

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §§1251 et seq.; the “CWA”),

New Hampshire Fish and Game Department

is authorized to discharge from a facility located at

**Powder Mill Fish Hatchery
Merrymeeting Road
New Durham, New Hampshire**

to receiving water named

**Merrymeeting River
(Hydrologic Basin Code: 01070002)**

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on April 1, 2005.

This permit and the authorization to discharge expire at midnight, five (5) years from the effective date.

This permit supersedes the permit issued on August 28, 1974.

This permit consists of **20** pages in Part I including effluent limitations, monitoring requirements, etc.; **Attachment A** (1 page); and **35** pages in Part II including General Conditions and Definitions.

Signed this 11th day of January, 2005

/s/ SIGNATURE ON FILE

Linda M. Murphy, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency (USEPA)
EPA-New England
Boston, Massachusetts

Part I.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1.a. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 001 fish hatchery overflow water from Raceways G, H, and I Series into Merrymeeting River. In addition, this outfall can be consolidated with outfall 002 as long as done in conformance with footnote 1 on page 9 of this permit. Such discharges shall be limited and monitored by the permittee as specified below. Samples taken in compliance with the monitoring requirements specified below shall be taken at a location that provides a representative analysis of the effluent.

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow; mgd	-----	-----	Report	-----	1/Week	Weir calculations or other approved method ²
TSS	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
BOD ₅	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Total Phosphorus ⁴ as P	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Total Nitrogen as N	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Fish Biomass on Hand; lbs	Report	-----	-----	-----	Monthly	Calculation ⁵
Fish Feed Used; lbs	Report	-----	-----	-----	Monthly	Calculation
Efficiency of Fish Feed Used; Percent	Report	-----	-----	-----	Monthly	Calculation
pH Range ⁶		6.5 to 8.0 Standard Units (See Part I.F.1.a.)			1/Week	Grab
Dissolved Oxygen ⁷ ; mg/L	-----	-----	-----	Report	1/Month (Formalin Absent)	Grab
Dissolved Oxygen Saturation ⁷ ; Percent	-----	-----	-----	Report	1/Month (Formalin Absent)	Calculation
Water Temperature ⁷ ; Degrees Fahrenheit	-----	-----	-----	Report	1/Month (Formalin Absent)	Grab
Formaldehyde ⁸ ; mg/L	-----	-----	1.61	4.58	1/Week (Formalin Present)	Grab
Dissolved Oxygen ⁸ ; mg/L	-----	-----	-----	Report	1/Week (Formalin Present)	Grab

NOTE: See pages 9 through 11 for explanation of the various footnotes.

Part I.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1.b. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 002 fish hatchery overflow water from Hatchery House and Storm Water runoff from Parking Lot into Merrymeeting River. In addition, this outfall can be consolidated with outfall 001 as long as done in conformance with footnote 1 on page 9 of this permit. Such discharges shall be limited and monitored by the permittee as specified below. Samples taken in compliance with the monitoring requirements specified below shall be taken at a location that provides a representative analysis of the effluent from the Hatchery House *absent any storm-water runoff from parking lot.*

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	Average <u>Monthly</u>	Maximum <u>Daily</u>	Average <u>Monthly</u>	Maximum <u>Daily</u>	Measurement <u>Frequency</u>	Sample <u>Type</u>
Flow; mgd	-----	-----	Report	-----	1/Week	Weir calculations or other approved method ²
TSS	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
BOD ₅	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Total Phosphorus ⁴ as P	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Total Nitrogen as N	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Fish Biomass on Hand; lbs	Report	-----	-----	-----	Monthly	Calculation ⁵
Fish Feed Used; lbs	Report	-----	-----	-----	Monthly	Calculation
Efficiency of Fish Feed Used; Percent	Report	-----	-----	-----	Monthly	Calculation
pH Range ⁶		6.5 to 8.0 Standard Units (See Part I.F.1.a.)			1/Week	Grab
Dissolved Oxygen ⁷ ; mg/L	-----	-----	-----	Report	1/Month (Formalin Absent)	Grab
Dissolved Oxygen Saturation ⁷ ; Percent	----	-----	-----	Report	1/Month (Formalin Absent)	Calculation
Water Temperature ⁷ ; Degrees Fahrenheit	----	-----	-----	Report	1/Month (Formalin Absent)	Grab
Formaldehyde ⁸ ; mg/L	-----	-----	1.61	4.58	1/Week (Formalin Present)	Grab
Dissolved Oxygen ⁸ ; mg/L	-----	-----	-----	Report	1/Week (Formalin Present)	Grab

NOTE: See pages 9 through 11 for explanation of the various footnotes.

Part I.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1.c. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 006 fish hatchery overflow water from Woods Pond # 5 (also, could contain overflow water from Raceways A, B, C and F Series, Show Ponds #s 1 through 3, and Woods Ponds #s 2 through 4) into Merrymeeting River. In addition, this outfall can be consolidated with any or all the outfalls 007 through 010 as long as done in conformance with footnote 1 on page 9 of this permit. Such discharges shall be limited and monitored by the permittee as specified below. Samples taken in compliance with the monitoring requirements specified below shall be taken at a location that provides a representative analysis of the effluent.

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	Average <u>Monthly</u>	Maximum <u>Daily</u>	Average <u>Monthly</u>	Maximum <u>Daily</u>	Measurement <u>Frequency</u>	Sample <u>Type</u>
Flow; mgd	-----	-----	Report	-----	1/Week	Weir calculations or other approved method ²
TSS	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
BOD ₅	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Total Phosphorus ⁴ as P	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Total Nitrogen as N	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Fish Biomass on Hand; lbs	Report	-----	-----	-----	Monthly	Calculation ⁵
Fish Feed Used; lbs	Report	-----	-----	-----	Monthly	Calculation
Efficiency of Fish Feed Used; Percent	Report	-----	-----	-----	Monthly	Calculation
pH Range ⁶		6.5 to 8.0 Standard Units (See Part I.F.1.a.)			1/Week	Grab
Dissolved Oxygen ⁷ ; mg/L	-----	-----	-----	Report	1/Month (Formalin Absent)	Grab
Dissolved Oxygen Saturation ⁷ ; Percent	-----	-----	-----	Report	1/Month (Formalin Absent)	Calculation
Water Temperature ⁷ ; Degrees Fahrenheit	-----	-----	-----	Report	1/Month (Formalin Absent)	Grab
Formaldehyde ⁸ ; mg/L	-----	-----	1.61	4.58	1/Week (Formalin Present)	Grab
Dissolved Oxygen ⁸ ; mg/L	-----	-----	-----	Report	1/Week (Formalin Present)	Grab

NOTE: See pages 9 through 11 for explanation of the various footnotes.

Part I.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1.d. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 007 fish hatchery overflow water from Bass Ponds #s 1 and 2 (also, could contain overflow water from Raceways A, B, C and F Series, Show Ponds #s 1 through 3, and Woods Ponds #s 2 through 5) into Merrymeeting River. In addition, this outfall can be consolidated with any or all the outfalls 006 and 008 through 010 as long as done in conformance with footnote 1 on page 9 of this permit. Such discharges shall be limited and monitored by the permittee as specified below. Samples taken in compliance with the monitoring requirements specified below shall be taken at a location that provides a representative analysis of the effluent.

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	Average <u>Monthly</u>	Maximum <u>Daily</u>	Average <u>Monthly</u>	Maximum <u>Daily</u>	Measurement <u>Frequency</u>	Sample <u>Type</u>
Flow; mgd	-----	-----	Report	-----	1/Week	Weir calculations or other approved method ²
TSS	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
BOD ₅	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Total Phosphorus ⁴ as P	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Total Nitrogen as N	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Fish Biomass on Hand; lbs	Report	-----	-----	-----	Monthly	Calculation ⁵
Fish Feed Used; lbs	Report	-----	-----	-----	Monthly	Calculation
Efficiency of Fish Feed Used; Percent	Report	-----	-----	-----	Monthly	Calculation
pH Range ⁶		6.5 to 8.0 Standard Units (See Part I.F.1.a.)			1/Week	Grab
Dissolved Oxygen ⁷ ; mg/L	-----	-----	-----	Report	1/Month (Formalin Absent)	Grab
Dissolved Oxygen Saturation ⁷ ; Percent	-----	-----	-----	Report	1/Month (Formalin Absent)	Calculation
Water Temperature ⁷ ; Degrees Fahrenheit	-----	-----	-----	Report	1/Month (Formalin Absent)	Grab
Formaldehyde ⁸ mg/L	-----	-----	1.61	4.58	1/Week (Formalin Present)	Grab
Dissolved Oxygen ⁸ ; mg/L	-----	-----	-----	Report	1/Week (Formalin Present)	Grab

NOTE: See pages 9 through 11 for explanation of the various footnotes.

Part I.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1.e. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 008 fish hatchery overflow water from Bass Ponds #s 3 and 4 (also, could contain overflow water from Raceways A, B, C and F Series, Show Ponds #s 1 through 3, and Woods Ponds #s 2 through 5) into Merrymeeting River. In addition, this outfall can be consolidated with any or all the outfalls 006 and 007, and 009 and 010 as long as done in conformance with footnote 1 on page 9 of this permit. Samples taken in compliance with the monitoring requirements specified below shall be taken at a location that provides a representative analysis of the effluent.

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow; mgd	-----	-----	Report	-----	1/Week	Weir calculations or other approved method ²
TSS	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
BOD ₅	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Total Phosphorus ⁴ as P	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Total Nitrogen as N	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Fish Biomass on Hand; lbs	Report	-----	-----	-----	Monthly	Calculation ⁵
Fish Feed Used; lbs	Report	-----	-----	-----	Monthly	Calculation
Efficiency of Fish Feed Used; Percent	Report	-----	-----	-----	Monthly	Calculation
pH Range ⁶		6.5 to 8.0 Standard Units (See Part I.F.1.a.)			1/Week	Grab
Dissolved Oxygen ⁷ ; mg/L	-----	-----	-----	Report	1/Month (Formalin Absent)	Grab
Dissolved Oxygen Saturation ⁷ ; Percent	-----	-----	-----	Report	1/Month (Formalin Absent)	Calculation
Water Temperature ⁷ ; Degrees Fahrenheit	-----	-----	-----	Report	1/Month (Formalin Absent)	Grab
Formaldehyde ⁸ ; mg/L	-----	-----	1.61	4.58	1/Week (Formalin Present)	Grab
Dissolved Oxygen ⁸ ; mg/L	-----	-----	-----	Report	1/Week (Formalin Present)	Grab

NOTE: See pages 9 through 11 for explanation of the various footnotes.

Part I.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1.f. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 009 fish hatchery overflow water from up to 18 Circular Tanks into Merrymeeting River. In addition, this outfall can be consolidated with any or all the outfalls 006 through 008 and 010 as long as done in conformance with footnote 1 on page 9 of this permit. Samples taken in compliance with the monitoring requirements specified below shall be taken at a location that provides a representative analysis of the effluent.

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow; mgd	-----	-----	Report	-----	1/Week	Weir calculations or other approved method ²
TSS	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
BOD ₅	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Total Phosphorus ⁴ as P	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Total Nitrogen as N	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Fish Biomass on Hand; lbs	Report	-----	-----	-----	Monthly	Calculation ⁵
Fish Feed Used; lbs	Report	-----	-----	-----	Monthly	Calculation
Efficiency of Fish Feed Used; Percent	Report	-----	-----	-----	Monthly	Calculation
pH Range ⁶		6.5 to 8.0 Standard Units (See Part I.F.1.a.)			1/Week	Grab
Dissolved Oxygen ⁷ ; mg/L	-----	-----	-----	Report	1/Month (Formalin Absent)	Grab
Dissolved Oxygen Saturation ⁷ ; Percent	-----	-----	-----	Report	1/Month (Formalin Absent)	Calculation
Water Temperature ⁷ ; Degrees Fahrenheit	-----	-----	-----	Report	1/Month (Formalin Absent)	Grab
Formaldehyde ⁸ mg/L	-----	-----	1.61	4.58	1/Week (Formalin Present)	Grab
Dissolved Oxygen ⁸ ; mg/L	-----	-----	-----	Report	1/Week (Formalin Present)	Grab

NOTE: See pages 9 through 11 for explanation of the various footnotes.

Part I.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1.g. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 010 fish hatchery overflow water from up to nine Circular Tanks into Merrymeeting River. In addition, this outfall can be consolidated with any or all the outfalls 006 and 009 as long as done in conformance with footnote 1 on page 9 of this permit. Such discharges shall be limited and monitored by the permittee as specified below. Samples taken in compliance with the monitoring requirements specified below shall be taken at a location that provides a representative analysis of the effluent.

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	Average <u>Monthly</u>	Maximum <u>Daily</u>	Average <u>Monthly</u>	Maximum <u>Daily</u>	Measurement <u>Frequency</u>	Sample <u>Type</u>
Flow; mgd	-----	-----	Report	-----	1/Week	Weir calculations or other approved method ²
TSS	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
BOD ₅	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Total Phosphorus ⁴ as P	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Total Nitrogen as N	-----	Report lbs/day	-----	Report mg/l	1/Quarter	24-Hour Composite ³
Fish Biomass on Hand; lbs	Report	-----	-----	-----	Monthly	Calculation ⁵
Fish Feed Used; lbs	Report	-----	-----	-----	Monthly	Calculation
Efficiency of Fish Feed Used; Percent	Report	-----	-----	-----	Monthly	Calculation
pH Range ⁶		6.5 to 8.0 Standard Units (See Part I.F.1.a.)			1/Week	Grab
Dissolved Oxygen ⁷ ; mg/L	-----	-----	-----	Report	1/Month (Formalin Absent)	Grab
Dissolved Oxygen Saturation ⁷ ; Percent	-----	-----	-----	Report	1/Month (Formalin Absent)	Calculation
Water Temperature ⁷ ; Degrees Fahrenheit	-----	-----	-----	Report	1/Month (Formalin Absent)	Grab
Formaldehyde ⁸ ; mg/L	-----	-----	1.61	4.58	1/Week (Formalin Present)	Grab
Dissolved Oxygen ⁸ ; mg/L	-----	-----	-----	Report	1/Week (Formalin Present)	Grab

NOTE: See pages 9 through 11 for explanation of the various footnotes.

Part I.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1.h. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge miscellaneous waters from each of the three outfalls listed in the table below, as specified under “*Type of Discharge Water*” into the Merrymeeting River without monitoring, on an as need basis. Aside from allowing the discharge of rainwater and snowmelt from units not in use, the specific intent of this authorization is to allow for a discharge from the “*Discharging Unit*” shown in the table below for the sole purpose of emptying it of incidental quantities of water; however, the discharge of any bottom sediments along with this discharge is strictly prohibited.

Outfall Number	Receiving Water	Discharging Unit	Type of Discharge Water
003	Merrymeeting River	All three Show Ponds	Drain water contained in three Show Ponds
004	Merrymeeting River	Old Granite Canal	Drain water contained in Old Granite Canal
005	Merrymeeting River	Woods Pond #2	Drain water contained in Woods Pond #2

EXPLANATION OF FOOTNOTES APPLICABLE TO Parts I.A.1.a. - g. on pages 2 - 8

(1) If the permittee wishes to consolidate any of the outfalls (See **Attachment A**) in this hatchery, they shall submit a written plan and schedule describing the planned consolidation to EPA-New England and the New Hampshire Department of Environmental Services, Water Division (NHDES-WD) at least 45 days in advance of any outfall consolidation. Outfalls available for consolidation in the upper hatchery are 001 and 002; whereas, those in the lower hatchery are 006 through 010. Such a plan would represent a cause for a minor permit modification, pursuant to 40 Code of Federal Regulations (CFR) Section 122.63(e)(2), by which EPA-New England would eliminate the sampling requirements for the outfall(s) being eliminated and update the effluent limitations and monitoring requirements page for the outfall(s) being consolidated to reflect all the rearing units currently discharging through the consolidated outfall. No other limit, monitoring requirement, measurement frequency or sample type will be altered.

EPA-New England collectively refers to a block of individual raceways having a common header pipe (water supply) in a generic manner to simplify their identification in this permit. However, fish culturists define raceway more specifically, such as an individual rectangular container used to rear fish, in which the fish can swim freely within that container but not into adjacent containers. As of this permit’s effective date, Raceways A, B, C, F, G and I

Series each contain a series of individual rectangular concrete units/containers with the number of individual raceways per generic Raceway Series listed below.

Raceway A Series contains 10 individual raceway units for rearing fish;
Raceway B Series contains 6 individual raceway units for rearing fish;
Raceway C Series contains 6 individual raceway units for rearing fish;
Raceway F Series contains 8 individual raceway units for rearing fish;
Raceway G Series contains 10 individual raceway units for rearing fish;
Raceway H Series contains 10 individual raceway units for rearing fish; and
Raceway I Series contains 10 individual raceway units for rearing fish.

- (2) In lieu of an effluent flow meter, weir calculations may be used to report effluent flow. To obtain approval for flow measurement method(s) other than weir calculations, the permittee shall submit a written description of the proposed method(s) to EPA-New England and receive written authorization via certified letter.
- (3) Water samples for BOD₅, TSS, Total Nitrogen and Total Phosphorus shall be collected and all test results shall be determined from the same 24-Hour composite sample whose collection shall be timed to begin at the start of a typical fish feeding event. **However, up through November 30, 2005, "Grab" samples are allowed in place of "24-Hour Composite" samples. All test results for the analysis of these four constituents when the sample type is "Grab" shall be determined from grab samples collected concurrently or by splitting a single grab sample with all samples being collected soon after the start of a typical fish-feeding event.** Analytical results are to be submitted with the appropriate monthly Discharge Monitoring Report (DMR) for the month in which the sample was collected.
- (4) For purposes of analysis and reporting of Total Phosphorus, the permittee shall use the minimum quantification level (ML) of 10 micrograms per liter ($\mu\text{g/l}$). (A ML of less than 10 $\mu\text{g/l}$ is also acceptable.) In general, the ML is defined as "the level at which the entire analytical system shall give recognizable signal and acceptable calibration points." Specifically, it's defined as the concentration in a sample equivalent to the concentration of the lowest calibration standard analyzed in a specific analytical procedure assuming that all the method-specific sample weights, volumes, and processing steps have been followed.
- (5) The permittee shall submit a written report with its monthly DMR of any significant import and/or export of fingerling or greater size fish which occurred during the reporting month. The report shall include the dates and quantities of each import and/or export. In lieu of a written report, the permittee is allowed to submit a copy of their in house "monthly reports form" as long as that form contains the relevant information. This report excludes any fish mortality data as that is covered separately under **Part I.A.6**.
- (6) Limit is a State Certification Requirement.

- (7) Each monthly sample for **Dissolved Oxygen** (DO) shall be collected on a discharge that is **Formalin** free. For each sample of DO collected, the **Water Temperature** shall also be measured and the **Percent Saturation of DO** determined for each DO sample.
- (8) Sampling for **Formaldehyde** shall occur after any discharge of **Formalin** to the hatchery's culture water, to capture the maximum concentration of that application after accounting for its detention time through the raceways, tanks and piping networks to the outfall. The detention time calculation shall take into account dosage, injection point, facility flow (both velocity and volume), etc. where possible [See **Part I.B.4.e.ii.**]. A sample for **DO** shall be collected concurrently with that for Formaldehyde and reported under the appropriate DO column on the monthly DMR. Formaldehyde shall be tested using Method 1667, Revision A, which has a ML of 50 µg/l.

Alternate analytical method(s) shall be approved by EPA-New England at the permittee's written request as long as the permittee utilizes method(s) that obtain MLs that are equal to or less than those referenced for Method 1667, Revision A, above. Such a request will be considered a minor modification to the permit.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Continued)

2. The discharge shall not cause a violation of the water quality standards of the receiving water.
3. The discharge shall be adequately treated to insure that the surface water remains free from pollutants in concentrations or combinations that settle to form harmful deposits, float as foam, debris, scum or other visible pollutants. It shall be adequately treated to insure that the surface waters remain free from pollutants which produce odor, color, taste or turbidity in the receiving waters which is not naturally occurring and would render it unsuitable for its designated uses.
4. Toxic Controls
 - a. No components of the effluent shall result in any demonstrable harm to aquatic life or violate any water quality standard which has been or may be promulgated. Upon promulgation of any such standard, this permit may be revised or amended in accordance with such standards, with the permittee being so notified.
 - b. The permittee shall not discharge into the receiving water any pollutant or combination of pollutants in toxic amounts.

5. This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable standard or limitation promulgated or approved under sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the “CWA”, if the effluent standard or limitation so issued or approved:
 - a. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - b. Controls any pollutants not limited in the permit.

If the permit is modified or reissued, it shall be revised to reflect all currently applicable requirements of the “CWA”.

6. The permittee shall notify EPA-New England and the NHDES-WD within 24-hours upon the occurrence of any mortality of greater than 25 percent in any aquatic species under culture at the facility in accordance with reporting requirements in **General Conditions Part II.D.1.e.**
7. Any change of the fish species to be raised at this facility or development stage to be attained will require written notification to EPA-New England and to the NHDES-WD and, possibly, a permit modification.
8. There shall be no direct discharge of “cleaning water” (i.e., water containing settled solids that have accumulated on the bottom of active rearing units that is discharged, absent some form of solids removal, along with a portion of the culture water directly to the receiving water during periodic cleaning operations) from any rearing unit (hatchery house, raceway, woods pond, bass pond, circular tank, etc.). However, the discharge of “cleaning water” to a settling pond, lagoon, empty raceway and/or clarifier for the purposes of settling solids including the temporary storage of those solids followed by the discharge of any decant water that accumulates above those solids and/or any water that flows slowly over those solids is allowed as long as that decant and/or overflow water discharges through a currently permitted outfall (**Part I.A.1.a.-g.**).
9. Any hypochlorite solution applied to the surface of any rearing equipment exposed to culture water must be neutralized prior to that equipment being exposed to culture water.
10. There shall be no discharge of iodine and/or phosphoric acid solution(s) to the rearing water or to the receiving water.
11. The permittee shall use only those Aquaculture Drugs and Chemicals approved by the U.S. Food and Drug Administration (USFDA) and in accordance with labeling instructions or as allowed in **Part B.1. Drug Usage** immediately below. EPA-New England will defer to the expertise of the USFDA regarding whether or not a particular drug and/or chemical is used in accordance with appropriate USFDA requirements.
In addition, each year with the December Discharge Monitoring Report (to be submitted by

January 15th) the permittee shall certify in writing that all Aquaculture Drugs and Chemicals used at this facility during the calendar year (specify the calendar year) were ones approved by the USFDA and were used in accordance with FDA labeling or as allowed under **Part B.1. Drug Usage** in Powder Mill's NPDES permit.

B. NARRATIVE EFFLUENT LIMITATION REQUIREMENTS FROM 40 CODE OF FEDERAL REGULATIONS (CFR) PART 451 WITH MODIFICATIONS

Pertinent definitions from 40 CFR Part 451 for specific terms used in this section are listed under **Item 5. General Definitions** at the end of this section.

1. *Drug Usage*

Except as noted below, the permittee must notify EPA-New England and the NHDES-WD in accordance with the following procedures of any investigational new animal drug (INAD) or any extralabel drug use where such a use may lead to a discharge of the drug to waters of the United States as stipulated below. However, reporting is not required for any INAD or extralabel drug use that has been previously approved by the USFDA for a different species or disease if the INAD or extralabel use is at or below the approved dosage and involves similar conditions of use.

- a. The permittee must provide to EPA-New England a written report of an INAD's impending use within 7 days of agreeing or signing up to participate in an INAD study. The written report must identify the INAD to be used, method of use, the dosage, and the disease or condition the INAD is intended to treat.
- b. For INADs and extralabel drug uses, the permittee must provide an oral report to EPA-New England as soon as possible, preferably in advance of use, but no later than 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.
- c. For INADs and extralabel drug uses, the permittee must provide a written report to EPA New England within 30 days after initiating 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.

2. *Structural Failure and/or Damage to Culture Units*

The permittee must notify EPA-New England and the NHDES-WD in accordance with the following procedures when there is a **“reportable failure”**(as defined immediately below) in, or damage to, the structure of an aquatic animal containment system (i.e, culture unit) or its wastewater treatment system that results in an unanticipated material discharge of pollutants to waters of the United States.

- a. For this facility, a **“reportable failure”** applies only to active culture units (ones that

contain fish and flowing water) and their ancillary components and refers to the collapse or damage of a rearing unit or its wastewater treatment system; damage to pipes, valves, and other plumbing fixtures; and damage or malfunction to screens or physical barriers in the system, which would prevent the rearing unit from containing water, sediment (i.e. settled solids), and the aquatic animals being reared. Wastewater treatment systems include ponds to which “cleaning water” is directly discharged and culture units which are used for the temporary storage of settled solids removed from active culture units.

- b. The permittee must provide an oral report to EPA-New England within 24 hours of discovery of any “**reportable failure**” as defined in item “a.” immediately above or damage that results in a material discharge of pollutants, describing the cause of the failure or damage in the containment system and identifying materials that have been released to the environment as a result of this failure.
- c. The permittee must provide a written report to EPA-New England within 7 days of discovery of the failure or damage documenting the cause, an estimate of the material released as a result of the failure or damage, and steps being taken to prevent a recurrence.

3. *Spills*

In the event a spill of drugs, pesticides or feed occurs that results in a discharge to water of the United States, the permittee must provide an oral report of the spill to EPA-New England and the NHDES-WD within 24 hours of its occurrence and a written report within 7 days to the above Agencies. The report shall include the identity and quantity of the material spilled.

4. *Best Management Practices (BMP) Plan*

The permittee must develop, implement and maintain a BMP Plan on site, hereinafter referred to as the **PLAN**, that describes how the requirements listed under this section below will be achieved and will make the current version of that **PLAN** available to EPA-New England and/or the NHDES-WD upon request. The permittee shall implement the intent of the BMP requirements described below upon the permit’s effective date; however, the permittee has **180 days following the permit’s effective date** to certify in writing to EPA-New England and the NHDES-WD that a written **PLAN** has been developed in accordance with requirements listed in this part and must submit that certification with the appropriate DMR.

Also, the permittee shall amend the **PLAN** within 30 days following any change in facility design, construction, operation, or maintenance which affects the potential for the discharge of pollutants into surface waters or after the EPA-New England and/or the NHDES-WD determine certain changes are required following a permit limit/**PLAN** exceedance, facility inspection, or review of the **PLAN**. The permittee shall place in the **PLAN** written documentation of each amended change along with a brief description stating the reason for said amendment including the date the change

triggering said amendment occurred. In that documentation, the permittee shall also state the specific date the amended **PLAN** was implemented.

Below is a list of requirements that must be addressed in that **PLAN**, at a minimum.

a. *Solids control*

- i. 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 feed and waste products to waters of the United States.
- ii. In order to minimize the discharge of accumulated solids from settling ponds and basins and production systems, identify and implement procedures for routine cleaning of rearing units and off-line settling basins, and procedures to minimize any discharge of accumulated solids during the inventorying, grading and harvesting aquatic animals in the production system. **Part I.A.8.** above prohibits the direct discharge of cleaning water absent some form of solids removal prior to discharge.
- iii. If any material is removed from the rearing units and/or settling ponds, describe where it is to be placed and the techniques used to prevent it from re-entering the surface waters from any on-site storage. If the material is removed from the site, describe who received the material and it's method of disposal and/or reuse.
- iv. Remove and dispose of aquatic animals mortalities properly on a regular basis to prevent discharge to waters of the United States, except in cases where EPA-New England authorizes such discharges in order to benefit the aquatic environment.

b. *Biological control*

- i. Describe in detail the precautions that will be exercised by the facility to prevent aquatic organisms that are not indigenous nor naturalized to New Hampshire waters from becoming established in the local surface waters.
- ii. Provide a description for the storage and treatment of discharges to prevent biological pollution (non-indigenous organisms including fish parasites and fish pathogens and dead or dying fish) from entering the receiving water when the cultured fish population or a portion thereof are showing signs of stress.

c. *Materials storage*

- i. Ensure proper storage of drugs, pesticides, and feed in a manner designed to

prevent spills that may result in the discharge of drugs, pesticides or feed to water of the United States.

- ii. Implement procedures for properly containing, cleaning, and disposing of any spilled material.
- d. *Structural maintenance*
- i. Inspect the production system and the wastewater treatment system on a routine basis in order to identify and promptly repair any damage.
 - ii. Conduct regular maintenance of the production system and the wastewater treatment system in order to ensure that they are properly functioning.
- e. *Recordkeeping*
- i. In order to show how representative feed conversion ratios were calculated, maintain records for aquatic animal rearing units documenting the feed amounts and estimates of the number and weight of aquatic animals.
 - ii. In order to show how the maximum concentration of Formaldehyde in the discharge was derived, maintain records by outfall of the approach/analyses used to determine the elapsed time from its dosage to its maximum (peak) effluent concentration.
 - iii. Keep records documenting the frequency of cleaning, inspections, maintenance and repairs. In addition, records of all medicinal and chemical usage (i.e., for each occurrence) at the facility shall be recorded and filed in the **PLAN** to include the dosage concentration, frequency of application (hourly, daily, etc.) and the duration (hours, days) of treatment, and the method of application.
- f. *Training*
- i. In order to ensure the proper clean-up and disposal of material adequately train all relevant facility personnel in spill prevention and how to respond in the event of a spill.
 - ii. Train staff on the proper operation and cleaning of production and wastewater treatment systems including training in feeding procedures and proper use of equipment.
- g. *Aquaculture drugs and chemicals used for disease control and/or prevention*

List in the **PLAN** all aquaculture drugs and chemicals including all INAD and extralabel drugs and for each, identify:

- i. Product name and manufacturer.
- ii. Chemical formulation.
- iii. Purpose/reason for its use.
- iv. Dosage concentration, frequency of application (hourly, daily, etc.) and the duration (hours, days) of application.
- v. The method of application.
- vi. Material Safety Data Sheets (MSDS), Chemical Abstracts Service Registry number for each active therapeutic ingredient.
- vii. The method or methods, if any, used to detoxify the wastewater prior to its discharge.
- viii. Information on the persistence and toxicity in the environment.
- ix. Information on the USFDA approval for the use of said medication or chemical on fish or fish related products used for human consumption.
- x. Available aquatic toxicity data (vendor data, literature data, etc.); Lethal Concentration to 50 percent test organisms (LC_{50}) at 48 and/or 96 hours and No Effect Level (NOEL) concentrations for typical aquatic organisms (salmon, trout, daphnia, fathead minnow, etc.).

5. *General definitions*

- a. **Approved dosage** means the dose of a drug that has been found to be safe and effective under the conditions of a new animal drug application.
- b. **Aquatic animal containment system** means a culture or rearing unit such as a raceway, pond, tank, net or other structure used to contain, hold or produce aquatic animals. The containment system includes structures designed to hold sediments and other materials that are part of a wastewater treatment system.
- c. **Drug** means any substance defined as a drug in section 201(g)(2) of the Federal Food, Drug and Cosmetic Act (21 U.S.C. 321).
- d. **Extralabel drug use** means a drug approved under the Federal Food, Drug and Cosmetic Act that is not used in accordance with the approved label direction, see 21

CFR Part 530.

- e. **Investigational new animal drug (INAD)** means a drug for which there is a valid exemption in effect under section 512(j) of the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. 360b(j), to conduct experiments.
- f. **New animal drug application** is defined in 512(b)(1) of the Federal Food, Drug, and Cosmetic Act [21 U.S.C. 360(b)(1)].
- g. **Pesticide** means any substance defined as a “pesticide” in section 2(u) of the Federal Insecticide, Fungicide, and Rodenticide Act [7 U.S.C. 136(u)].

C. SPECIAL CONDITIONS

pH Limit Adjustment

The permittee may submit a written request to the EPA-New England requesting a change in the permitted pH limit range to be not less restrictive than 6.0 to 9.0 Standard Units. The permittee’s written request must include the State’s approval letter containing an original signature (no copies). The State’s letter shall state that the permittee has demonstrated to the State’s satisfaction that as long as discharges to the receiving water from a specific outfall are within a specific numeric pH range the naturally occurring receiving water pH will be unaltered. That letter must specify for each outfall the associated numeric pH limit range. Until written notice is received by certified mail from the EPA-New England indicating the pH limit range has been changed, the permittee is required to meet the permitted pH limit range in the respective permit.

D. REOPENER CLAUSE

This permit may be modified, or alternatively, revoked and reissued if, in the future: (1) an analysis of a Total Maximum Daily Load (TMDL) or any other water-quality study of Merrymeeting River performed by NHDES-WD and/or EPA-New England demonstrates the need for more stringent pollutant limits; and (2) nitrogen and/or phosphorus monitoring data demonstrates a reasonable potential to equal or exceed federal and/or state surface water-quality regulations either currently existing or those adopted in the future. Section 301(b)(1)(C) requires that a permit include all limits necessary to protect federal and state surface water-quality regulations. Results from a TMDL or any other water-quality study, not available at the time of permit reissuance, are considered “New Information” and the permit may be modified as provided in 40 CFR Section 122.62(a)(2).

E. MONITORING AND REPORTING CONDITIONS

Monitoring results shall be summarized for each calendar month and reported on separate Discharge Monitoring Report Form(s) (DMRs) postmarked no later than the 15th day of the month following the completed reporting period.

1. Signed and Dated original DMRs and all other reports or notifications required herein or in **Part II**, shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114-8127

2. Duplicate signed copies of all reports required in Section 1. immediately above shall be submitted to the State at:

New Hampshire Department of Environmental Services
Water Division
Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302-0095

All verbal reports required in **Parts I** and **II** of this permit shall be made to both EPA-New England and to NHDES-WD.

F. STATE PERMIT CONDITIONS

1. The permittee shall comply with the following conditions which are included as State Certification requirements.
 - a. The pH range of 6.5-8.0 Standard Units (S.U.) must be achieved in the final effluent unless the permittee can demonstrate to NHDES-WD: (1) that the range should be widened due to naturally occurring conditions in the receiving water or (2) that the naturally occurring receiving water pH is not significantly altered by the permittee's discharge. The scope of any demonstration project must receive prior approval from NHDES-WD. In no case, shall the above procedure result in pH limits outside of the range of 6.0 to 9.0 S.U., which is the federal effluent limitation guideline regulation for pH for secondary treatment and is found in 40 CFR §133.102(c).

- b. The permittee shall not at any time, either alone or in conjunction with any person or persons, cause directly or indirectly the discharge of waste into the said receiving water unless it has been treated in such a manner as will not lower the legislated water quality classification or interfere with the uses assigned to said water by the New Hampshire Legislature (RSA 485-A:12).
2. This NPDES Discharge Permit is issued by the EPA-New England under Federal and State law. Upon final issuance by the EPA-New England, the NHDES-WD may adopt this permit, including all terms and conditions, as a State permit pursuant to RSA 485-A:13.

Each Agency shall have the independent right to enforce the terms and conditions of this Permit. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of the Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation.