Admin #407

UBLIC SERVICE
Company of New Hampshire 1000 Elm St., P.O. Box 330, Manchester, N.H. 03105
Telephone (603) 669-4000

February 16, 1979

U. S. Environmental Protection Agency
Permits Branch-Permit Administration Section
JFK Federal Building, Room 2100
Boston, Massachusetts 02203

Attention: Mr. William C. Guanci

Reference: Mr. E. J. Conley's Letter of 9/14/78
NPDES Permit #NH0001465

Gentlemen:

Attached are our re-application forms for permit #NH0001465 (Merrimack Station) as requested by the above referenced letter. Also, enclosed is a five page listing of various modifications which we would like to see included in the new permit. These modifications include a rewritten section on biological monitoring (currently Part 1, Section A-10 of the permit), a rewritten section on temperature monitoring and power spray module (PSM) operation (currently Part 1, Section A-11 of the permit), a new section covering dissolved oxygen and pH monitoring and a revised 003A-- ash settling pond effluent limitation section (currently Part 1, Section A-3 of the permit).

In the February 14, 1979, meeting of the New Hampshire Water Supply and Pollution Control Commission, a recommendation by the Commission's technical staff and the New Hampshire Fish and Game Department to approve these modifications was considered. The Commission is essentially in agreement with the proposed changes and will be in contact with the EPA in the near future concerning these changes. Let me TEL about this.

It is our understanding that the biological and chemical parameter (aluminum and chromium) monitoring requirements in question are basically State established requirements. With this understanding, we hope that timely comments by the State Water Supply and Pollution Control Commission will enable a quicker and more efficient permit re-application process. Technical supporting data for these proposed modifications will be submitted at a later date.

A check made payable to the Environmental Protection Agency in the amount of ten dollars ($10.00), to fulfill the application fee requirement, is also enclosed.

T. E. LANDRY
FEB 20 1979

If you have any questions concerning this application, please contact Mr. Jeffrey B. Lander, or the writer at (603) 669-4000.

Very truly yours,

W. A. Harvey

Warren A. Harvey
Vice President

WAH:jr

Attachments

cc: J. B. Lander
T. L. Fowke
W. E. Nelson
F. J. Coolbroth
R. Nylander - NHWSPCC

Form Approved
OMB No. 158-R0096

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
APPLICATION FOR PERMIT TO DISCHARGE - SHORT FORM C

FOR AGENCY USE

APPLICATION NUMBER									
DATE RECEIVED									
YEAR		MO.		DAY					

To be filed only by persons engaged in manufacturing and mining

Do not attempt to complete this form before reading accompanying instructions

Please print or type

1. Name, address, location, and telephone number of facility producing discharge

A. Name Public Service Company of New Hampshire - Merrimack Station

B. Mailing address

1. Street address 1000 Elm Street (P.O. Box 330)
2. City Manchester
3. State New Hampshire
4. County Hillsborough
5. ZIP 03105

C. Location:

1. Street River Road
2. City Bow
3. County Merrimack
4. State New Hampshire

D. Telephone No. (603) 669-4000 Ext. 2288

Area Code

2. SIC ☐☐☐☐ (Leave blank)

3. Number of employees 98

If all your waste is discharged into a publicly owned waste treatment facility and to the best of your knowledge you are not required to obtain a discharge permit, proceed to item 4. Otherwise proceed directly to item 5.

4. If you meet the condition stated above, check here ☐ and supply the information asked for below. After completing these items, please complete the date, title, and signature blocks below and return this form to the proper reviewing office without completing the remainder of the form.

A. Name of organization responsible for receiving waste

B. Facility receiving waste:

1. Name
2. Street address
3. City
4. County
5. State
6. ZIP

5. ☐ Principal product, ☒ raw material (Check one) Coal

6. Principal process Coal fired steam generation for electric power productior

7. Maximum amount of principal product produced or raw material consumed per (Check one)

Basis	Amount							
	1-99 (1)	100-199 (2)	200-499 (3)	500-999 (4)	1000-4999 (5)	5000-9999 (6)	10,000-49,999 (7)	50,000 or more (8)
A. Day					X			
B. Month								
C. Year								

EPA Form 7550-8 (1-73)

Region I Additional Information:

1. When did this or when will this discharge begin December 1960 (date).
2. If this discharge began or will begin after Jan. 1, 1975, when did construction (including contractual obligations) commence NA (date).

8. Maximum amount of principal product produced or raw material consumed, reported in item 7, above, is measured in (Check one):

A.☐ pounds B.☒ tons C.☐ barrels D.☐ bushels E.☐ square feet

F.☐ gallons G.☐ pieces or units H.☐ other, specify _____

9. (a) Check here if discharge occurs all year ☒, or

(b) Check the month(s) discharge occurs:

1.☐ January 2.☐ February 3.☐ March 4.☐ April 5.☐ May 6.☐ June

7.☐ July 8.☐ August 9.☐ September 10.☐ October 11.☐ November 12.☐ December

(c) Check how many days per week: 1.☐ 1 2.☐ 2-3 3.☐ 4-5 4.☐ 6-7

10. Types of waste water discharged to surface waters only (check as applicable)

Discharge per operating day	Flow, operating gallons per day					Volume treated before discharging (percent)				
	0.1-999 (1)	1000-4999 (2)	5000-9999 (3)	10,000-49,999 (4)	50,000- or more (5)	None (6)	0.1-29.9 (7)	30-64.9 (8)	65-94.9 (9)	95-100 (10)
A. Sanitary, daily average										
B. Cooling water, etc. daily average					X					X
C. Process water, daily average					X		X			
D. Maximum per operating day for total discharge (all types)					X					

(10 Line A, B or C)

11. If any of the three types of waste identified in item 9, either treated or untreated, are discharged to places other than surface waters, check below as applicable.

Waste water is discharged to:	Average flow, gallons per operating day				
	0.1-999 (1)	1000-4999 (2)	5000-9999 (3)	10,000-49,999 (4)	50,000 or more (5)
A. Municipal sewer system					
B. Underground well					
C. Septic tank		X			
D. Evaporation lagoon or pond					
E. Other, specify					

12. Number of separate discharge points: A.☐ 1 B.☒ 2-3 C.☐ 4-5 D.☐ 6 or more

13. Name of receiving water or waters Merrimack River

14. Does your discharge contain or is it possible for your discharge to contain one or more of the following substances added as a result of your operations, activities, or processes: ammonia, cyanide, aluminum, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc, phenols, oil and grease, and chlorine (residual). A.☒ yes B.☐ no

I certify that I am familiar with the information contained in the application and that to the best of my knowledge and belief such information is true, complete, and accurate.

Warren A. Harvey
Printed Name of Person Signing

Vice President
Title

2/16/79
Date Application Signed

W. A. Harvey
Signature of Applicant

18 U.S.C. Section 1001 provides that:

Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious, or fraudulent statements or representations; or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than 5 years, or both.

b. Pump Entrainment Monitoring, American Shad Ichthyoplankton.

American Shad ichthyoplankton pump entrainment monitoring at the Merrimack Generating Station shall be reactivated for the period June 15 to July 15 when significant numbers* of American Shad have been restored to the Hooksett Pond reach of the Merrimack River. Ichthyoplankton pump entrainment monitoring will be conducted at Unit I for 24 continuous hours, twice per week. Continuation of this program beyond the first year of reactivation will be the subject of negotiation between the NHWS&PCC and Regional Administrator, and the permittee, after review of monitoring program results.

The NHWS&PCC, with the aid of its technical staff and on advice of the Fish and Game Department, shall determine when the reactivation of this program is required and will provide the permittee with ample advance notice of the necessity for the program's reactivation. A monitoring program report will be submitted to the NHWS&PCC and the Regional Administrator on an annual basis.

*"Significant numbers," as referred to in the first paragraphs of sections a. (1), a. (2), and b, above, will be construed to mean a substantial increase in the population of shad or salmon residing within the Hooksett Pond reach of the Merrimack River or migrating past the Merrimack Generating Station.

PSNH PUBLIC SERVICE Company of New Hampshire

February 16, 1979

MERRIMACK STATION NPDES PERMIT NO. NH0001465 MODIFICATIONS

Biological Monitoring.

a. Impingement Monitoring, Juvenile Anadromous Fish.

(1) American Shad Juveniles:
Juvenile American Shad impingement monitoring at the Merrimack Generating Station shall be reactivated for the period September 15 to October 31, when significant numbers* of American Shad have been restored to the Hooksett Pond reach of the Merrimack River. Impingement monitoring will be conducted for 48 continuous hours per week and will alternate between Units I and II. Continuation of this program beyond the first year of reactivation will be the subject of negotiation between the NHWS&PCC and Regional Administrator, and the permittee, after review of monitoring program results.

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(2) Atlantic Salmon Smolts:
Emigrating Atlantic Salmon smolt impingement monitoring at the Merrimack Generating Station shall be reactivated for the period April 15 to June 15, when significan numbers* of emigrating Atlantic Salmon smolts are expected to pass through the Hooksett Pond reach of the Merrimack River in the vicinity of Merrimack Generating Station. Impingement monitoring will be conducted for 48 continuous hours per week and will alternate between Units I and II. Continuation of this program beyond the first year of reactivation will be the subject of negotiation between the NHWS&PCC and Regional Administrator, and the permittee, after review of monitoring program results.

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Temperature Monitoring and Power Spray Module (PSM) Operation.

a. Continuous River Surface Temperature Monitoring.

Continuous river surface temperature monitoring in the vicinity of the Merrimack Generating Station shall be continued on the following basis. Open-river surface-water temperatures will be continuously monitored at control station N-10, effluent discharge station Zero, and mixing zone station S-4. The discharge station Zero temperature monitoring probe will remain in place and in operation year-round. The N-10 and S-4 station temperature monitoring probes will be removed from the river and from operation in the fall when ambient river water temperatures have dropped to 40°F (4.4°C) or below and replaced and restored to operation when ambient river water temperatures have risen to 40°F or above in the spring. Ambient river water temperatures in this case are defined as measured at station N-10 for the fall probe removal and at the Merrimack Station Unit II condenser inlet water box for the spring probe replacement.

Monitoring program data shall be submitted to the NHWS&PCC and the Regional Administrator on an annual basis.

b. Power Spray Module (PSM) Operation.

Power Spray Module operation at the Merrimack Generating Station shall be suspended between October 1 and June 1 provided river flow exceeds 2500 cfs at Garvins Falls and the ambient river temperature is less than 68°F (20°C) and there is no unforeseen reason for cooling module operation within that period. During the period between June 1 and October 1, the PSM system will be operated at maximum capacity when the river temperature exceeds 68°F, regardless of flow conditions, to insure the maximum water cooling effect is maintained. Operation of the PSM's will be such that starting and stopping of the system will take place gradually to minimize rapid temperature changes.

12. Dissolved Oxygen and pH Monitoring.

a. The permittee shall continuously monitor the pH of both an ambient river control station and the circulating water discharge. The circulating water discharge shall be monitored at the point of cooling canal discharge into the Merrimack River (in the vicinity of the cooling canal boom and river station Zero-west). The ambient river control station will be at a Merrimack Station inlet structure (river station N-5).

b. The permittee shall continuously monitor the dissolved oxygen content of both an ambient river control station and the circulating water discharge. The circulating water discharge shall be monitored at the point of cooling canal discharge into the Merrimack River (in the vicinity of the cooling canal boom and river station Zero-west). The ambient river control station will be at a Merrimack Station inlet structure (river station N-5).

c. Monitoring program data shall be submitted to the NHWS&PCC and the Regional Administrator on an annual basis.

During the period beginning and lasting through
the permittee is authorized to discharge from outfall(s) serial number(s) 003A--ash settling pond (discharges occuring during routine operation) an effluent that shall not exceed the following conditions.
Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations kg/day (lbs/day)		Other Units (Specify)		Monitoring Requirements	
	Daily Avg	Daily Max	Daily Avg	Daily Max	Measurement Frequency	Sample Type
Flow—m^3/Day (MGD)	—	—	(5.0)	(9.0)	Continuous	Daily average and range
Suspended Solids			30.0 mg/1	100.0 mg/1	Weekly	Grab
Total Chromium			0.5mg/1	1.0 mg/1	Monthly	Grab
Total Zinc			0.2 mg/1	0.5 mg/1	Monthly	Grab
Total Nickel			0.5 mg/1	1.0 mg/1	Monthly	Grab
Total Copper			1.0 mg/1	1.0 mg/1	Monthly	Grab
Total Aluminum			1.0 mg/1	2.0 mg/1	Monthly	Grab
Total Iron			1.0 mg/1	1.0 mg/1	Monthly	Grab
Total Manganese			0.2 mg/1	0.4 mg/1	Monthly	Grab
Total Phosphorus			0.5 mg/1	0.8 mg/1	Monthly	Grab
Oil and Grease		None visible		None visible	Observation Daily	

The pH shall be monitored biweekly with a grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Point of discharge before dilution with circulating water (at the weir).

The aforementioned non-routine discharges during chemical cleaning operations or other extraordinary waste processing shall occur on no more than 30 days during each year. The permittee shall notify the Regional Administrator at least 24 hours in advance of such operations and furnish an estimate of the length of time over which such operations shall occur.

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