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"),

U.S. Department of the Interior
Fish and Wildlife Service

is authorized to discharge from the facility located at

White River National Fish Hatchery
RR#2, Box 140
Bethel, VT 05032

to receiving water named

White River (Connecticut River Drainage Area)

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

This permit shall become effective on the date of signature if no comments are received during public notice. If comments are received during public notice, this permit will become effective on the first day of the month following 60 days after signature.

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

This permit consists of 10 pages in Part I including effluent limitations and monitoring requirements; 25 pages in Part II, Standard Conditions; and Attachment A – Fresh Water Chronic Toxicity Test Procedure and Protocol.

Signed this ___ day of _____, 2008.

_____
Stephen S. Perkins, Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

PART I
A. EFFLUENT LIMITS AND MONITORING REQUIREMENTS

1. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial number **001,** treated fish culture water to the White River. 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.

EFFLUENT CHARACTERISTIC		EFFLUENT LIMITS			MONITORING REQUIREMENTS	
PARAMETER	UNITS	AVERAGE MONTHLY	AVERAGE WEEKLY	MAXIMUM DAILY	MEASUREMENT FREQUENCY	SAMPLE TYPE
FLOW	MGD	6.62	***	7.05	Daily[1]	Instantaneous
BOD_5	mg/l lbs/day	***	***	10 588	2X/Quarter[2]	Composite[3]
TSS	mg/l lbs/day	***	***	10 588	2X/Quarter[2]	Composite[3]
Total Ammonia, as N	mg/l	5.0	***	***	2X/Quarter[2]	Composite[3]
Total Nitrogen, as N [8]	mg/l	***	***	Report Only	2X/Quarter[2]	Composite[3]
Total Phosphorus, as P	mg/l	***	***	Report Only	2X/Quarter[2]	Composite[3]
pH	std units	(see condition I.A.3. of this permit)			Monthly	Grab
Dissolved Oxygen	mg/l	$\geq$ 7.0 mg/l			Quarterly, when formalin is in use[4]	Grab
Formaldehyde	mg/l	***	***	0.74	Quarterly, when formalin is in use[4]	Grab
Total Residual Chlorine[9]	mg/l	***	***	0.04	Daily, when in use	Grab
Whole Effluent Toxicity Testing[4, 5, 6, 7]	%	Acute LC_{50} $\geq$ 100% Chronic C-NOEC $\geq$ 25%			Quarterly, when formalin is in use[4]	Composite[3]

Footnotes:

1. Daily flows shall be recorded and the average monthly and maximum daily values shall be reported.

2. During each three-month period, one of the quarterly BOD, TSS, Total Ammonia, Total Nitrogen, and Total Phosphorus samples shall be taken immediately following a raceway cleaning and/or maintenance activity when pollutant concentrations in the discharge are likely to be at a maximum, rather than at a random operating time. The other quarterly sample for these pollutants shall be taken during normal operations when raceway cleaning is not occurring. The results of both samplings shall be reported separately on the DMRs

3. Composite Sampling - The composite samples shall consist of at least 8 grab samples collected at approximately equal intervals during the day. For those composite samples collected during cleaning operations:

    a. If raceway flows are continuously discharging through a settling pond or are diverted through a settling pond during cleaning, a representative composite sample shall be taken of the settling pond overflow, during cleaning operations.

    b. If raceway flows during cleaning operations are diverted to treatment lagoons which are continually discharging, a representative composite sample shall be taken of the lagoon discharge at the time of maximum concentration or design detention time, which ever is best representative of maximum concentration.

    c. If lagoons are batch discharged, a representative composite sample shall be taken at the time of discharge.

    d. If raceway or tanks are vacuumed, a representative composite sample of hatchery discharge shall be taken during the vacuuming cycle.

4. Sampling for dissolved oxygen, formaldehyde, and Whole Effluent Toxicity testing shall be conducted quarterly during formalin use, when effluent pollutant concentrations are likely to be at a maximum. Sampling is not required if formalin is not used during the quarter. In such cases, "No Discharge" shall be reported on the Discharge Monitoring Reports. The permittee is required to conduct Whole Effluent Toxicity (WET) testing following EPA Region I Protocols. The test species is *Ceriodaphnia*. A cover letter indicating the sampling location shall be submitted with the test results. The test results shall be submitted by the last day of the month following completion of the test. A test must be performed in accordance with test procedure and protocol specified in **Attachment A** of this permit.

5. The LC_{50} is the concentration of effluent which causes mortality to 50% of the test organisms. Therefore, a 100% limit means that a sample of 100% effluent (no dilution) shall cause no more than 50% mortality.

6. The C-NOEC (chronic-no observed effect concentration) is defined as the highest concentration of toxicant or effluent to which organisms are exposed in a life cycle or partial life cycle test which causes no adverse effect on growth, survival, or reproduction at a specific time of observation as determined from hypothesis testing where the test results exhibit a linear dose-response relationship. However, where the test results do not exhibit a linear dose-response relationship, the permittee must report the lowest concentration where there is no observable effect. The 25% or greater limit is defined as a sample which is composed of 25% (or greater) effluent, the remainder being dilution water

7. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, the permittee shall either follow procedures outlined in **Attachment A (Toxicity Test Procedure and Protocol**) **Section IV., DILUTION WATER** in order to obtain an individual approval for use of an alternate dilution water, or the permittee shall follow the Self-Implementing Alternative Dilution Water Guidance which may be used to obtain automatic approval of an alternate dilution water, including the appropriate species for use with that water. This guidance is found in Attachment G of NPDES Program Instructions for the Discharge Monitoring Report Forms (DMRs) which is sent to all permittees with their annual set of DMRs and may also be found on the EPA, Region I web site at http://www.epa.gov/region1/enforcementandassistance/dmr.html. If this guidance is revoked, the permittee shall revert to obtaining individual approval as outlined in **Attachment A**. Any modification or revocation to this guidance will be transmitted to the permittees as part of the annual DMR instruction package. However, at any time, the permittee may choose to contact EPA-New England directly using the approach outlined in **Attachment A**.

8. Total Nitrogen shall be determined by performing the "Total Kjeldahl Nitrogen (as N)" test and the "Nitrate-Nitrite (as N)" test and adding the two test results together to produce a value for mg/l of Total Nitrogen.

9. Total residual chlorine monitoring is required only during periods when chlorination is carried out at the hatchery (i.e. when the "sea-run egg disinfection program" is occurring). A note indicating the start and end dates of chlorination shall be indicated on the monthly Discharge Monitoring Report. The limitation is in effect year-round.

   The minimum level (ML) for total residual chlorine is defined as 20 µg/l. This value is the minimum level for chlorine using EPA approved methods found in the most currently approved version of Standard Methods for the Examination of Water and Wastewater, Method 4500 CL-E and G, or USEPA Manual of Methods of Analysis of Water and Wastes, Method 330.5. One of these methods must be used to determine total residual chlorine. For effluent limitations less than 20 ug/l, compliance/non-compliance will be determined based on the ML. Sample results of 20 µg/l or less shall be reported as zero on the discharge monitoring report.

I.A. (Continued)

2. The discharge shall not cause a violation of the water quality standards of the receiving waters.

3. The pH of the effluent shall not be less than 6.5 nor greater that 8.5 standard units (SU) at any time.

4. The discharge shall not cause objectionable discoloration of the receiving waters.

5. The effluent shall not contain visible oil sheen, foam, floating solids, or settleable solids at any time.

6. The permittee shall not discharge into the receiving water any pollutant or combination of pollutants in toxic amounts.

7. There shall be no discharge of untreated wastewaters resulting from cleaning accumulated solids in the raceways, culture tanks, screens and associated equipment.

8. The results of sampling for any parameter done more often than its required frequency in accordance with EPA approved methods must also be reported.

9. The permittee shall notify EPA within 24-hours upon the occurrence of a water quality induced mortality of greater than 25 percent in any aquatic species under culture at the facility in accordance with reporting requirements in the Standard Conditions, Part II.D.1.e.

10. In accordance with 40 Code of Federal Regulations (CFR) §122.42, all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

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

        (1) One hundred micrograms per liter (100 µg/l);

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

        (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or

        (4) Any other notification level established by the Director in accordance with 40 CFR §122.44(f) and Massachusetts regulations.

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

(1) Five hundred micrograms per liter (500 µg/l);

(2) One milligram per liter (1 µg/l) for antimony;

(3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or

(4) Any other notification level established by the Director in accordance with 40 CFR §122.44(f) and Massachusetts regulations.

c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

11. 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.

12. 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 Clean Water Act, 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.

13. Any change in: 1) the fish species to be raised at this facility or, 2) the development stage to be attained at this facility, will require written notification to EPA and possible permit modification.

14. There shall be no discharge of untreated wastewaters resulting from cleaning accumulated solids in the raceways, culture tanks, screens and associated equipment.

15. Medications and Disease Control Chemicals

a. The permittee shall use only medications and disease control chemicals in dosages and combinations as included in the Best Management Practices (BMP) plan [See Part I.A.16.d.iv.]

and as approved for appropriate uses by the U.S. Food and Drug Administration (USFDA), U.S. Fish and Wildlife Service (USF&WS), and EPA.

b. The permittee shall use these medications and chemicals as needed to treat a disease or disease-causing conditions. The prophylactic use of disease control medications is prohibited.

c. The permittee shall notify, within 24 hours by telephone and within 5 working days in writing, the Regional Administrator at EPA-Region I and the U.S. Fish and Wildlife Service of the emergency use or the immediate intended use of any medication and/or chemical not specifically identified in the Best Management Practices Plan as described below.

d. The Regional Administrator or the Director will notify the permittee when the use of a specific chemical described in item c., immediately above, is unacceptable or that the dosage, concentration, or frequency level must be modified to protect the aquatic community in the receiving water.

16. Best Management Practices (BMP) Plan

a. A Best Management Practices (BMP) plan shall be developed. The plan shall identify Best Management Practices (BMPs) to be followed in operating the facility, cleaning the raceways/culture tanks, screens and other equipment and disposing of any solid waste. BMPs means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. The purpose of the plan is to identify and to describe the practices which prevent or minimize the amounts of pollutants (biological, chemical and medicinal) discharged to surface waters.

b. The BMP plan shall be completed and signed within **90 days after the effective date** of this permit. The permittee shall certify the BMP plan has been updated and that it meets the requirements of this permit. The certification shall be signed in accordance with the requirements identified in 40 CFR §122.22. A copy of the certification shall be sent to EPA within **120 days after the effective date** of this permit. A current copy of the plan shall be maintained at the facility.

c. The BMP plan shall be amended as necessary and appropriate during the life of the permit. Specifically, the permittee shall amend and sign the BMP plan within **30 days following a change** in facility design, construction, operation, or maintenance which affects the potential for the discharge of pollutants into surface waters. The amended BMP plan shall be certified and the amended plan and certification shall be forwarded to the regulatory agencies as described in item b above within **60 days after the facility change**.

d. The BMP Plan shall include, at a minimum, the following items:

i. During operations:

(1) A description of the pollution control equipment or methods used to enhance solids collection.

(2) A description of how excessive solids buildup will be identified to trigger more frequent cleaning of the raceways/culture tanks and equipment thereby preventing more suspended and dissolved materials in the discharge.

(3) A description of feeding methods used to minimize the amount of feed residual in the discharge.

(4) A description of the preventative maintenance program for cleaning equipment so that delays in cleaning due to equipment failures are avoided.

(5) A description of the analyses and model (if one is used) used to determine the time of maximum concentration based on dosage, injection point, facility flow, etc.

ii. Biological Pollution

(1) Describe, in detail, the precautions that will be exercised by the facility to prevent aquatic organisms that are not indigenous to the New England area and/or the United States from becoming established in the local surface waters.

(2) A description for storage and treatment of Outfall 001 discharge during plant upsets to prevent biological pollution (non-native organisms, fish parasites, and fish diseases) from entering the receiving water in the case of an untreated discharge bypass.

iii. Cleaning of culture tanks/raceways and other equipment

(1) Describe in detail how the accumulated solids are to be removed, dewatered and methods of disposal.

(2) Describe where the removed material 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 to be removed from the site, describe who receives the material and its method of disposal and/or reuse.

iv. Medications and chemicals used in the facility

(1) List in the plan all medications and chemicals that are expected to be used in

the culture tanks/raceways. For each medication or chemical, identify:

(a) Product name of the medication or chemical.

(b) The chemical formulation of the medication or chemical.

(c) The purpose or use of the chemical.

(d) The dosage concentration, frequency of application (hourly, daily, etc.) and the duration (hours, days) of treatment.

(e) The method of application.

(f) Material Safety Data Sheets (MSDS), Chemical Abstracts Service (CAS) Registry number for each active therapeutic ingredient.

(g) The method or methods used to detoxify the wastewater prior to discharge following application of chemical and/or medication.

(h) Information on the persistence and toxicity of each medication or chemical.

(i) Information on the Food and Drug Administration (USFDA) approval for the use of said medication or chemical on fish or fish related products used for human consumption.

(j) Available aquatic toxicity data for each medication or chemical used (vendor data, literature data, etc.); LC_{50} at 48 and/or 96 hours and No Observed Effect Level (NOEL) concentrations for typical aquatic organisms (salmon, trout, daphnia, fathead minnow, etc.).

v. Personnel Training

(1) Describe the training to be provided for employees to assure they understand the goals and objectives of the BMPs, the requirements of the NPDES Permit and their individual responsibilities for complying with the goals and objectives of the BMP Plan and the NPDES permit.

vi. BMP Records Maintenance

(1) Records of the calculations done at the time of sampling must be maintained at the facility in order that an inspector may verify that the sampling was properly

conducted.

B. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfall(s) listed in Part I A.1.of this permit. Discharges of wastewater from any other point sources are not authorized by this permit and shall be reported in accordance with Section D.1.e. (1) of the Part II standard conditions of this permit (Twenty-four hour reporting).

C. MONITORING AND REPORTING

Monitoring results obtained during each calendar month shall be summarized and reported on Discharge Monitoring Form(s) postmarked no later that the 15th day of the following month.

Signed and dated originals of these, and all other reports required herein, shall be submitted to EPA at the following address:

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

Additional monitoring and recordkeeping requirements are contained in Section C of the Part II Standard Conditions of this permit. Section C includes, but is not limited to, the requirements to record: the date, exact place, and time of sampling, measurements, and analyses; the individual(s) who performed the sampling, measurements, and analyses; the analytical techniques or methods used; and the results of such analyses. Section C of Part II also includes the requirements to retain records of all monitoring information, including all data, for a period of at least 3 years from the date of the sample, measurement, report or application.

Additional reporting requirements are contained in Section D of the Part II Standard Conditions of this permit. Section D requires reporting of monitoring results on a Discharge Monitoring Report (DMR), as well as reporting within 24 hours of any noncompliance which may endanger health or the environment. Section D also requires reporting to EPA if a variety of conditions exist, including planned changes to the facility and anticipated or unanticipated noncompliance. This section also sets the signatory and public availability requirements of reports sent to EPA.