



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4**

Water Division
Atlanta Federal Center
61 Forsyth Street
Atlanta, Georgia 30303-8960

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT NUMBER
FL0A00001**

Under the authority of the Clean Water Act (CWA) of 1977 (33 USC § 1251 et seq.) and in accordance with the effluent limitations, monitoring requirements, and other conditions set forth herein.

Permittee: Ocean Era, Inc.
PO Box 4239
Kailua-Kona HI 96745

Facility: Velella Epsilon

Location: Gulf of Mexico (Approx. 27° 7.34185'N, 83° 12.02291'W)

Authorization to discharge: Wastewater from an Aquatic Animal Production Facility producing up to 80,000 pounds/year for one production cycle (SIC code 0273)

Outfall: 001

Receiving water body: Federal Waters of the Gulf of Mexico

Issuance Date: June 8, 2022
Permit Effective Date: July 8, 2022
Permit Expiration Date: July 7, 2027

The permittee shall reapply for NPDES coverage before January 8, 2027 (180 days before the expiration of this permit) if the permittee intends to continue to discharge at the facility beyond the term of this permit.

**JEANEANNE
GETTLE**

Jeaneanne M. Gettle, Director
Water Division

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GETTLE
Date: 2022.06.08 11:48:25 -04'00'

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PART I – SCHEDULE OF SUBMISSIONS

The following table summarizes some of the items that the permittee must complete and submit to the U.S. Environmental Protection Agency Region 4 (EPA) during the term of this permit:

Item	Due Date
1. Discharge Monitoring Reports (DMRs)	Unless an exception is granted, the effluent and receiving water body monitoring must be submitted on DMRs and entered into NetDMR on a monthly basis (see Part II.A and III.B).
2. Drug and Chemical Use Report	Drugs, pesticides, chemicals, investigational new animal drugs, and extra-label drug use must be reported when used (see Part III.A.1).
3. Best Management Practices (BMP) Plan	The permittee must develop a BMP plan within 90 days of the issuance date of this permit and obtain approval from the EPA prior to discharge (see Part IV).
4. Environmental Monitoring Plan (EMP)	The permittee must develop an EMP within 90 days of permit issuance and obtain approval from the EPA prior to discharge (see Part V).
5. Facility Damage Prevention and Control (FDPC) Plan	The permittee must create a FDPC plan within 90 days of the issuance date of this permit and obtain approval from the EPA prior to discharge (see Part VI).
6. Quality Assurance Project Plan (QAPP)	The permittee must develop a QAPP within 90 days of the issuance date of this permit and obtain approval from the EPA prior to discharge (see Part VII).
7. Submittal of NPDES Application	A complete application for the next permit cycle must be submitted to the EPA no later than 180 days before the permit expires (see 40 CFR § 122.21).
8. Annual Certification	The permittee must submit a certification to the EPA that the BMP plan, FDPC plan, and QAPP has been reviewed and modified (if necessary) on an annual basis no later than July 31 st of each year. Certification is not required if the facility is not discharging. See Part IV, VI, and VII for more information. The EMP may be modified as necessary in consultation with the EPA (see Part V for more information).

The address below is to be used for all submittals required by the permit except DMRs:

U.S. Environmental Protection Agency, Region 4
Permitting and Grants Branch Chief
Water Division
61 Forsyth Street S.W. | Atlanta, Georgia 30303-8960
(404) 562-9459 | R4NPDESPermits@epa.gov

PART II – MONITORING AND OTHER REQUIREMENTS

A. Water Quality, Sediment, and Biological Monitoring Requirements

During the period beginning on the effective date and lasting through the expiration date of this permit, the permittee is authorized to discharge industrial wastewater from an aquatic animal production facility into the Gulf of Mexico for one production cycle. The discharge shall be limited and monitored by the permittee as specified below. All reports shall be submitted in accordance with the requirements of the permit.

1. Monitoring Requirements

Table 1: Summary of Monitoring Requirements

Parameter	Units	Parameter Code ¹	Daily Maximum	Average Monthly	Location	Monitoring Frequency ²	Sample Type
Water Quality Monitoring							
Current measurements ³	m/s	-	Report	Report	EF1	Continuous	Instantaneous
Fish biomass ³	lbs	-			EF1	Monthly	Measured
Feed rate	lbs/day	45603			BT1	Monthly	Measured
Feed Conversion Rate ⁴	%/day	45603			BT1	Monthly	Calculated
Medicinal products ⁵	lbs or gal	-			BT1	As applicable	Measured
Chlorophyll-a	mg/l	32230			UC1, EF1, EF2, DC1, DC2	Monthly ⁶	Grab
Copper, Total (as Cu)	mg/l	01042					
Nitrogen, Ammonia Total (as N)	mg/l	00610					
Nitrogen, Total (as N)	mg/l	00600					
Oxygen, Dissolved	mg/l	00300					
pH	s.u.	00400					
Phosphorus, Total (as P)	mg/l	00665					
Solids, Total Suspended	mg/l	00530					
Sulfide, Total (as S)	mg/l	00745					
Temperature	°C	00010					
Sediment Monitoring							
Carbon, Total Organic (TOC)	mg/l	00680	Report	Report	SD1, SD2, SD3	Biomass based ⁷	Grab
Hydrogen sulfide	mg/l	71875					
Sediment Oxygen Demand	mg/l	51812					
Nitrogen, Total (as N)	mg/l	00600					
Particle size distribution ³	-	-					
Phosphorus, Total (as P)	mg/l	00665					
Solids, Total	mg/l	00500					
Total volatile solids	mg/l	00505					
Benthic Monitoring							
Benthic macroinvertebrates ³	-	-	Report		SD1, SD2, SD3	Biomass based ⁷	Grab

Table 1 footnote information:

- ¹ Parameter Codes are the unique codes identifying the individual parameter being monitored and shall be used when reporting monitoring results in NetDMR pursuant to permit Part III.B.
- ² The monitoring requirements contained in the NPDES permit are only effective while the facility is operational; however, the DMR reporting requirements remain in force while the permit is effective. When the facility is not operating or discharging, the regularly scheduled DMRs must be submitted to the EPA with the appropriate no discharge reporting code (NODI = 2 Operation Shutdown).
- ³ The environmental monitoring data and reports for current measurements (velocity and direction), fish biomass, particle size distribution, and benthic macroinvertebrates shall be submitted to the EPA at the address shown in Part I of the permit. The results of monitoring for current measurements and fish biomass shall be submitted to the EPA monthly and are due at the end of the following month. The results of monitoring for particle size distribution and benthic macroinvertebrates shall be submitted to the EPA on a biomass basis (see Footnote 7) and are due at the end of the following month.
- ⁴ The feed conversion rate shall be reported as the ratio of feed weight per day to animal weight (see Appendix D).
- ⁵ Only medicinal products (all veterinary therapeutic products, antibiotics, and other treatments) and medicinal premixes for inclusion in fish feeds which are approved for use in aquaculture by the Food and Drug Administration, shall be used. The appropriate withdrawal times for all medicines used in the treatment or prevention of fish disease must be adhered to. The discharge of any medicinal products shall be reported to the EPA at the address shown in Part I of the permit. The report shall include the mass or volume of product discharged, the product, and the duration that the product was used (see Appendix C). See Part III.A for more information.
- ⁶ Effluent and down current samples shall be collected no more than 30 minutes after feeding is complete. Upstream current samples shall be collected no more than 60 minutes before or after feeding is complete. The sample collected during the final month of the project should be collected just prior to harvesting the fish to collect data representative of maximum biomass.
- ⁷ Sampling shall be collected at frequencies corresponding to fish biomass and should be collected on the same day as that month's water quality samples. Sampling shall occur when the fish production reaches an approximate 50 percent biomass and at maximum biomass prior to harvesting.

2. Compliance Monitoring Locations

The following table lists the sampling locations associated with this permit:

Table 2: Sampling Locations

No	Type	Current Vector	Location	Depth
BT1	Water Quality	Not applicable	On vessel	Not applicable
UC1		Day of sampling ¹	500 m up-current of cage	Mid-cage
EF1			≤1 m down-current of cage	
EF2				≤ 1 m below cage
DC1				5 m down-current of cage
DC2			5 m below cage	
SD1	Sediment and Benthic Macroinfauna Community Sampling	Long-term ²	2,000 m up-current	Ocean floor
SD2			Center of project site	
SD3			Down-current edge of project site	

Table 2 footnote information:

- ¹ Water quality sampling locations shall be based on the primary current vector on the day of sampling. Sampling locations shall be located along a transect passing through the center of the cage and run in the direction of the primary current vector at the time of sampling. These locations could change with each water quality sampling event (see Part V for more information).
- ² Sediment and benthic macroinvertebrate sampling locations shall be based on the long-term primary current vector and shall remain the same throughout the lifetime of the project. The exact sampling locations for sediment/benthic monitoring will be determined after the cage has been placed in the water and the long-term current vector has been confirmed (see Part V for more information).

B. Other Requirements and Prohibitions

1. There shall be no discharge of floating solids or visible foam in other than trace amounts.
2. The effluent shall not cause a visible sheen on the receiving water.
3. The discharge of surfactants, dispersants, and detergents is not allowed.
4. The discharge of any solid material not in compliance with the other parts of the permit is prohibited.
5. Any discharge from the facility support vessel must comply with the U.S. Coast Guard regulations implementing Annex V of Marpol 73/78 for domestic waste disposal or exploitation of seabed mineral resources (33 CFR § 151). These limitations apply to all navigable Waters of the United States to prevent pollution from ships (33 USC § 1901). Annex V prohibits the discharge of garbage, including food wastes, within 12 nautical miles from land. Comminuted food waste (able to pass through a screen with a mesh size no larger than 25 mm) may be discharged within 12 nautical miles or more from land (33 CFR § 151.51 – 151.77). Gray water, drainage from dishwater, shower, laundry, bath, and washbasins are not considered garbage within the meaning of Annex V. Incineration ash and non-plastic clinkers may be discharged beyond 12 nautical miles from nearest land.
6. The discharge from the facility shall not cause unreasonable degradation of the marine environment underneath the facility and in the surrounding area. Unreasonable degradation is defined in 40 CFR § 125.121(e) as significant adverse changes in ecosystem diversity, productivity and stability of the biological community within the area of discharge and surrounding biological communities, and/or loss of aesthetic,

recreational, scientific or economic values which is unreasonable in relation to the benefit derived from the discharge.

7. All stocking of live aquatic organisms of any life stage must be accompanied by an Official Certificate of Veterinary Inspection signed by a licensed and accredited veterinarian attesting to the health of the organisms to be stocked.
8. This permit only authorizes discharges under the CWA in accordance with the terms of this permit and does not authorize any activity in violation of other applicable law; permittee remains responsible for compliance with all applicable laws.
9. The use or discharge of toxic chemicals to control the fouling of any part of the cage is prohibited.
10. Un-pelletized wet feed (minced fish or shellfish) shall not be discharged.
11. The permittee shall not store toxic chemicals or materials (as defined in 40 CFR § 122, Appendix D) at the facility.
12. The facility and anchoring system shall be placed at least 500 meters from any hardbottom habitat on the seafloor.
13. Discharges from seafood processing activities are not authorized under this permit.
14. The discharge from the facility is limited to one production cycle of approximately 80,000 lbs over the course of approximately 12 months. A production cycle is defined as the period of time that starts when fish are placed in the cage until all fish are harvested.

C. Failure to Sample

Should conditions arise so that some or all of the sampling or analytical procedures prescribed in this permit are not done or reporting cannot occur on schedule, the EPA must be notified in writing (email) within five calendar days at the address shown in Part I of the permit. The notification should include the nature of the problem and recommend solutions.

PART III – REPORTING, MONITORING, AND RECORD REQUIREMENTS

A. Aquaculture Specific Requirements

1. Reporting Requirements for the Use of Drugs and Other Chemicals

The following requirements apply to drugs, pesticides, and chemicals that are used in such a way that they will be or may be discharged to the receiving water body. More information about the reporting requirements (including report examples) for drugs, pesticides, chemicals, structural failure or damage to the facility, and spills can be found in the *Compliance Guide for the Concentrated Aquatic Animal Production Point Source Category*.¹

a. Use of Drugs, Pesticides, and Other Chemicals

- i. All drugs, pesticides and other chemicals must be applied in accordance with label directions.
- ii. The permittee must maintain records of all drug, pesticide, and other chemical applications including date and time of application and the quality of the drug or chemical used. See Appendix C for more information

b. Investigational New Animal Drugs (INAD) and Extra-Label Drug Usage

- i. Participation in INAD Testing and the Use of Extra-Label Drugs: The permittee must notify the EPA in writing within seven (7) days of volunteering to participate in INAD testing. The written report must identify the INAD to be used, method of use, the dosage, and the disease or condition the INAD is intended to treat. For INADs and extra label drug uses, the permittee must provide an oral report to the permitting authority as soon as possible, preferably in advance of use, but no later than seven (7) days after initiating use of that drug. The oral report must identify the drugs used, method of application, and the reason for using that drug. Based on the report, the EPA may implement site-specific action, as warranted. For INADs and extra-label drug uses, the permittee must provide a written report to the permitting authority within thirty (30) days after initiating the use of that drug. The written report must identify the drug used and include: the reason for treatment, date(s) and time(s) of the addition (including duration), method of application; and the amount added. See appendix C for more information.
- ii. INAD or Extra-Label Drug Reporting Exception: If the EPA has already approved the permittee's use of a specific INAD or extra-label drug, additional approval to treat another species, or to treat another disease using this INAD or extra-label drug, is not necessary provided that the INAD or extra-label use is at or below the approved dosage and involves similar conditions of use (See 40 CFR § 451.3(a)).

2. Structural Failure or Damage to the Facility

The permittee shall alert the EPA to any failure or damage to any part of the aquatic animal containment structures that results in any fish escapes, discharge of pollutants, or hazardous materials, including pollutants authorized by this permit, into the receiving water body. The permittee shall make an oral report to the EPA within 24 hours of the occurrence identifying the material discharged and describe the cause of the failure or damage in the facility. The permittee must also provide a written report within seven days that includes: cause of the damage or failure, estimate of time elapsed until the failure or damage was repaired, an estimate of the material released, and steps taken to prevent a reoccurrence.

¹ U.S. Environmental Protection Agency. 2006. Compliance Guide for the Concentrated Aquatic Animal Production Point Source Category. EPA-821-B-05-001. U.S. Environmental Protection Agency, Office of Water, Washington, DC.
< http://water.epa.gov/scitech/wastetech/guide/aquaculture/upload/2006_05_03_guide_aquaculture_guidance_full-final.pdf >.

3. Spills of Feed, Drugs, Pesticides, or Other Chemicals

The permittee shall alert the EPA of a spill of any hazardous materials, drugs, pesticides, or feed that results in a discharge to waters of the United States. The permittee shall make an oral report to the EPA within 24 hours of the spill's occurrence identifying the cause and amount of material discharged. The permittee must also provide a written report within seven (7) days that includes: cause of the spill, estimate of time elapsed until the spill was contained, an estimate of the material released, and steps taken to prevent a reoccurrence.

B. Electronic Reporting Requirements

1. Except as described in item 2 below, all monitoring data required by this permit shall be submitted on the EPA Form 3320-1 Discharge Monitoring Report (DMR) forms using the electronic DMR (NetDMR) internet application. NetDMR is a web-based application that allows NPDES Permittee Users to enter and electronically submit DMR data through the Central Data Exchange to the Integrated Compliance Information System (ICIS).²
2. The environmental monitoring data and reports for current measurements (velocity and direction), fish biomass, particle size distribution, and benthic macroinvertebrates shall be submitted to the EPA at the address shown in Part I of the permit. Results shall include any narrative reporting in electronic format (.pdf, .doc, .txt, etc.). All processed and raw data shall be included in Excel (.xls) format. The results of monitoring for current measurements and fish biomass shall be submitted to the EPA monthly and are due at the end of the following month. The results for monitoring for particle size distribution and benthic macroinvertebrates shall be submitted based on product biomass (50 percent biomass and maximum biomass) and are due at the end of the following month
3. The permittee shall determine its ability to meet the electronic reporting requirements. DMRs must be reported using the EPA's electronic NetDMR tool unless a waiver from electronic reporting has been granted from the EPA Region 4. If the permittee wishes to obtain a waiver from submitting DMRs electronically, a written request must be submitted to EPA Regional 4 at the address shown in Part I of the permit. Temporary and permanent waivers from electronic reporting may be granted based on one of the following conditions.
 - a. If the permittee's headquarters is physically located in a geographic area (i.e., zip code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission; or
 - b. If the permittee has limitations regarding available computer access or computer capability.

The request must document which exemption is met and provide evidence supporting any claims. A waiver may only be considered granted once the permittee receives written confirmation from EPA Region 4. If the permittee qualifies for a waiver from electronic reporting, monitoring data must be submitted on paper DMR forms provided by EPA Region 4.

4. The DMRs shall be signed by a facility's Responsible Official or a Delegated Responsible Official (i.e. a person delegated by the Responsible Official) in accordance with 40 CFR § 122.22(b). The Responsible Official of a facility is defined in Part VIII. For NetDMR, the person(s) viewing, editing, signing and submitting the DMRs will need to register for a new account managed by the EPA Region 4. A request for signatory privilege requires submission of a Subscriber Agreement to the EPA Region 4 for any facility or permittee staff responsible for signing and submitting DMRs on behalf of an organization. Additionally, Delegated Responsible Officials must be delegated by the Responsible Official, either on-line using NetDMR, or on a paper delegation form provided by the EPA Region 4. More information and guidance on NetDMR can be found online.²

² EPA's NetDMR webpage can be found at: <https://netdmr.epa.gov>.

5. DMRs submitted using NetDMR shall be submitted to the EPA Region 4 by the end of the month following the month for which the monitoring was completed. DMRs submitted on paper must include the original signed DMR form and must be submitted to the EPA at the address shown in Part I of the permit.

A paper copy of the submitted EPA 3320-1 DMR shall be maintained onsite for records retention purposes. For NetDMR users, view and print the DMR from the Submission Report Information page after each original or revised DMR is submitted. For submittals on paper, make a copy of the completed paper form after it is signed by a Responsible Official or a Delegated Responsible Official.

C. Monitoring Procedures

In accordance with 40 CFR § 122.41(j)(4), monitoring and sampling must be conducted according to test procedures approved under 40 CFR Part 136, unless other sufficiently sensitive test procedures have been specified in this permit or approved by EPA as an alternate test procedure under 40 CFR § 136.5.

D. Additional Monitoring by the Permittee

In accordance with 40 CFR § 122.41(l)(4)(ii), if the permittee monitors any additional parameters/pollutants or monitors any parameter/pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the permittee must include the results of this monitoring in the calculation and reporting of the data submitted in the DMR.

E. Retention of Records

In accordance with 40 CFR § 122.41(j)(2), the permittee shall retain records of all monitoring information including all calibration and maintenance records, all recordings for continuous monitoring instrumentation, copies of all reports and plans required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report, plan, or application. This period may be extended by request of the Director at any time.

PART IV – BEST MANAGEMENT PRACTICES

A. Requirements

The permittee must use Best Management Practices (BMPs) as well as develop and implement a BMP Plan that will prevent or minimize the generation of direct and indirect discharge for wastes and pollutants to the receiving water body that are associated with the aquaculture facility. More information about BMP plan requirements (including examples) can be found in the EPA's *Compliance Guide for the Concentrated Aquatic Animal Production Point Source Category*. The BMP Plan must include, at a minimum, procedures and information explaining how the permittee will meet all the following requirements:

1. Feed Management

The permittee must employ 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 of uneaten food and waste products to the waters of the U.S. These strategies must minimize the accumulation of uneaten food beneath the pens through the use of active feed monitoring and management practices. These practices may include one or more of the following: use of real-time feed monitoring, including devices such as video cameras, digital scanning sonar, and upwelled systems; monitoring of sediment quality beneath the pens; monitoring of benthic community quality beneath the pens; capture of waste feed and feces; or other good husbandry practices. Feeding methods should maximize ingestion and food conversion by using slow-settling and highly digestible feed.

2. Waste Collection and Disposal

The permittee must collect, return to shore, and properly dispose of all feed bags, packaging materials, waste rope and netting.

3. Transport or Harvest Discharge

The permittee must minimize any discharge associated with the transport or harvesting of aquatic animals including blood, viscera, aquatic animal carcasses, or transport water containing blood. The permittee shall contain and transfer commercial fish and other aquatic life in a manner which shall prevent the unconfined entry of commercial aquatic life into waters of the United States, and in a manner, which shall prevent release by overstocking, tipping, or rupture. All transfer structures/facilities shall conform with and be maintained in accordance with all applicable manufacturer and U.S. Coast Guard requirements and recommendations.

4. Carcass and Waste Removal

The permittee must identify and implement procedures to collect, store, and dispose of wastes, including biological wastes, such as fish mortalities and other solid processing aquaculture wastes. The permittee must remove and dispose of aquatic animal mortalities properly on a regular basis to prevent discharge to waters of the United States. Mortalities must be stored and transported in closed containers with tight fitting lids and must be returned to shore.

5. Material Storage

- a. The permittee must ensure proper storage of drugs, pesticides, feed, and hazardous materials in a manner designed to prevent spills that may result in the discharge of drugs, pesticides, feed, and hazardous materials to water of the United States. The permittee shall:

- i. Maintain the facility, its support craft, and storage facilities in clean and tidy condition to minimize the possibility of accidents and spills of petroleum products and other hazardous materials in the operation of the facility.
 - ii. Conduct periodic inspection, cleaning, and maintenance of the facility, and its support craft.
 - iii. Develop a list of appropriate agencies to contact in the event of a spill that includes, but is not limited to, the EPA, U.S. Army Corps of Engineers, and National Marine Fisheries Service.
 - iv. Provide and always have on-hand absorbent materials and appropriate tools in enough quantities to contain and collect chemicals spilled at the mariculture facility, on its support craft, and in shore-based storage facilities.
- b. The permittee must implement procedures for properly containing, cleaning, and disposing of any spilled material. The permittee must:
 - i. Provide a complete and up-to-date list of all chemicals and other hazardous materials stored at the facility.
 - ii. Include descriptions of the procedures used to properly prevent, control, clean, dispose and/or treat spills and unplanned discharges of chemicals and other hazardous materials.
 - iii. Include a description of the supplies and equipment which prevent, control, and/or treat spills and unplanned discharges and a compliance schedule to install any necessary items.
 - iv. Describe the reporting system which shall be used to alert responsible facility management and appropriate legal and regulatory authorities.
 - v. Store all petroleum products and other hazardous materials in durable, impervious containers which are clearly labeled to indicate their contents. Fuel used for boat and small engine operation shall be stored in U.S. Coast Guard-approved containers.
 - vi. In the event of a discharge of petroleum products and other hazardous materials:
 - a. Undertake actions to limit and prevent the spreading of the discharge to the waters of the United States.
 - b. Notify the appropriate agencies as soon as possible and within twenty-four (24) hours.
 - c. Commence cleanup efforts immediately and be completed as soon as possible, taking precedence over normal work, and include the proper disposal of any spilled materials and used cleanup materials (chemical wastes and spilled chemicals shall be removed from the mariculture facility and disposed of at an approved facility).

6. Structural Maintenance

The permittee shall implement procedures to ensure structural maintenance of the facility. At a minimum, the permittee must ensure that all equipment is operational by:

- a. Routine inspection of the production system to identify and promptly repair any damage.
- b. Regularly conduct maintenance of the production system in order to ensure that it is properly functioning.

7. Record-keeping

The permittee shall implement record keeping procedures. At a minimum, the permittee must implement the following record maintenance requirements:

- a. Maintain records for aquatic animal net pens documenting feed amounts and estimates of the numbers and weights of aquatic animals in order to calculate representative feed conversion ratios.
- b. Keep records documenting frequency of cleaning, inspections, maintenance, and repairs. A checklist of record-keeping requirements is in Appendix R of EPA's 2006 *Compliance Guide for the Concentrated Aquatic Animal Production Point Source Category*.

8. Training Requirements

At a minimum, the permittee must implement the following training requirements:

- a. Train all relevant personnel in spill prevention and how to respond in the event of a spill to ensure proper clean-up and disposal of spilled materials.
- b. Train personnel on proper operation and cleaning of all feeding procedures, equipment, proper disposal of waste material including carcasses, administration of drugs, and treatment systems.

9. Pathogen Requirements

The permittee shall create and implement health management procedures to prevent and minimize the indirect transfer or discharge of aquaculture pathogens. At a minimum, the following procedures are required:

- a. Create a frequent fish inspection, fish sampling, or fish monitoring program to identify aquatic pathogens and parasites as early as practicable.
- b. Develop a cage monitoring and cleaning plan that maximizes flow through the rearing area.
- c. Identify the feasibility of using alternative disease control prevention measures such as vaccines.

B. Plan Development, Implementation, Submission, and Approval

The permittee must develop and implement a BMP Plan that meets the specific requirements listed in this Part. The plan must be provided to the EPA within 90 days of permit issuance and approved by the EPA prior to discharge (i.e. stocking of fish). The plan shall include the NPDES number, the name of the facility, the date the plan was developed, and signed by an authorized representative pursuant to 40 CFR § 122.22. The BMP plan shall be submitted to the EPA at the address shown in Part I of the permit.

C. Modification and Annual Certification

The permittee must amend the BMP Plan whenever there is a change in the facility or in the operation of the facility which materially increases the generation of pollutants or their release or potential release to surface waters. With any change in operator, the BMP Plan must be reviewed and modified, if necessary. The permittee must review the BMP Plan annually and provide certification that the BMP plan has been reviewed annually and modified if necessary. The annual certification is due July 31st of each year. If the BMP plan is modified, implementation of the modified plan is required upon submittal to the EPA. When determined as necessary, the EPA has the authority to require modifications to the BMP plan. Modification and certification are not required if the facility is not operating or discharging.

D. Documentation

The permittee must maintain a copy of the BMP Plan at the facility and make it available to the EPA or an authorized representative upon request.

PART V – ENVIRONMENTAL MONITORING

A. Requirements

The permittee shall perform environmental monitoring as well as develop and implement an environmental monitoring plan (EMP) to provide project-specific details for the water quality, sediment, and benthic infauna monitoring and sampling requirements contained in the permit. The permittee must comply with the following requirements:

1. Water Quality Samples

a. Sampling Locations

Water quality samples shall be collected at locations along the primary current vector. Samples shall be collected at one point up-current of the cage (reference), two points directly next to the cage (effluent), and two locations down-current of the cage. Sampling locations shall be located along a transect passing through the center of the cage and run with the primary current vector (determined at the time of sampling). Samples shall also be collected at different depths depending on the location. The sample depths shall be based off the depth of the cage at the time of feeding. See Table 3 and Figure 1 at the end of Part V for a summary of the sampling locations. The cage shall not be moved vertically until after sampling is complete. The sampling sites include:

- i. Up-current: The up-current sample (UC1) shall be collected at the same depth as mid-cage at a point approximately 500 meters up-current of the cage.
- ii. Effluent: Two effluent samples shall be collected. One effluent sample must be at mid-cage depth (EF1). Another effluent sample shall be collected at a depth of less than 1 meter below the cage (EF2). Both samples shall be collected at a point less than 1 meter down-current from the edge of the cage.
- iii. Down-current: One sample shall be collected at mid-cage depth (DC1). Another sample shall be collected 5 meters below the bottom of the cage (DC2). Both samples must be collected at a location approximately 5 meters down-current from the edge of the cage.

d. Sampling Frequency

Sampling shall occur at the monitoring frequency shown in Table 1 (Permit Part II.A) while the facility is discharging (fish are present). The sample during the last month shall be collected just prior to harvesting the fish to collect data representative of maximum biomass. Effluent and down current samples shall be collected no more than 30 minutes after feeding is complete. Upstream current samples shall be collected no more than 60 minutes before or after feeding is complete.

e. Water Quality Parameters

Water quality parameters shall include dissolved oxygen, pH, temperature, total suspended solids, chlorophyll-a, sulfide, copper, total ammonia-N, total nitrogen, and total phosphorous. Samples shall be collected at the locations and the frequencies mentioned above.

Water quality-associated parameters shall include fish biomass, feed rate, feed conversion ratio, medicinal products, and current measurement. Monitoring shall be performed at the location and frequencies specified in Table 1.

f. Current Measurement

Water quality sampling locations shall be based on the primary current vector on the day of sampling. The primary current vector is the direction of the current at the facility on the day of sampling. To comply with the monitoring requirements, continuous measurements shall be taken to determine the direction and magnitude of the current prior to water quality sample collection. The primary current vector measurement shall be representative of the current at the time of sampling. The current measurement results and report must provide the direction (frequency distribution) and magnitude (average and maximum velocity) for the appropriate depth intervals (identified in the EMP by the permittee). The report shall also indicate the primary direction and magnitude at the time of water quality sampling. Current measurement data should be submitted in accordance with Permit Part III.B.

2. Sediment Samples

a. Sampling Locations

Sediment samples shall be collected at intervals along a transect passing through the center of the site parallel to the long-term primary current vector. Sediment samples must occur at three sampling locations:

- i. Up-current (SD1): approximately 2,000 meters up-current of the cage along the long-term primary flow vector.
- ii. Facility (SD2): in the middle of the project area along the long-term primary flow vector; and
- iii. Down-current (SD3): at the down-current edge of the project site along the long-term primary flow vector.

b. Sampling Frequency

Sampling shall occur at stages corresponding with increments of increasing fish biomass and should be collected on the same day as that month's water quality sample. Sediment samples will be collected during two periods:

- i. when the production reaches an approximate 50 percent biomass; and
- ii. at the maximum biomass immediately prior to harvesting.

c. Sediment Parameters

Sediment physical characteristics shall be collected consisting of particle size distribution and total solids. Sediment chemical composition samples shall consist of total volatile solids (TOV), total organic carbon (TOC), total nitrogen, total phosphate, hydrogen sulfide, and sediment oxygen demand.³

d. Current Measurement

Sediment sampling shall be based on the long-term primary current vector and shall remain the same throughout the lifetime of the project. The exact sampling locations will be determined after the cage has been placed in the water and the current measurements have confirmed the long-term primary current vector. To comply with the monitoring requirements, continuous measurements of the current velocity and direction shall be taken to determine the long-term primary current vector. The current results must provide the direction (frequency distribution) and magnitude (recorded as the average and maximum velocity) at the appropriate depth intervals identified in the EMP by the permittee. Current measurement data should be submitted in accordance with Permit Part III.B.

³ Analytical methods to determine TOC or TOV may be hampered by sediment grain size as influenced by scouring currents. In the event one or both parameters cannot be determined, the permittee must document such as a failure.

3. Benthic Sampling

a. Sampling Locations

Benthic samples shall be collected at the same sample locations as the sediment samples.

b. Sampling Frequency

Benthic samples shall be collected at the same frequency as the sediment samples.

c. Benthic Parameters

Benthic macroinvertebrates or infauna (organisms that are retained on a 0.5 mm sieve) shall be collected at each benthic sample location for community structure analysis. Organisms shall be identified to the lowest possible identification level and counted. Infauna community structure analysis shall include species richness and diversity. Species richness shall be calculated as Margalefs index: $d = (S-1)/\log N$, where N is the total number of species in the sample). Species diversity must be calculated as Shannon diversity: $H' = -\sum p_i(\log p_i)$.

d. Current Measurement

Benthic macroinvertebrate sampling shall be based on the long-term primary current vector and shall remain the same throughout the lifetime of the project. The exact sampling locations will be determined after the cage has been placed in the water and the current measurements have confirmed the long-term primary current vector. To comply with the monitoring requirements, continuous measurements of the current velocity and direction shall be taken to determine the long-term primary current vector. The current results must provide the direction (frequency distribution) and magnitude (recorded as the average and maximum velocity) at the appropriate depth intervals identified in the EMP by the Permittee. Current measurement data should be submitted in accordance with Permit Part III.B.

B. Plan Development, Implementation, Submission, and Approval

The permittee must develop and implement an EMP for all the monitoring required by the permit. The EMP plan must be provided to the EPA within 90 days of permit issuance and approved by the EPA prior to discharge (i.e. stocking of fish). The plan shall include the NPDES number, the name of the facility, the date the plan was developed, and signed by an authorized representative pursuant to 40 CFR § 122.22. The EMP shall be submitted to the EPA at the address shown in Part I of the permit.

C. Modifications to the EMP

The specifications in the monitoring program are subject to modification by the EPA if warranted, based on evaluation of physical, chemical, and biological data or proposed changes. The permittee may request modifications of the monitoring program in writing to the EPA. The EPA shall consider modification requests based on findings of the monitoring program, in consultation with the permittee. If the EMP is modified, implementation of the modified plan is required upon submittal to the EPA. When determined as necessary, the EPA has the authority to require modifications to the EMP.

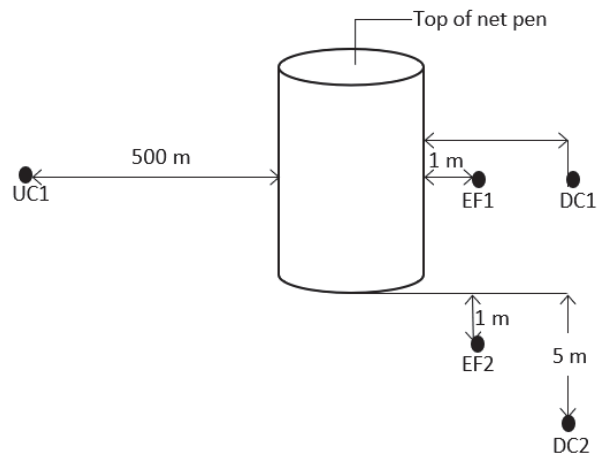
D. Documentation

The permittee must maintain a copy of the EMP at the facility and make it available to the EPA or an authorized representative upon request.

Table 3 – Summary of Sampling Locations with Distance and Depths

Depth	Up-current	Effluent	Down-current
Mid-cage	UC1	EF1	DC1
< 1 m below cage	-	EF2	-
5 m below cage	-	-	DC2

Figure 1: Sampling Locations



PART VI – FACILITY DAMAGE PREVENTION AND CONTROL

A. Requirements

The permittee must implement Facility Damage Prevention and Control (FDPC) practices as well as develop and implement a FDPC plan to demonstrate that the facility is being operated and maintained to mitigate any environmental impacts during any disaster and prevent the release of aquatic animals from entering waters of the United States during any disaster. At a minimum, the permittee must use the below practices:

1. Prevention Practices

The permittee shall operate and maintain the facility, anchors, mooring lines, confinement structures, and support vessels in a structurally sound manner to prevent or minimize the impact of disasters. At a minimum, the following prevention practices shall be used:

- a. Identify procedures to operate and maintain all facility components in a structurally sound manner in order to prevent or minimize the impact of disasters.
- b. Describe how the facility systems conform with and will be maintained in accordance with all applicable manufacturer requirements and recommendations and include a maintenance schedule for all facility components.
- c. Provide a facility-specific analysis of potential risks for each type of disaster (extreme weather events, tropical storms, hurricanes, vessel strike, entanglement of mammals, etc.).
- d. Describe the procedures used to prevent, control, and/or minimize the impacts of disasters to the facility according to the type and magnitude of the disaster.
- e. Assess the appropriate materials, supplies, equipment, and tools needed to contain and collect aquatic life at the facility.
- f. Include the description of the reporting system which shall be used to alert responsible facility management and appropriate regulatory authorities during disasters.
- g. An emergency contact list including but not limited to the EPA, U.S. Army Corps of Engineers, National Marine Fisheries Service, and the U.S. Coast Guard.
- h. Develop procedures to contain and transfer commercial fish and other aquatic life in a manner which shall prevent the entry of commercial aquatic life into waters of the United States.
- i. Describe the emergency procedures that will be taken to minimize the structural failure of the facility or fish escapes.
- j. Provide written certification that all members of the facility's staff have an operational familiarity with the prevention practices and plan.

2. Disaster Response

In the event of a disaster, the permittee shall undertake actions to limit and prevent environmental impacts and the release of commercial aquatic life into the waters of the United States. At a minimum, the disaster response efforts shall include:

- a. Procedures for notification of the appropriate agencies as soon as possible and within 24 hours of any disaster impacting the facility.
- b. Procedures requiring the permittee to report any emergency procedures used during a disaster. The report shall include the cause of the disaster, aquatic animal escape information, facility and/or aquatic animal recovery efforts, and the effectiveness of any emergency efforts deployed.
- c. Procedures for commencing response and cleanup efforts immediately and completing such efforts as soon as possible, taking precedence over normal work.
- d. Procedures for the proper disposal of dead or parts of commercial fish, aquatic life, and debris at an approved method.
- e. Provide written certification that all members of the facility's staff have an operational familiarity with

the disaster response requirements and plan.

B. Plan Development, Implementation, and Submission

The permittee must develop and implement a FDPC plan to meet the requirements within this part of the permit. The plan must be provided to the EPA within 90 days of permit issuance and approved by the EPA prior to discharge (i.e. stocking of fish). The plan shall include the NPDES number, the name of the facility, the date the plan was developed, and signed by an authorized representative pursuant to 40 CFR § 122.22. The FDPC plan shall be submitted to the EPA at the address shown in Part I of the permit.

C. Modification and Annual Certification

The permittee must amend the FDPC plan whenever there is a change in the facility or in the operation of the facility which materially increases the risk of damage to the site. The permittee must review the FDPC Plan annually and provide certification that the FDPC Plan has been reviewed annually. The annual certification is due July 31st of each year. Modification and certification is not required if the facility is not operating or discharging. If the FDPC plan is modified, implementation of the modified plan is required upon submittal to the EPA. When determined as necessary, EPA has the authority to require modifications to the FDPC plan.

D. Documentation

The permittee must maintain a copy of the FDPC Plan at the facility and make it available to the EPA or an authorized representative upon request.

PART VII – QUALITY ASSURANCE

A. Requirements

The permittee shall ensure that all monitoring data collected is reliable through the implementation of quality assurance (QA) procedures and development a QA Project Plan (QAPP). Quality assurance procedures shall be used to support sample collection and analysis, document and identify representative sampling conditions, and data anomalies at the facility and in the receiving water body. The QAPP shall provide details (such as sampling devices, methods, sample holding times, quality control/quality assurance, chain of custody, etc.) to be used to collect water quality, sediment, and benthic samples. The permittee must use the appropriate EPA-approved quality assurance and quality control (QA/QC) and chain-of-custody procedures throughout the sample collection and analysis activities. More information about QA/QC procedures are described in the EPA's *Requirements for Quality Assurance Project Plans*⁴ and *Guidance for Quality Assurance Project Plans*.⁵ At a minimum, the QA procedures must include the following:

1. Details on the number of samples, type of sample containers, preservation of samples, holding times, analytical methods, analytical detection and quantification limits for each parameter, type and number of quality assurance field samples, precision and accuracy requirements, sample preparation requirements, sample shipping methods, chain of custody, and laboratory data delivery requirements.
2. Requirements and procedures for the collection of information about the weather and ocean conditions during each sampling event such as a record of the sea surface conditions (wind, wave amplitude and frequency, rain, cloud cover, air temperature, salinity, current velocity, and current direction).
3. Details about the production amounts such as current stocking density, feeding rate, and an analysis of feed contents.
4. Description of current measuring devices and/or methods used to accurately measure the current vectors at the facility and within the sampling area, calibration procedures, and calculations used.
5. Maps indicating the location of each sampling point.
6. Qualification and training of personnel, or any specialized training and certifications, needed to properly conduct sampling, measurements, or perform analyses.
7. Documentation of how environmental monitoring data will be managed, formatted, and compiled in electronic systems or databases.
8. Name, address, and telephone number of the laboratory used by the permittee.

B. Plan Development, Implementation, Submission, and Approval

The permittee must develop and implement a QAPP for all monitoring required by this part of the permit. The QAPP must be provided to the EPA within 90 days of permit issuance and approved by the EPA prior to discharge (i.e., stocking of fish). The plan shall include the NPDES number, the name of the facility, the date the plan was developed, and signed by an authorized representative pursuant to 40 CFR § 122.22. The QAPP shall be submitted to the EPA at the address shown in Part I of the permit.

C. Modification and Annual Certification

The permittee must amend the QAPP whenever there is a change in the facility or in the operation of the facility which materially increases the generation of pollutants or their release or potential release to surface waters. An amendment to the QAPP is also required whenever there is a modification in sample collection, sample analysis, or other procedure addressed by the QAPP. The permittee must amend the QAPP with any change in operator. The

⁴ U.S. Environmental Protection Agency. 2001. EPA Requirements for Quality Assurance Project Plans (QA/R-5). EPA/240/B-01/003. U.S. Environmental Protection Agency, Office of Environmental Information, Washington, DC.
< <https://www.epa.gov/quality/epa-qar-5-epa-requirements-quality-assurance-project-plans> >

⁵ U.S. Environmental Protection Agency. 2002. Guidance for Quality Assurance Project Plans (QA/G-5). EPA/240/R-02/009. U.S. Environmental Protection Agency, Office of Environmental Information, Washington, DC.
< <https://www.epa.gov/quality/guidance-quality-assurance-project-plans-epa-qag-5> >

permittee must review the QAPP annually and provide certification that the QAPP has been reviewed annually. The annual certification is due July 31st of each year. Modification and certification is not required if the facility is not operating or discharging. If the QAPP is modified, implementation of the modified plan is required upon submittal to EPA. When determined as necessary, EPA has the authority to require modifications to the QAPP.

D. Documentation

The permittee must maintain a copy of the QAPP at the facility and make it available to the EPA or an authorized representative upon request.

PART VIII – STANDARD CONDITIONS

A. General Conditions

1. Duty to Comply [40 CFR §§ 122.41(a) and 122.41(a)(1)]

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the CWA or Act) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

2. Penalties for Violations of Permit Conditions [40 CFR § 122.41(a)(2) and 40 CFR § 122.41(a)(3)]

(Note: Civil and administrative penalty amounts described in this subsection are based on adjustments to the original statutory amounts based on inflation, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990 (28 U.S.C. § 2461 note; Pub. L. 101- 410, enacted October 5, 1990; 104 Stat. 890), as amended by the Debt Collection Improvement Act of 1996 (31 U.S.C. § 3701 note; Public Law 104-134, enacted April 26, 1996; 110 Stat. 1321) and as set forth at 40 CFR § 19.4.)

The CWA provides that any person who violates Section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under Section 402, or any requirement imposed in a pretreatment program approved under Sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$51,570 per day for each violation. The CWA provides that any person who negligently violates Sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under Section 402 of the Act, or any requirement imposed in a pretreatment program approved under Section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six years, or both. Any person who knowingly violates Section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in Section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.

Any person may be assessed an administrative penalty by the Administrator for violating Section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$20,628 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$51,570. Penalties for Class II violations are not to exceed \$20,628 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$257,848. The specific penalty amounts described above for violations reflect those in effect at the time of permit issuance and are subject to change.

3. Civil and Criminal Liability [40 CFR § 122.41(m) and (n)]

Except as provided in permit conditions on “Bypassing” Section B, and “Upset” Section B, nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

4. Duty to Mitigate [40 CFR § 122.41(d)]

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

5. Permit Actions [40 CFR § 122.41(f)]

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

6. Toxic Pollutants [40 CFR § 122.44(b)(1)]

If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in the permit, the Director shall institute proceedings under these regulations to modify or revoke and reissue the permit to conform to the toxic effluent standard or prohibition.

7. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the CWA.

8. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the CWA.

9. Effect of a Permit [40 CFR § 122.5(a)(1) and (2)]

Except for any toxic effluent standards and prohibitions imposed under Section 307 of the CWA and “standards for sewage sludge use or disposal” under Section 405(d) of the CWA, compliance with a permit during its term constitutes compliance, for purposes of enforcement, with Sections 301, 302, 306, 307, 318, 403, and 405 (a)-(b) of the CWA. However, a permit may be modified, revoked and reissued, or terminated during its term for cause as set forth in 40 CFR §§ 122.62 and 122.64.

Compliance with a permit condition which implements a particular “standard for sewage sludge use or disposal” shall be an affirmative defense in any enforcement action brought for a violation of that “standard for sewage sludge use or disposal” pursuant to Sections 405(e) and 309 of the CWA.

10. Property Rights [40 CFR § 122.5(b), 40 CFR § 122.41(g), and 40 CFR § 122.5(c)]

This permit does not convey any property rights of any sort, or any exclusive privilege. The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.

11. Onshore or Offshore Construction

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any waters of the United States.

12. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

13. Duty to Provide Information [40 CFR § 122.41(h)]

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

14. Reopener Clause [40 CFR § 122.62(a)(7)]

This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under CWA § 301(b)(2)(C), CWA § 301(b)(2)(D), and CWA § 307(a)(2), as amended, if the effluent standard or limitation so issued or approved:

- a. Contains different conditions or is otherwise more stringent than any condition in the permit; or
- b. Controls any pollutant not addressed in the permit.

The permit as modified or reissued under this paragraph shall contain any other requirements of the CWA then applicable.

B. Operation and Maintenance of Pollution Controls

1. Proper Operation and Maintenance [40 CFR § 122.41(e)]

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

2. Need to Halt or Reduce Activity Not a Defense [40 CFR § 122.41(c)]

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

3. Bypass of Treatment Facilities [40 CFR § 122.41(m)(1)-(4)]

a. Definitions

- (1) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass not exceeding limitations

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Paragraphs c. and d. of this subsection.

c. Notice

- (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least ten days before the date of the bypass.
- (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section D, Subsection 8 (24-hour notice).

d. Prohibition of bypass

- (1) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:
 - (a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and
 - (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(c) The permittee submitted notices as required under Paragraph c. of this subsection.

(2) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in Paragraph d.(1) of this subsection.

4. Upsets [40 CFR § 122.41(n)(1)-(4)]

a. Definition

“Upset” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. Effect of an upset

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Paragraph c. of this subsection are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. Conditions necessary for a demonstration of upset

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
- (2) The permitted facility was at the time being properly operated;
- (3) The permittee submitted notice of the upset as required in Section D, Subsection 8 (24-hour notice); and
- (4) The permittee complied with any remedial measures required under Section A, Subsection 4.

d. Burden of proof

In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

5. Removed Substances

This permit does not authorize discharge of solids, sludge, filter backwash, or other pollutants removed during treatment or control of wastewaters of the United States unless specifically limited in Part I.

C. Monitoring and Records

1. Representative Sampling [40 CFR § 122.41(j)(1)]

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Director.

2. Current Measurements [40 CFR 122.44(i)(1)(iii)]

Appropriate current measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of all measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring current with a maximum deviation of less than $\pm 10\%$ from the true discharge rates throughout the range of expected discharge volumes.

3. Monitoring Procedures [40 CFR § 122.41(j)(4)]

Monitoring results must be conducted according to test procedures approved under 40 CFR Part 136 unless another method is required under 40 CFR sub-chapters N or O.

4. Penalties for Tampering [40 CFR § 122.41(j)(5)]

The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

5. Retention of Records [40 CFR § 122.41(j)(2)]

Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

6. Record Contents [40 CFR § 122.41(j)(3)(i)-(vi)]

Records of monitoring information shall include:

- a. The date, exact place, and time of sampling or measurements;
- b. The individual(s) who performed the sampling or measurements;
- c. The date(s) analyses were performed;
- d. The individual(s) who performed the analyses;
- e. The analytical techniques or methods used; and

- f. The results of such analyses.

7. Inspection and Entry [40 CFR § 122.41(i)(1)-(4)]

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

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

D. Reporting Requirements

1. Change in Discharge [40 CFR § 122.41(l)(1)(i)-(iii)]

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR § 122.29(b); or
- b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under Section D.
- c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

2. Anticipated Noncompliance [40 CFR § 122.41(l)(2)]

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

Any maintenance of facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, shall be scheduled during noncritical water quality periods and carried out in a manner approved by the Director.

3. Transfer of Ownership of Control [40 CFR § 122.41(l)(3), § 122.61, and § 122.61(b)]

- a. This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the CWA.
- b. In some cases, modification or revocation and reissuance is mandatory.
- c. Automatic transfers. As an alternative to transfers of permits by modification, any NPDES permit may be automatically transferred to a new permittee if:
 - (1) The current permittee notifies the Director at least 30 days in advance of the proposed transfer date in Subparagraph b(2) of this subsection;
 - (2) The notice includes a written agreement between the existing and new permittee(s) containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
 - (3) The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify or revoke and reissue the permit. A modification under this subparagraph may also be a minor modification under 40 CFR § 122.63. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Subparagraph b(2) of this subsection.

4. Monitoring Reports [40 CFR § 122.41(l)(4) and 40 CFR § 122.41(l)(4)(i)]

Monitoring results shall be reported at the intervals specified in this permit. Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of all effluent and in-stream monitoring.

5. Additional Monitoring by the Permittee [40 CFR § 122.41(l)(4)(ii)]

If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

6. Averaging of Measurements [40 CFR § 122.41(l)(4)(iii)]

Calculations for all monitoring or limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

7. Compliance Schedules [40 CFR § 122.41(l)(5)]

The permittee shall achieve compliance with the effluent limitations and monitoring requirements specified for discharges by the effective date of this permit. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

8. Twenty-Four Hour Reporting [40 CFR § 122.44(g), 40 CFR § 122.41(l)(6), and 40 CFR § 122.44(g)]

The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five calendar days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The following shall be included as information which must be reported within 24 hours under this paragraph. The Director may waive the written report on a case-by-case basis for reports under this subsection if the oral report has been received within 24 hours.

- a. Any unanticipated bypass which exceeds any effluent limitation in the permit.
- b. Any upset which exceeds any effluent limitation in the permit.
- c. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours.

9. Other Noncompliance [40 CFR § 122.41(l)(7)]

The permittee shall report all instances of noncompliance not reported under Section D at the time monitoring reports are submitted. The reports shall contain the information listed in Section D, Subsection 8.

10. Other Information [40 CFR § 122.41(l)(8)]

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

11. Changes in Discharge of Toxic Substances [40 CFR § 122.42(a)(1)(i-iii) and 40 CFR § 122.42(a)(2)(i-iii)]

The following conditions apply to all NPDES permits within the categories specified below:

- a. Existing manufacturing, commercial, mining, and silvicultural dischargers. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:
 - (1) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - (a) 100 micrograms per liter (100 µg/l);
 - (b) 200 micrograms per liter (200 µg/l) for acrolein and acrylonitrile; 500 micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (1 mg/l) for antimony; or
 - (c) Five times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7).
 - (2) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - (a) 500 micrograms per liter (500 µg/l);
 - (b) 1 milligram per liter (1 mg/l) for antimony; or
 - (c) Ten times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7).
- b. Publicly owned treatment works. All POTWs must provide adequate notice to the Director of the following:
 - (1) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to Section 301 or 306 of CWA if it were directly discharging those pollutants; and
 - (2) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
 - (3) For purposes of this paragraph, adequate notice shall include information on the quality and quantity of effluent introduced into the POTW, and any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. [40 CFR § 122.42(b)]

12. Duty to Reapply [40 CFR § 122.41(b), § 122.21(d), § 122.6(a), and § 122.6(b)]

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

The application should be submitted at least 180 days before the expiration date of this permit. The Regional Administrator may grant permission to submit an application later than the 180 days in advance, but no later than the permit expiration date.

The conditions of an expired permit continue in force under 5 U.S.C. 558(c) until the effective date of a new permit if the permittee has submitted a timely application under this subsection which is a complete application for a new permit; and the Regional Administrator, through no fault of the permittee, does not issue a new permit with an effective date on or before the expiration date of the previous permit. Permits continued under this section remain fully effective and enforceable.

13. Signatory Requirements [40 CFR § 122.41(k)(1) and 40 CFR § 122.22]

All applications, reports, or information submitted to the Director shall be signed and certified.

a. All permit applications shall be signed as follows:

(1) For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

- (a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or
- (b) The manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

NOTE: The EPA does not require specific assignments or delegations of authority to responsible corporate officers identified in this subparagraph. The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under this subparagraph rather than to specific individuals.

(2) For a partnership or sole proprietorship. By a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

- (a) the chief executive officer of the agency, or
- (b) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

b. All reports required by permits, and other information requested by the Director shall be signed by a person described in Paragraph a. of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- (1) The authorization is made in writing by a person described in Paragraph a. of this section;
 - (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company.
 - (3) The written authorization is submitted to the Director.
- c. Changes to authorization. If an authorization under Paragraph b. of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Paragraph b. of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.
 - d. Certification. Any person signing a document under Paragraph a. or b. of this section shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

14. Availability of Reports and the Administrative Record [40 CFR §§ 124.18 & 122.7]

Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the EPA. As required by the Act, permit applications, permits and effluent data shall not be considered confidential.

15. Penalties for Falsification of Reports [40 CFR § 122.41(k)(2)]

The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.

E. Definitions

1. The EPA [40 CFR § 122.2]

The Regional Administrator of EPA Region 4 or his/her designee is “The EPA,” unless at some time in the future the State or Indian Tribe receives authority to administer the NPDES program and assumes jurisdiction over the permit at which time, the Director of the State program receiving the authorization becomes the issuing authority.

The use of the term “Director” in this permit shall apply to the EPA Regional Administrator, Region 4.

2. Act [40 CFR § 124.2]

"Act" means the CWA (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483, and Public Law 97-117, 33 U.S.C. 1251 et seq.

3. Discharge Monitoring Report (DMR) [40 CFR § 122.2]

“Discharge Monitoring Report” means the EPA national form (Form 3320-1) or electronic reporting form required by the federal regulations including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees.

4. Measurements [40 CFR § 122.2]

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

The “average annual discharge limitation” means the highest allowable average of “daily discharges” over a period of 12 consecutive calendar months, calculated as the “arithmetic mean” of the monthly averages for the current calendar month and the 11 prior calendar months. The annual average is calculated each month. This limitation is identified as “Annual Average” in the permit.

The “average monthly discharge limitation” other than for bacterial indicators, means the highest allowable average of “daily discharges” over a calendar month, calculated as the sum of all “daily discharges” measured during a calendar month divided by the number of “daily discharges” measured during that month. For bacterial indicators, the “average monthly discharge limitation” is calculated using a “geometric mean.” This limitation is identified as “Monthly Average” or “Daily Average” in the permit.

The “average weekly discharge limitation” means the highest allowable average of “daily discharges” over a calendar week, calculated as the sum of all “daily discharges” measured during a calendar week divided by the number of “daily discharges” measured during that week. This limitation is identified as “Weekly Average” in the permit.

The “maximum daily discharge limitation” means the highest allowable “daily discharge.” This limitation is identified as “Daily Maximum” in the permit.

The “Method Detection Limit (MDL)” means the minimum concentration of a substance (analyte) that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte.

The “Minimum Level (ML)” means the concentration at which the entire analytical system must give a recognizable signal and an acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method-specified sample weights, volumes and processing steps have been followed.

5. Types of Samples

- a. Composite Sample: A “composite sample” is a combination of not less than eight influent or effluent portions (aliquots), of at least 100 ml, collected over the full time specified in the permit. The composite sample must be flow proportioned by either a time interval between each aliquot, or by volume as it relates to effluent flow at the time of sampling, or by total flow since collection of the previous aliquot. Aliquots may be collected manually or automatically.
- b. Grab Sample: A “grab sample” is a single influent or effluent portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the total discharge.

6. Calculation of Means

- a. Arithmetic Mean: The “arithmetic mean” of any set of values is the sum of the individual values divided by the number of individual values.
- b. Geometric Mean: The “geometric mean” of any set of values is the N^{th} root of the product of the individual values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered to be one (1).

7. Permittee [40 CFR 122.21(b)]

The “permittee” means the operator who has substantial control over the day-to-day operations of the facility; when a facility or activity is owned by one person but is operated by another person, it is the operator’s duty to obtain a permit.

8. Hazardous Substance [40 CFR § 122.2]

A “hazardous substance” means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the CWA.

9. Toxic Pollutants [40 CFR § 122.2]

A “toxic pollutant” is any pollutant listed as toxic under Section 307(a)(1) of the CWA or, in the case of “Sewage sludge use or disposal practices,” any pollutant identified in regulations implementing Section 405(d) of the CWA.

APPENDICES ⁶

Appendix A: Best Management Practices (BMP) Plan Certification

Appendix B: Quality Assurance Plan (QAPP) Certification

Appendix C: Drug and Chemical Use Certification

Appendix D: Example Feed Conversion Ratios Log

⁶ More guidance about the reporting and certification requirements for the aquaculture industry (including plans, certifications, reports, and guidance) can be found in the Compliance Guide for the Concentrated Aquatic Animal Production Point Source Category. U.S. Environmental Protection Agency. 2006. Compliance Guide for the Concentrated Aquatic Animal Production Point Source Category. EPA-821-B-05-001. U.S. Environmental Protection Agency, Office of Water, Washington, DC.
< http://water.epa.gov/scitech/wastetech/guide/aquaculture/upload/2006_05_03_guide_aquaculture_guidance_full-final.pdf >.

Appendix A
Best Management Practices (BMP) Plan
Certification

**Best Management Practices (BMP) Plan
Certification**

Facility Name: _____

NPDES Permit Number: _____

The BMP Plan is complete and has been submitted to EPA.

The BMP Plan is being implemented by trained employees.

The BMP Plan has been reviewed and endorsed by the facility manager.

The individuals responsible for implementation of the BMP Plan have been properly trained.

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Print Name: _____

Title/Company: _____

Signature: _____

Date: _____

Appendix B
Quality Assurance Project Plan (QAPP)
Certification

Quality Assurance Project Plan (QAPP)
Certification

Facility Name: _____

NPDES Permit Number: _____

The QAPP is complete and has been submitted to EPA.

The QAPP is being implemented by trained employees.

The QAPP has been reviewed and endorsed by the facility manager.

The individuals responsible for implementation of the QAPP have been properly trained.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including

Print Name: _____

Title/Company: _____

Signature: _____

Date: _____

Appendix C
Drug and Chemical Use
Report Contents

CHECKLIST FOR ORAL REPORT FOR INAD AND EXTRA-LABEL DRUG USE

Instructions: Provide an oral and written report to EPA within seven days after initiating use of the drug. The first row is an example row.

Reported to Permitting Authority?	Name of Drug (INAD & Extra-label) Used & Reason for Use	Method of Application	First Date of Drug Use	Date Oral Report Submitted to Permitting Authority	Initials
☒	Extra-label: Erythromycin Treat bacterial infections	Injection	09/09/04	09/10/04	MJ
☐					
☐					
☐					
☐					
☐					
☐					
☐					
☐					

WRITTEN REPORT FOR AGREEING TO PARTICIPATE IN AN INAD STUDY

Facility Name: _____ NPDES Permit Number: _____

Name of person submitting this report: _____

Date this written report was submitted to the permitting authority: _____

Instructions: Submit a written report to the EPA within 7 days of agreeing or signing up to participate in an INAD study.
The first row is an example row.

Date Initiating INAD Study Participation	Name of INAD Drug Used & Dosage	Disease or Condition Intended to Treat	Method of Application
09/09/04	Oxytetracycline	For controlling columnaris in walleye	☒ Medicated feed ☐ Injection ☐ Bath treatment ☐ Other:
			☐ Medicated feed ☐ Injection ☐ Bath treatment ☐ Other:
			☐ Medicated feed ☐ Injection ☐ Bath treatment ☐ Other:
			☐ Medicated feed ☐ Injection ☐ Bath treatment ☐ Other:

Note: This form is only an example of what a written report could look like. Facilities may use other types of existing written reports if available.

WRITTEN REPORT FOR INAD AND EXTRA-LABEL DRUG USE

Facility Name: _____

NPDES Permit Number: _____

Name of person submitting this report: _____

Date this written report was submitted to the permitting authority: _____

Instructions: Submit a written report to the EPA within 30 days after initiating use of the drug. For extra-label drug use, include the name of the prescribing veterinarian and date of the prescription. The first row is an example row.

Name of Drug & Reason for Use	Date and Time of Application (start date/time end date/time)	Duration	Method of Application	Total Amount of Active Ingredient Added	Total Amount of Medicated Feed Added**
Oxytetracycline For control of columnaris in walleye	09/09/04 10:00 AM 09/13/04 10:00 AM	5 consecutive days	☒ Medicated feed ☐ Injection ☐ Bath treatment ☐ Other:	1 g/lb as sole ration	50 lbs
			☐ Medicated feed ☐ Injection ☐ Bath treatment ☐ Other:		
			☐ Medicated feed ☐ Injection ☐ Bath treatment ☐ Other:		
			☐ Medicated feed ☐ Injection ☐ Bath treatment ☐ Other:		

* This form is only an example of what a written report could look like. Facilities may use other types of existing written reports if available.

** Applies only to drugs applied through medicated feed.

Appendix D
Feed Conversion Ratios Log

FEED CONVERSION RATIOS LOG
FLOW-THROUGH, RECIRCULATING, AND NET PEN SYSTEMS

Instructions: This example form may be used to keep track of feeding and to calculate/track feed conversion ratios (FCR). The first row is an example row. The FCR is calculated with the following equation:

$$\text{FCR} = \text{Dry weight of feed applied} / \text{Wet weight of fish gained}$$

Date (start date end date)	Description of Group	Total Feed Amounts (Estimate)	Weights of Animals (start weight end weight)	Weight Gained	Calculated FCR
3/20/04	Brook trout stockers for Potomac River	5,275 lbs	100 lbs	4,700 lbs	1.12
10/21/04			4,800 lbs		