

**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"),

PCC Structural, Inc.

is authorized to discharge from a facility located at

**24 Granite Street
Northfield, New Hampshire 03276**

to receiving water named

Winnepesaukee River (Hydrologic Code; 01070002)

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

The permit shall become effective on signature.

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

This permit supersedes the permit issued on June 1, 2001 and subsequently modified on April 23, 2002.

This permit consists of 10 pages in Part I including effluent limitations, monitoring requirements, etc., Attachment A, Freshwater Chronic Toxicity Test Procedure and Protocol (7-pages), and 25-pages in Part II, which includes General Conditions and Definitions.

Signed this 1st day of September, 2008

/S/ SIGNATURE ON FILE

Stephen S. Perkins, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency
New England Region
Boston, Massachusetts

PART I.**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

1. During the period beginning on the effective date of this permit and lasting through the expiration date, the permittee is authorized to discharge non-contact cooling water from outfall Serial Number 001 into the Winnepesaukee 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	Discharge Limitations		Monitoring Requirement	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Flow; 001, MGD	Report	0.22	1/Week	Totalizer ¹
Temperature, °C	Report	32.2 (90°F)	3/Week	Grab
pH ² , Standard Units	Range: 6.5 - 8.0 (See PART I.C.2)		1/Week	Grab

Note: See page 3 for explanation of superscripts.

EXPLANATION OF SUPERSCRIPTS TO PART I.A.1.a ON PAGE 2

- (1) Outfall 001 effluent discharge shall be monitored by a continuous recording flow meter containing a totalizer.
- (2) This is a State of New Hampshire Certification requirement. Refer to Section I.C. for specific reporting requirements. The pH of the effluent shall not be less than 6.5 or greater than 8.0 at any time, unless in compliance with conditions specified in PART I.C.2.

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. No biocides, solutions or chemicals are to be added to the non-contact cooling water.
4. The permittee is no longer permitted to discharge non-contact cooling water from Outfall 003.
5. The permittee shall report to EPA-New England and NHDES 120 days prior to the initiation of any facility changes that would alter the non-contact cooling water systems from which the Outfall 001 discharge is derived.
6. The discharge must remain free from pollutants in concentrations or combinations that settle to form harmful deposits, float as foam, debris, scum or other visible pollutants. It shall 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.
7. The permittee shall not discharge into the receiving water any pollutant or combination of pollutants in toxic amounts.
8. The discharge shall not cause the turbidity in the receiving water to exceed naturally occurring conditions by more than 10 Nephelometric Turbidity Units (NTU) as specified in Env-Wq 1703.11.
9. The Regional Administrator reserves the right to modify this permit to incorporate additional Chemical Specific and/or Toxicity Testing requirements including limits if a result of any toxicity tests of the receiving waters in

the vicinity of the permittee's outfall indicates the permittee's discharge causes or has a "reasonable potential" to cause the exceeding of any water-quality criterion. Results from these toxicity test are considered "new information" and the permit may be modified as provided in the Code of Federal Regulations (CFR) §122.62(a)(2).

10. All existing manufacturing, commercial, mining, and silvicultural dischargers, in accordance with 40 CFR §122.42, must notify the EPA and NHDES-WD as soon as they know or have reason to believe (as summarized):
 - a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant (as defined in 40 CFR §122.2) 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 ug/L);
 - (2) Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (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).
 - 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 ug/L);
 - (2) One milligram per liter (1 mg/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).

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. 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 the effluent limitation in the permit; or

b. Controls any pollutants not limited in the permit.

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

B. MONITORING AND REPORTING

Discharge Monitoring Report Form(s) are to be postmarked no later than the 15th day of the month following the completed sampling period.

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

U.S. Environmental Protection Agency
Region 1
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114-8127

Duplicate signed copies of all reports and information required herein 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 or notifications shall be made to both EPA and NHDES.

C. STATE PERMIT CONDITIONS

1. 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. The pH of the discharge shall be in the range of 6.5 to 8.0 Standard Units (s.u.) unless the upstream ambient pH in the receiving water is outside of this range and it is not altered by the facility's discharge or activities. If the permittee's discharge pH is lower than 6.5 s.u., the permittee may demonstrate compliance by showing that the discharge pH was either higher than, or no more than 0.5 s.u. lower than, the ambient upstream receiving water pH. If the permittee's discharge pH is higher than 8.0 s.u., the permittee may demonstrate compliance by showing that the discharge pH is either lower than, or no more than 0.5 s.u. higher than, the upstream receiving water pH. For this demonstration the upstream receiving water sample must be collected on the same day as the discharge pH is measured.
3. This NPDES Discharge Permit is issued by EPA under Federal and State law. Upon final issuance by EPA, the New Hampshire Department of Environmental Services-Water Division (NHDES-WD) may adopt this permit, including all terms and conditions, as a State permit pursuant to RSA 485-A:13.
4. EPA shall have the right to enforce the terms and conditions of this Permit pursuant to federal law and

NHDES-WD shall have the right to enforce the Permit pursuant to state law, if the Permit is adopted. 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.

D. Special Conditions

1. The permittee's non-contact cooling water intake structure (CWIS) shall reflect the best technology available (BTA) for minimizing the adverse environmental impacts due to the CWIS. In order to satisfy this BTA requirement, the permittee shall comply with the following requirements:
 - a. The permittee shall install removable screens at the discharge end of the two 10-inch river water intake pipes so that the screens extend into the sump and can be visually inspected for impinged fish from above. The mesh size of the screen barrier shall be sized to preclude the passage of adult and juvenile fish and not to increase the through screen velocity above 0.5 ft/sec. The design of these screens shall allow for their removal and visual inspection.
 - b. The CWIS intake shall not exceed 0.25 MGD. In addition, the permittee shall operate its variable speed pump to withdraw non-contact cooling water (NCCW) such that only the minimum required amount of cooling water is pumped to meet the facility's cooling demands.
 - c. The permittee, when appropriate and after obtaining all required permits, shall remove built up sediment from the non-contact cooling water intake pipe suctions and/or the pipes' interior. Sediment build up at the suction end or interior to the cooling water intake pipes shall not cause the through screen velocity of the impingement screens to exceed 0.5 ft/sec.
2. Within six months of the effected date of this permit, the permittee shall implement an Impingement Monitoring Program at the CWIS. The Impingement Monitoring Program shall include the following:

- a. All locations in the CWIS where fish could potentially be impinged or trapped shall be included as inspection sites. These sites shall include the two impingement screens and the cooling water wet well.
- b. Visual inspection of these sites shall take place a minimum of three times per week at evenly spaced intervals (e.g. Monday, Wednesday and Friday) and shall take place only when the CWIS is in use. Monitoring shall be for all fish species.
- c. A monitoring log must be maintained on-site to document the program and shall include the following information:
 - i. Date and time of each inspection;
 - ii. Name of observer/operator; and
 - iii. Average water withdrawal profile at the facility since the last inspection; e.g., number of pumps on and speed, intake flow, etc.
- d. If any adult or juvenile fish are observed against the impingement screens, the following information must also be collected:
 - i. The CWIS intake location; e.g., upstream or downstream intake pipe, where each fish was found; and
 - ii. The number of fish; and for each fish observed:
 1. The identification of each fish species; if possible;
 2. The total length of each fish;
 3. The condition of the fish (alive, injured, dead); and
 4. The treatment of the fish (released or discarded).
- e. The log book shall contain appropriate reference material to ensure that those involved in planning and conducting the inspection have the necessary knowledge and ability to (1) ensure sampling accuracy and effectiveness, including the ability to identify all fish found in this area to the species level, and (2) return trapped organisms to the river by means designed to maximize their survival.

The monitoring log must be made available for review by EPA, NHDES, or NHFG when requested.

- f. All live adult and juvenile fish and other aquatic organisms impinged or trapped on or in the CWIS shall be returned to the river by means designed to maximize their survival. All solid materials except for naturally occurring materials such as leaves, branches, and grass will be removed from the trash racks and will not be discharged to the water.
5. Any unusual impingement event must be reported to the EPA, the NHDES, and the NHFGD within 24 hours by telephone. If the permittee observes four (4) or more fish on the CWIS during any one of the following situations, this would qualify as an unusual impingement event, warranting notification: 1) during a required impingement monitoring program observation event, 2) at any time the CWIS is viewed, or 3) when the cumulative number of individual fish observed on the CWIS totals four (4) or more based on multiple observations over the course of any 24-hour period. The 24-hour notice must be followed with a written report.

The written report, to be submitted within ten working days of the event, shall include the following information:

- a. The species, sizes, and approximate number of fish involved in the incident.
 - b. The time and date of the occurrence.
 - c. The operating mode of the facility, including the estimated volume of intake water.
 - d. The permittee's opinion as to the reason the incident occurred.
 - e. The remedial action the permittee will take to prevent or reduce the likelihood of a recurrence of the incident, to the maximum extent practicable.
6. Whole Effluent Toxicity (WET) Testing.
- a. The Permittee shall conduct a one-time Whole Effluent Toxicity (WET) test. The WET test shall be conducted in the calendar quarter following the calendar quarter during which the permit becomes effective. Toxicity test results are to be submitted by the 15th day of the month following the end of the quarter

tested.

- b. The WET tests conducted shall be a chronic (and modified acute) procedure on effluent samples using two species, Daphnid (Ceriodaphnia dubia) and Fathead Minnow (Pimephales promelas) following the protocol listed in ATTACHMENT A, *Freshwater Chronic Toxicity Test Procedure and Protocol*, dated May 2007).
- c. This Permit shall be modified, or alternatively, revoked and reissued to incorporate additional toxicity testing requirements, including chemical specific limits, if the results of the WET tests indicate the discharge exceeds any State of New Hampshire water quality criterion. Results from these toxicity tests are considered "New Information" and the Permit may be modified as provided in 40 CFR Section 122.62(a)(2).
- d. LC50 is the concentration of wastewater (effluent) causing mortality to 50 percent (%) of the test organisms.
- e. 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 (growth, survival, and/or reproduction) exhibit a linear dose-response relationship. However, where the test results do not exhibit a linear dose-response relationship, report the lowest concentration where there is no observable effect. See ATTACHMENT A (VII. TOXICITY TEST DATA ANALYSIS) for additional clarification.