the pH of wastewater through chemical addition or other methods.

Based on the recent pH data summarized above, the Department is making a best professional judgment determination that the discharge does not exhibit a reasonable potential to exceed the pH range established by 38 M.R.S.A. § 464(4)(A)(5). Whereas the Bingham Fish Hatchery does not actively control the pH of wastewater, this permitting action is eliminating the pH limitation and monitoring requirements based on this new information (recent compliance data). This action complies with the anti-backsliding provision at 40 CFR 122.44(l)(2)(i)(B)(1).

- i. Temperature: *Regulations Relating to Temperature*, 06-096 CMR 582 (last amended February 18, 1989), states that no discharge shall cause the ambient temperature of any freshwater body to be raised more than 5 degrees Fahrenheit, nor shall any discharge cause the temperature of any waters to exceed the USEPA national ambient water quality criteria established to protect all species of fish that are indigenous to the receiving waters. When the ambient temperature of any body of water naturally exceeds the applicable USEPA criteria, 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.

The Department has established that cold water fish species are indigenous to all Maine rivers and streams. USEPA has established maximum temperatures for the protection of growth and survival of cold water fish as follows: a weekly average temperature of 66 degrees Fahrenheit; and a daily maximum temperature of 73 degrees Fahrenheit. Neither the USEPA nor Department has established BPT for non-contact cooling water.

The Department has made a best professional judgment determination that the maximum discharge flow of 5.7 MGD of non-contact cooling heat exchange water that is 4-5 degrees Fahrenheit less than the ambient river flow (827 MGD) temperature will not cause a measurable change in the ambient river temperature or violate an applicable water quality standard. The Department is authorizing the discharge of non-contact heat exchange water but not establishing monitoring or reporting requirements in this permitting action.

## 7. OPERATIONS AND MAINTENANCE (O&M) PLAN

The previous permitting action established Special Condition F, *Operation and Maintenance (O&M) Plan*, which is contained in the majority of MEPDES permits and all fish hatchery permits. In this permitting action, the Department is revising the condition to incorporate and require inclusion of specific best practicable control technology currently available (BPT) practices pursuant to 40 CFR 451.11. In addition to the previous requirements of the O&M Plan, the revised O&M Plan must ensure the following items are adequately addressed: 1) solids control; 2) materials storage; 3) structural maintenance; 4) recordkeeping; and 5) training.

The previous permitting action established Special Condition H, *Settling Basin Cleaning*. Through inclusion of the revised O&M Plan the need for a separate condition for settling basin cleaning is redundant and is therefore being eliminated.

## 8. USE OF DRUGS FOR DISEASE CONTROL AND PESTICIDES AND OTHER COMPOUNDS

The previous permitting action established Special Condition I, *Disease and Pathogen Control and Reporting*, Special Condition J, *Therapeutic Agents*, and Special Condition K, *Disinfecting/Sanitizing Agents*. The Department is restructuring and consolidating conditions for drugs, pesticides, and chemicals or compounds not registered as pesticides under two new Special Conditions in the permit. Restructuring of the conditions is consistent with the conditions established in other MEPDES permits, namely *Net Pen Aquaculture General Permit* #MEG130000, April 10, 2014, which is the regulatory permit used by the majority of marine aquaculture facilities where the Atlantic salmon reared at the Bingham Fish Hatchery during the freshwater life stages are transferred.

Special Condition G, *Use of Drugs for Disease Control*, contains conditions for U.S. Food and Drug Administration (FDA)-approved drugs, extralabel drug use, and investigational new animal drugs (INADs).

Cooke provided, on Form DEPLW1999-18 included with its December 8, 2014 General Application for Waste Discharge Permit, a list of drugs, pesticides, and chemicals or compounds proposed for use at the Bingham Fish Hatchery during the term of the permit. The discharge of drugs associated with treatment is subject to all terms and conditions of Special Condition G of the permit. Only FDA-approved drugs that are identified in Cooke's December 8, 2014 General Application for Waste Discharge Permit may be used without additional written approval from the Department.

Special Condition H, *Pesticides and Other Compounds*, contains conditions for the use of pesticides registered with both the United States Environmental Protection Agency (USEPA) and Maine Board of Pesticides Control (BPC) and other chemicals and compounds that are neither defined as drugs nor pesticides, but are used, primarily, for cleaning and disinfection. Any chemical or compound proposed for use at the facility during the term of the permit not identified in the application or authorized in the permit must be reported to the Department in accordance with Special Condition D, *Notification Requirements* of the permit.

## 9. PROTECTION OF ATLANTIC SALMON

The U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (collectively, the Services) issued a final rule listing Atlantic salmon populations in certain Maine rivers and streams as "endangered" under the federal Endangered Species Act. In that decision, the Gulf of Maine Distinct Population Segment (DPS) encompassed all naturally reproducing remnant populations of Atlantic salmon downstream of the former Edwards Dam site on the Kennebec River northward to the mouth of the St. Croix River. The watershed structure, available Atlantic salmon habitat, and abundance of Atlantic salmon at various life stages were best known for the following eight rivers: Dennys River, East Machias River, Machias River, Pleasant River, Narraguagus River, Ducktrap River, Sheepscot River, and Cove Brook. On June 15, 2009, the Services expanded the Gulf of Maine DPS to include salmon in the Penobscot River, two significant issues of concern regarding the rearing of salmon in Maine involve the genetic integrity of the salmon and escape prevention to avoid impacts on native fish.

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

On December 4, 2000, in regard to the Department's pending delegation to administer the NPDES Permit Program, USEPA Region I informed the Department that "*permits issued to freshwater hatcheries raising salmon will require that the facility be designed or modified to achieve zero escapement of fish from the facility.*" The USEPA also stated, "*The information contained in the Services' listing documents indicates that a remnant population of wild Atlantic salmon is present in...*" Maine waters "*...and that salmon fish farms and hatcheries are activities having a significant impact on the...*" Gulf of Maine Distinct Population Segment (DPS) of Atlantic salmon "*...through, among other things, the escape of farmed and non-North American strains of salmon which may interbreed with the wild Maine strains, compete for habitat, disrupt native salmon redds, and spread disease.*" "*Based on this information, the Services have concluded that the escape of farm-raised salmon from fish farms and hatcheries is likely to significantly impair the growth, reproduction and habitat of wild salmon, thereby impairing the viability of the DPS.*" "*EPA has analyzed current information, including these findings, and based on this information believes that this remnant population constitutes an existing instream use of certain Gulf of Maine rivers and considers that the above-described impacts to the population would be inconsistent with Maine's water quality standards. Assuming the information discussed above does not significantly change, EPA will utilize its authorities to ensure compliance with Maine water quality standards by ensuring that conditions to protect the remnant population of Atlantic salmon are included in NPDES permits for salmon fish farms and hatcheries, which are subject to regulation as concentrated aquatic animal production facilities.*" "*In view of the substantial danger of extinction to the DPS described by the Services, it is EPA's view that proposed permits authorizing activities that would adversely affect the population, as described earlier in this letter, would be inconsistent with Maine's water quality standards and objectionable under the CWA.*"

The previous permitting action established Special Condition M, *Salmon Genetic Testing and Escape Prevention*. The Department is restructuring and consolidating conditions for Atlantic salmon protection in the permit as Special Condition I, *Protection of Atlantic Salmon*. Restructuring of the conditions is consistent with the conditions established in other MEPDES permits, namely *Net Pen Aquaculture General Permit #MEG130000*, April 10, 2014, which is the regulatory permit used by the majority of marine aquaculture facilities where the Atlantic salmon reared at the Bingham Fish Hatchery during the freshwater life stages are transferred.

## 10. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted, the Department has determined the existing water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the water body to meet standards for Class A classification.

## 11. PUBLIC COMMENTS

Public notice of this application was made in the *Kennebec Journal* newspaper on or about December 1, 2014. 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 shall 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).

## 12. RESPONSE TO COMMENTS

*Reserved.*

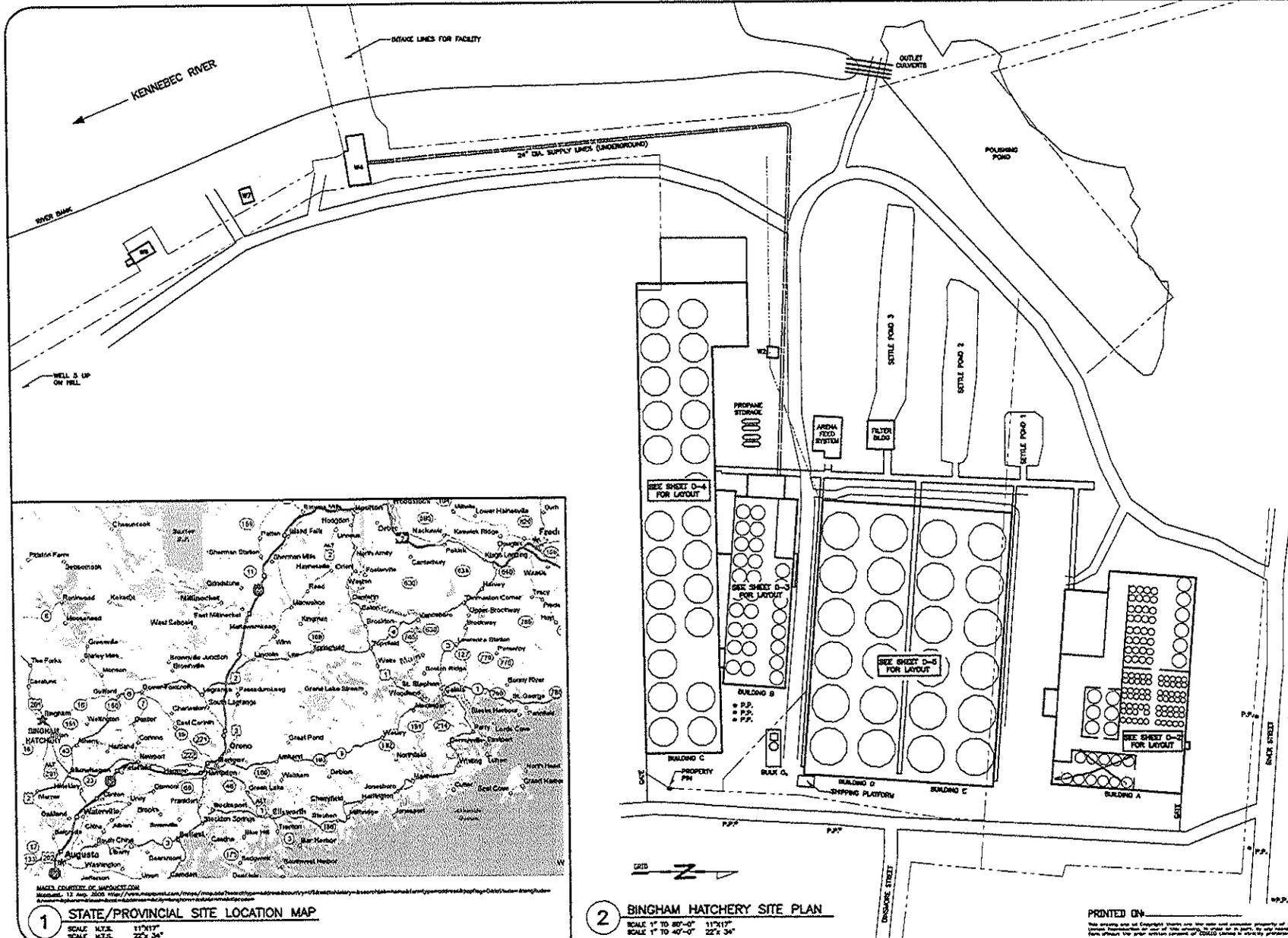
## 13. DEPARTMENT CONTACTS

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

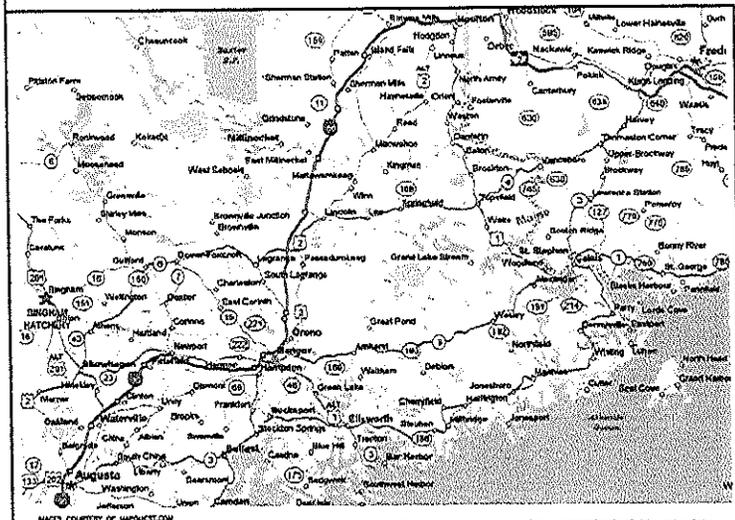
Bill Hinkel  
Division of Water Quality Management  
Bureau of Land & Water Quality  
Department of Environmental Protection  
17 State House Station  
Augusta, Maine 04333-0017  
Telephone: (207) 485-2281  
e-mail: [bill.hinkel@maine.gov](mailto:bill.hinkel@maine.gov)

DRAFT

# **ATTACHMENT A**



- DRAWING LIST**
- D-1 SITE PLAN
  - D-2 BUILDING A
  - D-3 BUILDING B
  - D-4 BUILDING C
  - D-5 BUILDING D & E
  - D-6
- LEGEND**
- PP.P. POWER POLE
  - W. WELL NUMBER
  - PROPERTY LINE
  - PIPE CENTER LINE



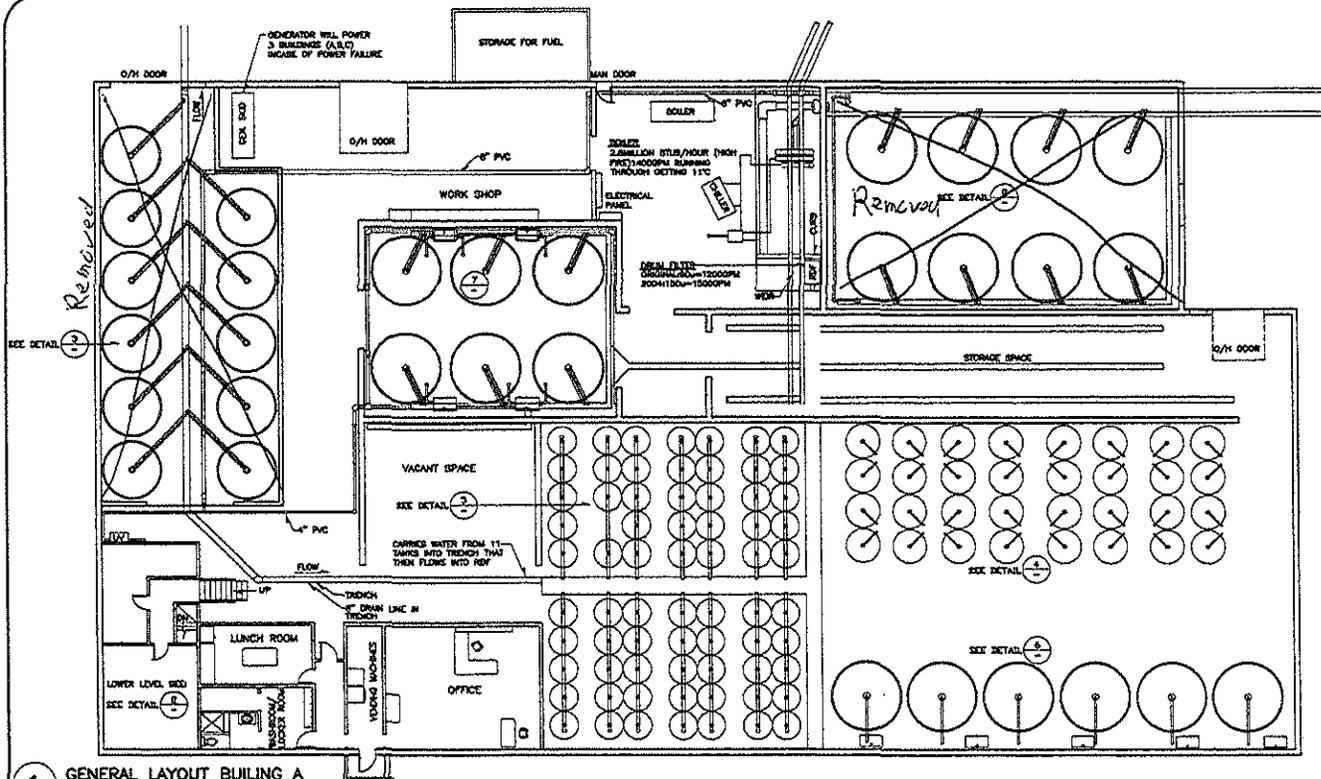
**2 BINGHAM HATCHERY SITE PLAN**  
 SCALE 1" TO 80'-0" 11°11'17"  
 SCALE 1" TO 40'-0" 22° 34"

DATE 07-24-2014	CS-25
BINGHAM HATCHERY RIVER ST, BINGHAM, NB B4B2B	05/23/13
CLIENT COOKE AQUACULTURE	R.C.E.
TITLE SITE PLAN	

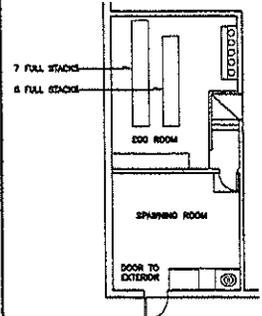


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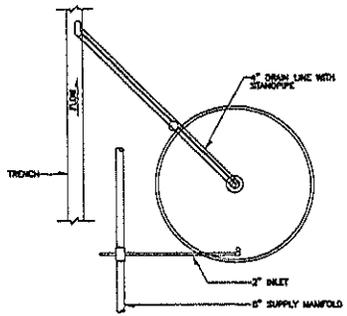
# **ATTACHMENT B**



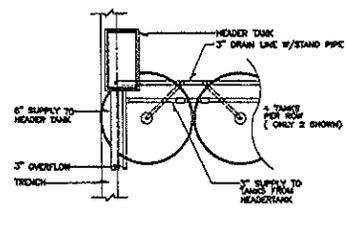
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 SCALE 3/32" TO 1'-0" 22"X 34"



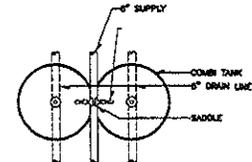
**2 LOWER LEVEL EGG AND SPAWNING ROOM**  
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 SCALE 1/4" TO 1'-0" 22"X 34"



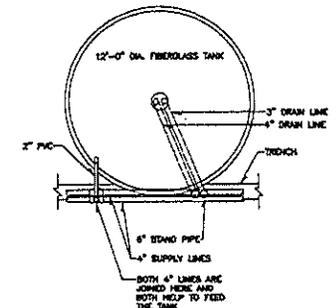
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 SCALE 1/4" TO 1'-0" 22"X 34"



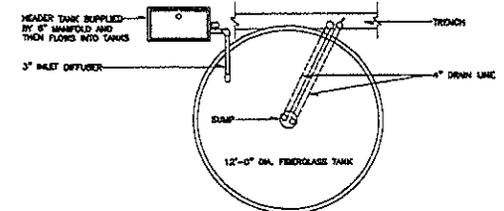
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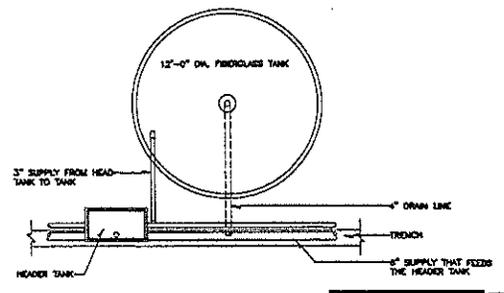
**5 TYP TANK SETUP**  
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 SCALE 1/4" TO 1'-0" 22"X 34"



**8 TYP TANK SETUP**  
 SCALE 1/2" TO 1'-0" 11"X17"  
 SCALE 1/4" TO 1'-0" 22"X 34"



**7 TYP TANK SETUP**  
 SCALE 1/2" TO 1'-0" 11"X17"  
 SCALE 1/4" TO 1'-0" 22"X 34"



**6 TYP TANK SETUP**  
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 SCALE 1/4" TO 1'-0" 22"X 34"

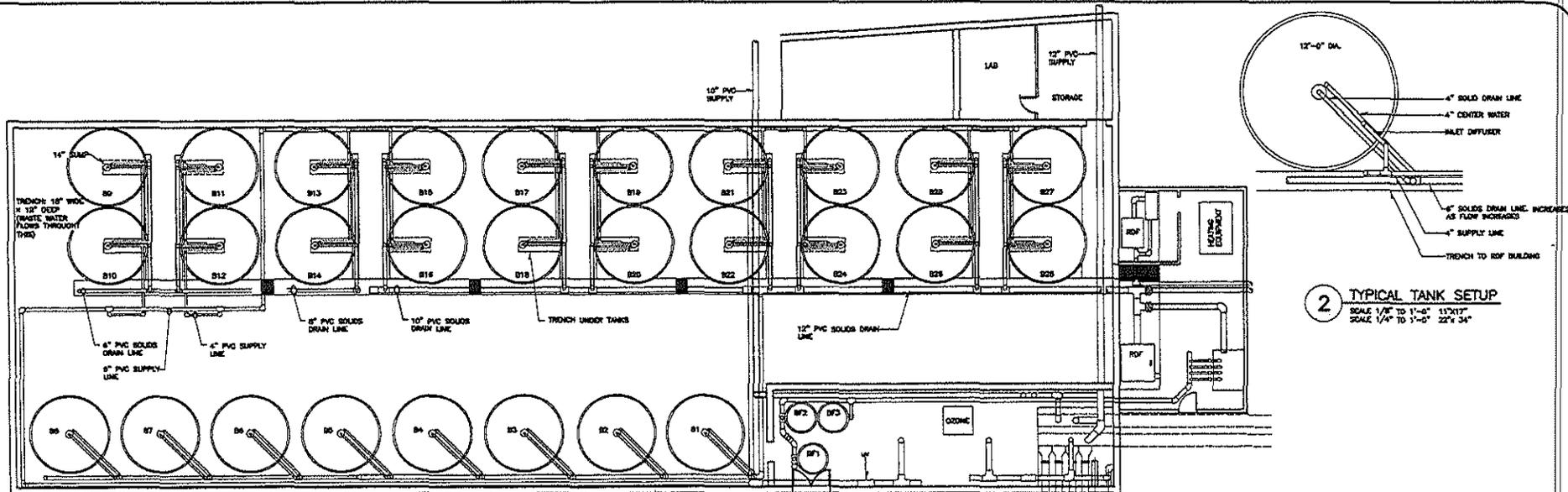
DRAWN BY BODRUM MADNE REVISOR BY COOKE AQUACULTURE TITLE GENERAL LAYOUT BUILDING A	DATE 05/09/83 SCALE 1/4" = 1'-0" SHEET NO. 2 OF 2
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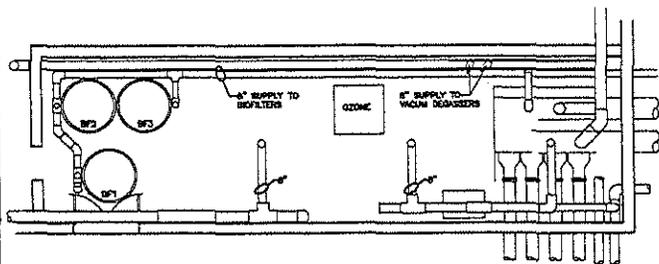


D-2

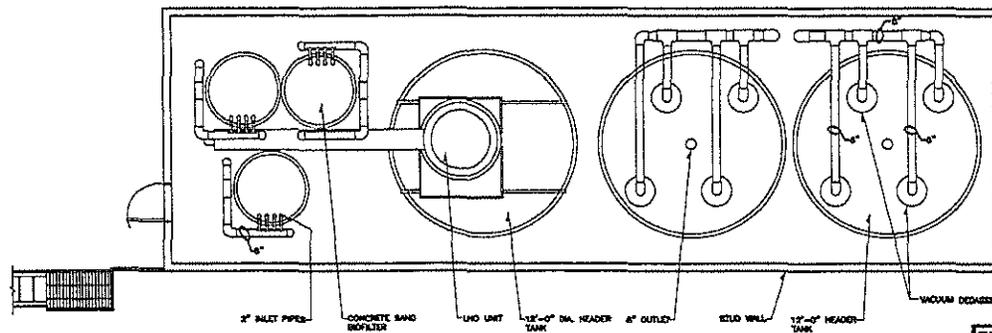


**1 GENERAL LAYOUT BUILDING B**  
 SCALE 1/8" TO 1'-0" 11'x17'  
 SCALE 1/4" TO 1'-0" 22'x 34'

**B-BUILDING**  
 CONCRETE BLOCK WALLS, STEEL TRUSS  
 ROOFING SYSTEM  
 CONCRETE SLAB FLOOR  
 ALL TANKS 12"-0" DIA. FIBERGLASS TANKS,  
 3'x3', 4'-0" DEPTH  
 ONLY BUILDING CURRENTLY ON RE-CIRCULATION



**3 UPPER LEVEL MECHANICAL ROOM**  
 NBS 11'x17'  
 NBS 22'x 34'



**4 GROUND FLOOR MECHANICAL ROOM**  
 SCALE 1/8" TO 1'-0" 11'x17'  
 SCALE 1/4" TO 1'-0" 22'x 34'

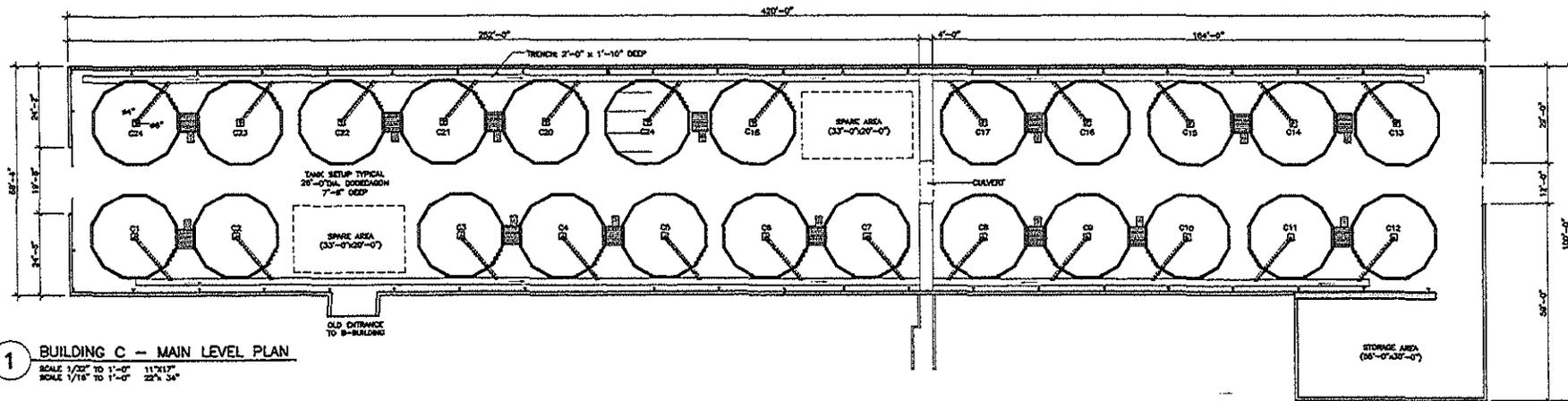
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PROJECT	01-84-21-01	DATE	05-84
CLIENT	BINGHAM HATCHERY REVER ST., BIRMGHAM, NC 04980	DATE	05/25/85
TITLE	COOKE AQUACULTURE	SCALE	1/8" = 1'-0"
DESIGNER	GENERAL LAYOUT	SCALE	1/4" = 1'-0"
PROJECT	BUILDING B	SCALE	1/8" = 1'-0"
PROJECT		SCALE	1/4" = 1'-0"
PROJECT		SCALE	1/8" = 1'-0"
PROJECT		SCALE	1/4" = 1'-0"
PROJECT		SCALE	1/8" = 1'-0"
PROJECT		SCALE	1/4" = 1'-0"

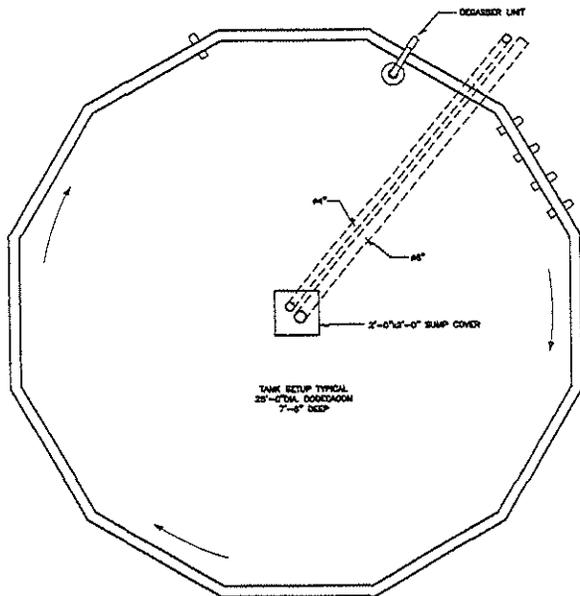


D-3



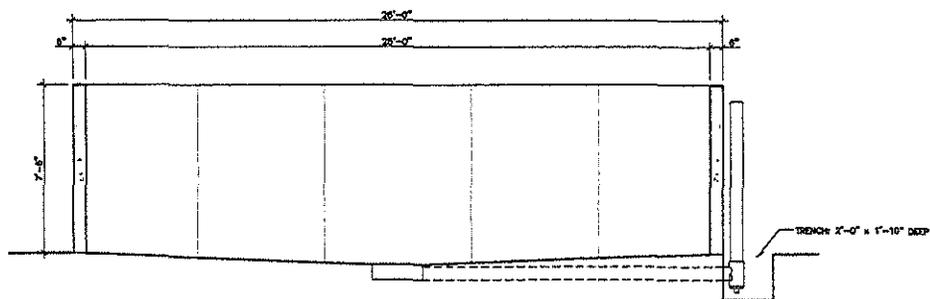
1 BUILDING C -- MAIN LEVEL PLAN

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2 BUILDING C -- TANK DETAIL

SCALE 3/16" TO 1'-0" 11" x 17"  
SCALE 3/8" TO 1'-0" 22" x 34"



3 BUILDING C -- TANK SECTION

SCALE 3/16" TO 1'-0" 11" x 17"  
SCALE 3/8" TO 1'-0" 22" x 34"

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PROJECT	CP-04-311-D1	DATE	05-16
CLIENT	BINGHAM HATCHERY ROVER ST., SEASIDE, N.C. 04900	DATE	06/09/05
DESIGNER	COOKE AQUACULTURE	SCALE	R.C.E.
PROJECT	BUILDING C	DATE	



11-4

