

Permit No. NH0001473
Page 1 of 24

**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"),

Public Service Company of New Hampshire
Schiller Station

is authorized to discharge from the facility located at
Portsmouth, New Hampshire 03801

to receiving waters named:
Piscataqua River

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

This permit shall become effective 30 days after the date of signature.

This permit and the authorization to discharge expires at midnight, five years from the effective date.

This permit supersedes the permit issued on December 31, 1984.

This permit consists of 24 pages in Part I including effluent limitations, monitoring requirements, etc., and 22 pages in Part II including General Conditions and Definitions.

Signed this 11th day of September 1990

Edward K. McSweeney
Director
Water Management Division
Environmental Protection Agency
Region I
Boston, MA

Amity

PART I

A. Effluent Limitations and Monitoring Requirements

1. Except as specified in Paragraph 1 through 17 herein, the permittee shall not discharge to Piscataqua River, a final effluent to which it has added any pollutants.
 - a. Chlorine may be used as a biocide. No other biocide shall be used without explicit approval from the Regional Administrator and the Commissioner. The chlorination cycle shall not exceed two hours in any one day for any one unit. Simultaneous chlorination is allowed.
 - b. The discharges shall not jeopardize any Class B use of the Piscataqua River and shall not violate applicable water quality standards. Pollutants which are not limited by this permit, but which have been specifically disclosed in the permit application, may be discharged at the frequency and level disclosed in the application, provided that such discharge does not violate Section 307 or 311 of the Act or applicable water quality standards.
 - c. All live fish, shellfish, and other aquatic organisms collected or trapped on the intake screens shall be returned to their natural habitat. All solid materials removed from the screens shall have land disposal.
 - d. This permit shall be modified, revoked or reissued to comply with any applicable effluent standard or limitation issued or approved under Section 301(b)(2)(C) and (D), 304(b)(2), and 207(a)(2) of the Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in this permit; or
 - (2) controls any pollutant not limited by this permit.

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

- e. The term "Regional Administrator" means the Regional Administrator of Region I of the U. S. Environmental Protection Agency and the term "Director" means the Director of the Water Supply & Pollution Control Division of the New Hampshire Department of Environmental Services.
- f. It has been determined, based on engineering judgement, that the circulating water intake structure presently employs the best technology available for minimizing adverse environmental impact. Any change in the location, design or capacity of the present structure shall be approved by the Regional Administrator and the Director. The present design shall be reviewed for conformity to regulations pursuant to Section 316(b) of the Act when such are promulgated.
- g. *25 ppmw/s* The permittee may add a maximum of 2.75 mg/l of ferrous sulfate ($\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$) for one hour per day for each unit (Units #3, #4, #5 and #6) for 5 days a week to prevent erosion in the condenser tubes. 2.75 mg/l of ferrous sulfate heptahydrate is equivalent to 0.5 mg/l of ferrous ion (Fe^{++}) concentration. Any increase in the use of ferrous sulfate must be approved by the Director and Regional Administrator prior to use.
- h. The combined thermal plumes for the station shall;
(a) not block zone of fish passage, (b) not change the balanced indigenous population of the receiving water, and (c) have minimal contact with the surrounding shorelines.
- i. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.
- j. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe (40 CFR 122.42):
1. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (a) One hundred micrograms per liter (100 ug/l);

- (b) 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;
 - (c) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. §122.21(g)(7); or
 - (d) Any other notification level established by the Director in accordance with 40 C.F.R. §122.44(f) and New Hampshire regulations.
2. 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:"
- (a) Five hundred micrograms per liter (500 ug/l);
 - (b) One milligram per liter (1 mg/l) for antimony;
 - (c) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. §122.21(g)(7); or
 - (d) Any other notification level established by the Director in accordance with 40 C.F.R. §122.44(f) and New Hampshire regulations.
- k. To substantiate the source of several heavy metals (cadmium, nickel, and mercury) not normally associated with power plant discharges, the permittee is required to take concurrent grab samples of intake and discharge from Unit #3 within 60 days after the effective date of the permit for comparative heavy metals analyses. The results shall be reported to EPA and the State 90 days after the effective date of the permit.

1. To determine whether application data (Form 2-C) for Outfall 012A represents a normal, chemical cleaning, or combination of both discharges, the permittee is required to take two samples from the wastewater treatment facility. The first sample shall be taken within 60 days after the effective date of the permit. The second sample shall be taken during the first metal cleaning operation after the effective date of the permit. Both samples shall be analyzed for all heavy metals identified in Appendix D, Table III of 40 CFR 122.21 with the exception of cyanide and phenol.

- m. Water drawn from fuel oil tanks shall not be discharged into the Piscataqua River without treatment.

2. Coal Conversion

- (1) At the discretion of the Regional Administrator and/or the Director during the life of the permit, the permittee may be required to perform any or all of the analyses outlined in Subparagraphs (2), (3), and (4) whenever coal of radically different chemical characteristics (new source) is or will be used at the station.
- (2) The permittee shall maintain the previously established test program for evaluating the chemical composition of the following liquid and solid streams:
 - (a) Coal as received.*
 - (b) Coal pile runoff during and after a rain storm.
 - (c) Wastewater treatment system discharge.
- (3) The streams (subparagraph (2) above) shall be sampled twice simultaneously by grab samples on two different days when burning coal. The stream analysis shall include the following parameters where applicable but are not to be limited to:
 - (a) Flow rate (gpd or lbs/day)
 - (b) Total Suspended Solids
 - (c) Total Dissolved Solids
 - (d) pH
 - (e) BOD
 - (f) COD
 - (g) TOC
 - (h) Antimony (Total)
 - (i) Arsenic (Total)
 - (j) Beryllium (Total)
 - (k) Cadmium (Total)
 - (l) Chromium (Total)
 - (m) Copper (Total)
 - (n) Lead (Total)
 - (o) Mercury (Total)
 - (p) Nickel (Total)
 - (q) Selenium (Total)
 - (r) Silver (Total)
 - (s) Thallium (Total)
 - (t) Zinc (Total)
 - (u) Iron (Total)
 - (v) Manganese (Total)
 - (w) Nitrate
 - (x) Sulfate
 - (y) Sulfite (WWTS only)

* Parameters (a) through (g) are not included in analysis of "coal as received".
- (4) The metals shall be reported both as stream concentration and the pounds per day in that stream.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

3. 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**:
~~Unit #3 Circulating Water Discharge (Non-Contact Cooling Water); #1 and #2 Boiler Drains; Station Steam Heat Drains; Northwest Yard Drain; Oil Separator Non-Contact Cooling Water; Unit #3 Blowdown; deaerator drains and overflows; gland seal water.~~

- a. Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average Monthly</u>	<u>Daily Maximum</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow (MGD)	40.0	40.0	Continuous	Calculate
Oil and Grease (mg/l)	15	20	Monthly	Grab
Maximum Temperature, T _{max}	—	95 ^o F	Hourly, When on-line	Grab
Temperature rise, ΔT*	—	25 ^o F	Hourly, When on-line	Calculate
Total Residual Chlorine (mg/l)	—	0.2	Daily, When in use	Grab
Ferrous Sulfate as Fe ⁺⁺ (mg/l)	—	0.5	Monthly, When in use	Calculate

* The temperature rise (ΔT) limitation is increased from 25^oF to 30^oF for a two hour period during condenser maintenance.

** Previously designated as Outfall 001A

- b. At no time shall the discharge cause the receiving water to exceed a maximum temperature of 84^oF at a distance of 200 feet in any direction from the point of discharge.
- c. The pH shall not be less than 6.5 standard units nor greater than 8.0 standard units, or shall be as naturally occurs in the receiving water.
- d. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- e. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at a representative point prior to discharge into receiving water.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

4. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 015**: Waste Treatment Plant #1 Effluent.*
- a. Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average Monthly</u>	<u>Daily Maximum</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow (GPD)	61,800	85,300	Daily	Estimate
Oil and Grease <i>Mg/L</i>	15.0	20.0	Monthly	Grab

* This discharge will only be used during essential maintenance of waste treatment plant #2 (outfalls 016 and 017); i.e. sludge removal from the fireside basin. Only treated plant demineralization reagent wastes, chem lab drains, oil separator wastes, and other routine wastes from day-to-day operation may be discharged. Waste treatment plant #1 is not allowed to treat coal pile runoff, metal cleaning wastes, or any wastestreams not specified in the 1984 NPDES permit for outfall 001.

** Previously designated as Outfall 001B

- b. The pH shall not be less than 6.5 standard units nor greater than 8.0 standard units and shall be monitored continuously. Report range.
- c. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- d. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at a representative point prior to mixing with discharge 001.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

4. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 015**: Waste Treatment Plant #1 Effluent.*

a. Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average Monthly</u>	<u>Daily Maximum</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow (GPD)	61,800	85,300	Daily	Estimate
Oil and Grease (mg/l)	15.0	20.0	Monthly	Grab

* This discharge will only be used during essential maintenance of waste treatment plant #2 (outfalls 016 and 017); e.g. sludge removal from the fireside basin. Only treated plant demineralization reagent wastes, chem lab drains, oil separator wastes, and other routine wastes from day-to-day operation may be discharged. Waste treatment plant #1 is not allowed to treat coal pile runoff, metal cleaning wastes, or any waste streams not specified in the 1984 NPDES permit for outfall 001.

** Previously designated as Outfall 001B

- b. The pH shall not be less than 6.5 standard units nor greater than 8.0 standard units and shall be monitored continuously. Report range.
- c. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- d. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at a representative point prior to mixing with discharge 001.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

5. 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: Unit #4 Circulating Water System (Non-Contact Cooling Water); Condenser Hotwell Drains.

a. Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average Monthly</u>	<u>Daily Maximum</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow (MGD)	43.5	52.2	Continuous	Calculate
Total Residual Chlorine (mg/l)	---	0.2	Daily, When in use	Grab
Ferrous Sulfate as Fe ⁺⁺ (mg/l)	---	0.5	Monthly, When in use	Calculate
Maximum Temperature, T _{max}	---	95 ^o F	Hourly, When On-line	Grab
Temperature rise, ΔT*	---	25 ^o F	Hourly, When On-line	Calculate

* The temperature rise (ΔT) limitation is increased from 25^oF to 30^oF for a two hour period during condenser maintenance.

- b. At no time shall the discharge cause the receiving water to exceed a maximum temperature of 84^oF at a distance of 200 feet in any direction from the point of discharge.
- c. The pH shall not be less than 6.5 standard units nor greater than 8.0 standard units, or shall be as naturally occurs in the receiving water.
- d. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- e. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at a representative point prior to discharge into receiving water.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

6. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 003: Unit #5 Circulating Water System (Non-Contact Cooling Water); Condenser Hotwell Drains.
- a. Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average Monthly</u>	<u>Daily Maximum</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow (MGD)	50.2	50.2	Continuous	Calculate
Total Residual Chlorine (mg/l)	—	0.2	Daily, When in use	Grab
Ferrous Sulfate as Fe ⁺⁺ (mg/l)	—	0.5	Monthly, When in use	Calculate
Maximum Temperature, T _{max}	—	95 ^o F	Hourly, When On-line	Grab
Temperature rise, ΔT*	—	25 ^o F	Hourly, When On-line	Calculate

* The temperature rise (ΔT) limitation is increased from 25^oF to 30^oF for a two hour period during condenser maintenance.

- b. At no time shall the discharge cause the receiving water to exceed a maximum temperature of 84^oF at a distance of 200 feet in any direction from the point of discharge.
- c. The pH shall not be less than 6.5 standard units nor greater than 8.0 standard units, or shall be as naturally occurs in the receiving water.
- d. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- e. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at a representative point prior to discharge into receiving water.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

7. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 004: Unit #6 Circulating Water System (Non-Contact Cooling Water); Condenser Hotwell Drains.

a. Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average Monthly</u>	<u>Daily Maximum</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow (MGD)	50.2	50.2	Continuous	Calculate
Total Residual Chlorine (mg/l)	---	0.2	Daily, When in use	Grab
-Ferrous Sulfate as Fe ⁺⁺ (mg/l)	---	0.5	Monthly, When in use	Calculate
Maximum Temperature, T _{max}	---	95 ^o F	Hourly, When On-line	Grab
Temperature rise, ΔT*	---	25 ^o F	Hourly, When On-line	Calculate

* The temperature rise (ΔT) limitation is increased from 25^oF to 30^oF for a two hour period during condenser maintenance.

- b. At no time shall the discharge cause the receiving water to exceed a maximum temperature of 84^oF at a distance of 200 feet in any direction from the point of discharge.
- c. The pH shall not be less than 6.5 standard units nor greater than 8.0 standard units, or shall be as naturally occurs in the receiving water.
- d. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- e. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at a representative point prior to discharge into receiving water.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

8. 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: Emergency Boiler Blowdowns, Deaerator Overflows. The outfall consists of 6 pipes; 2 for each of Unit #s 4, 5, 6.

a. Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average</u> <u>Monthly</u>	<u>Daily</u> <u>Maximum</u>	<u>Measurement</u> <u>Frequency</u>	<u>Sample</u> <u>Type</u>
Flow, Gallons	—	Report	When in use	Estimate
Flow Duration, hours	—	Report	When in use	Estimate

b. This discharge consists only of boiler blowdowns during an emergency condition or when a boiler experiences a severe disruption. The duration and the amount of flow shall be estimated when the discharge occurs and shall be reported in the succeeding Discharge Monitoring Report. The flow estimate shall not include the steam portion of the discharge.

c. The discharge shall consist of boiler condensate only. There shall be no discharge of process wastes, cleaning wastes, or sanitary wastes from this discharge point.

d. The pH of the emergency discharge will be measured and reported in the Discharge Monitoring Report each time there is a discharge. The permittee will evaluate pH control methods for the emergency blowdowns. If the State or EPA, after review of the reports, find the frequency of the discharges too high and the pH outside the standard range of 6.5 to 8.0 standard units, the permit may be modified or reissued with more stringent pH discharge limitations.

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

f. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at a representative point prior to discharge into receiving water. The continuous blowdown sampling station shall be a representative point. *DA overflow use Boiler Feed pH*

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

9. 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: Dock Boiler House Boiler Blow-down, Softener Regenerations.

a. Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average</u> <u>Monthly</u>	<u>Daily</u> <u>Maximum</u>	<u>Measurement</u> <u>Frequency</u>	<u>Sample</u> <u>Type</u>
Flow (GPD)	16,000	24,500	Daily when in use	Estimate

- b. The permittee will note zero (0) for all parameters in the Discharge Monitoring Reports when outfall 007 is not in use.
- c. The temperature of the discharge shall at no time cause the receiving water to exceed a maximum of 28.9°C (84°F) at any distance of 200 feet from the point of discharge into the receiving water. The maximum temperature at the point of discharge shall at no time exceed 212°F.
- d. The thermal plume shall not interfere with the natural reproductive cycles of the indigenous populations within the water body segment.
- e. The thermal plume shall not interfere with the natural movements and migratory pathways of the indigenous populations within the water body segment.
- f. The pH shall not be less than 6.5 standard units nor greater than 8.0 standard units and shall be monitored continuously.
- g. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- h. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at a representative point prior to discharge into the receiving water.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

10. 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: Dock Boiler House Floor and Equipment Drains, Heater Drips.

a. Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average</u> <u>Monthly</u>	<u>Daily</u> <u>Maximum</u>	<u>Measurement</u> <u>Frequency</u>	<u>Sample</u> <u>Type</u>
Flow (GPD)	3750	7500	Monthly	Estimate
Oil and Grease (mg/l)	15.0	20.0	Monthly	Grab

b. The permittee will note zero (0) for all parameters in the Discharge Monitoring Reports when Outfall 008 is not in use.

c. The pH shall not be less than 6.5 standard units nor greater than 8.0 standard units, or shall be as naturally occurs in the receiving water, and shall be monitored monthly by grab sample.

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

e. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at a representative point prior to discharge into the receiving water.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

11. 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: Dock Boiler House Boiler Drains, Dock Boiler House Start-up Blowdown. ✓

a. Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average</u> <u>Monthly</u>	<u>Daily</u> <u>Maximum</u>	<u>Measurement</u> <u>Frequency</u>	<u>Sample</u> <u>Type</u>
Flow (GPD)	250	4000	Daily when in use	Estimate

- b. The permittee will note zero (0) for all parameters in the Discharge Monitoring Reports when Outfall 009 is not in use.
- c. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- d. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at a representative point prior to discharge into the receiving water.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

12. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 011: Schiller Station Tank Farm Drains. The effluent from 3 individual pipes combine to create the culverted outfall. The discharge of snow and ice shall be accounted for in a reasonable manner.

a. Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average Monthly</u>	<u>Daily Maximum</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow (GPD)	115,000	230,000	Daily	Estimate
Oil and Grease (mg/l)	15.0	20.0	Monthly	Grab

b. The pH shall not be less than 6.5 standard units (s.u.) nor greater than 8.0 s.u., unless due to naturally occurring conditions. The pH shall be within 0.5 s.u. of the rainfall when the pH is outside the above range. Rainfall pH shall be monitored when the discharge is monitored and shall be reported in the discharge monitoring report. The pH shall be monitored monthly by grab sample. *Use rain pH of the storm closest to the discharge date monthly four grab samples*

c. There shall be no discharge of floating solids or visible foam in other than trace amounts. *report the range*

d. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at a representative point prior to discharge into the receiving water. The combined discharge of the 3 individual pipes shall be considered a representative sampling point.

PART I

Minor Modification No. 1
Permit No. NH0001473
Page 16 of 24

May 29 1991

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

12. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 011: Schiller Station Tank Farm Drains. The effluent from 3 individual pipes combine to create the culverted outfall. The discharge of snow and ice shall be accounted for in a reasonable manner.

a. Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average Monthly</u>	<u>Daily Maximum</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow (GPD)	115,000	230,000	Daily	Estimate
Oil and Grease (mg/l)	15.0	20.0	Monthly	Grab

- b. The pH shall not be less than 6.5 standard units (s.u.) nor greater than 8.0 s.u., unless due to naturally occurring conditions. The pH shall be within 0.5 s.u. of the rainfall when the pH is outside the above range. A range of rainfall pH shall be monitored when the discharge is monitored and shall be reported, with all other data taken during the month in which the discharge occurs, in the discharge monitoring report. The pH shall be monitored monthly by grab sample. Each grab sample shall consist of four grabs.
- c. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- d. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at a representative point prior to discharge into the receiving water. The combined discharge of the 3 individual pipes shall be considered a representative sampling point.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

13. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 013, Emergency Spillway Overflow. The discharge of snow and ice shall be accounted for in a reasonable manner.

a. Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average</u> <u>Monthly</u>	<u>Daily</u> <u>Maximum</u>	<u>Measurement</u> <u>Frequency</u>	<u>Sample</u> <u>Type</u>
Flow Gallons	---	Report	When in use	Estimate
Flow Duration, hours	---	Report	When in use	Estimate

- b. This discharge shall consist only of stormwater from the coal pile area during an emergency condition resulting from an actual storm that exceeds the design storm (10 years - 24 hour occurrence). The duration and the amount of flow shall be estimated when the spillway is used and shall be reported in the succeeding Discharge Monitoring Report.
- c. The discharge shall consist of stormwater runoff only. There shall be no discharge of process wastes, cleaning wastes, or sanitary wastes from this discharge point.
- d. There shall be no discharge of floating solids or visible foam in other than trace amounts due to materials added by station operation.
- e. The pH of the emergency sluiceway discharge and the pH of the rain will be measured and reported in the Discharge Monitoring Report each time the coal pile runoff collection pond discharges via the emergency sluiceway. The company will evaluate pH control methods for the emergency sluiceway. If the State or EPA after review of the reports find the frequency of the discharge is too high and the pH too low when compared to the rainfall, the permit may be modified or reissued with more stringent pH discharge limitations.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

14. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 016*: Wastewater Treatment Facility Discharge, treated wastewater discharge during normal plant operations, and effluent shall not exceed the following conditions.

a. Such discharge shall be limited and monitored by the permittee as specified below:

WWT #2

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average Monthly</u>	<u>Daily Maximum</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow (GPD)	216,000	360,000	Continuous	—
Oil and Grease (mg/l)	15.0	20.0	Weekly	Grab
Total Suspended Solids (mg/l)	30.0	100.0	Weekly	24 hr. Composite
Total Iron (mg/l)	—	1.0	Weekly	24 hr. Composite
Total Copper (mg/l)	—	1.0	Weekly	24 hr. Composite

* Previously designated as Outfall 012A.

- b. The pH shall not be less than 6.5 standard units nor greater than 8.0 standard units, and shall be monitored continuously.
- c. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- d. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at a representative point prior to mixing with discharge 018.

PART I

Minor Modification No. 1
 Permit No. NH0001473
 Page 18 of 24

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

14. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 016*: Wastewater Treatment Facility #2 Discharge, treated wastewater discharge during normal plant operations, and effluent shall not exceed the following conditions.

a. Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average</u> <u>Monthly</u>	<u>Daily</u> <u>Maximum</u>	<u>Measurement</u> <u>Frequency</u>	<u>Sample</u> <u>Type</u>
Flow (GPD)	216,000	360,000	Continuous	---
Oil and Grease (mg/l)	15.0	20.0	Weekly	Grab
Total Suspended Solids (mg/l)	30.0	100.0	Weekly	24 hr. Composite
Total Iron (mg/l)	----	1.0	Weekly	24 hr. Composite
Total Copper (mg/l)	----	1.0	Weekly	24 hr. Composite

* Previously designated as Outfall 012A.

- b. The pH shall not be less than 6.5 standard units nor greater than 8.0 standard units, and shall be monitored continuously.
- c. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- d. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at a representative point prior to mixing with discharge 018.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

15. During the period beginning effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 017*: Wastewater Treatment Facility #2 Discharge, treated wastewater discharge during boiler chemical cleaning operations only, and effluent that shall not exceed the following conditions.

a. Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average Monthly</u>	<u>Daily Maximum</u>	<u>Measurement** Frequency</u>	<u>Sample Type</u>
Flow (GPD)	----	360,000	Continuous	---
Oil and Grease (mg/l)	15.0	20.0	Daily	Grab
Total Suspended Solids (mg/l)	30.0	100.0	Daily	24 hr. Composite
Total Iron (mg/l)	----	1.0	Daily	24 hr. Composite
Total Copper (mg/l)	----	1.0	Daily	24 hr. Composite

* Previously designated as Outfall 012A.

** Samples to be taken daily during boiler chemical cleaning operations (approx. frequency is once every 12 to 36 months for each boiler unit).

- b. The pH shall not be less than 6.5 standard units nor greater than 8.0 standard units, and shall be monitored continuously.
- c. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- d. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at a representative point prior to mixing with discharge 018.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

16. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 018*: Schiller Station Yard Drains, Newington Station Tank Farm Yard Drains. The discharge of snow and ice shall be accounted for in a reasonable manner.

a. Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average</u> <u>Monthly</u>	<u>Daily</u> <u>Maximum</u>	<u>Measurement</u> <u>Frequency</u>	<u>Sample</u> <u>Type</u>
Flow (GPD)	300,000	600,000	Daily	Estimate
Oil and Grease (mg/l)	15.0	20.0	Monthly	Grab

* Previously designated as Outfall 012B.

- b. The pH shall not be less than 6.5 standard units (s.u.) nor greater than 8.0 s.u., unless due to naturally occurring conditions. The pH shall be within 0.5 s.u. of the rainfall when the pH is outside the above range. A range of rainfall pH shall be monitored when the discharge is monitored and shall be reported, with all other data collected during the month in which the discharge occurs, in the discharge monitoring report. The pH shall be monitored monthly by grab sample. Each grab sample shall consist of four grabs.
- c. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- d. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at a representative point prior to mixing with discharge 016 and 017.

The following conditions are a consequence of the fact that the group is finite and the action is transitive. The first condition is that the stabilizer of a point is a subgroup of the group. The second condition is that the orbit of a point is a coset of the stabilizer. The third condition is that the action is faithful. The fourth condition is that the action is free. The fifth condition is that the action is regular.

The following conditions are equivalent:

- (1) The action is regular.
- (2) The action is free and transitive.
- (3) The action is free and the stabilizer of a point is trivial.
- (4) The action is free and the orbit of a point is the whole set.
- (5) The action is free and the stabilizer of a point is the identity element.

The following conditions are equivalent:

- (1) The action is regular.
- (2) The action is free and transitive.
- (3) The action is free and the stabilizer of a point is trivial.
- (4) The action is free and the orbit of a point is the whole set.
- (5) The action is free and the stabilizer of a point is the identity element.

The following conditions are equivalent:

- (1) The action is regular.
- (2) The action is free and transitive.
- (3) The action is free and the stabilizer of a point is trivial.
- (4) The action is free and the orbit of a point is the whole set.
- (5) The action is free and the stabilizer of a point is the identity element.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

17. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall(s) serial number(s) 019*, 020*, 021*, and 022*, intake screen wash for Units #3, #4, #5 and #6, an effluent subject to the following conditions:

a. Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average</u> <u>Monthly</u>	<u>Daily</u> <u>Maximum</u>	<u>Measurement</u> <u>Frequency</u>	<u>Sample</u> <u>Type</u>
Flow GPD per unit	—	108,000	Monthly	Estimate

* Designated as Outfall(s) XXX in Form 2C of Application.

- b. The temperature of the discharge shall at no time exceed the temperature of the intake water used for this discharge.
- c. All live fish, shellfish and other organisms collected or trapped on the intake screens should be returned to their habitat, sufficiently distant from the intake structures to prevent re-impingement. All solid materials removed from the screens shall have land disposal.
- d. The pH shall not be less than 6.5 standard units nor greater than 8.0 standard units, or as naturally occurs.
- e. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- f. Samples taken in compliance with the monitoring requirements specified above shall be taken at some representative point prior to discharge to the receiving water.

Don't need to take daily pH

B. Biological Monitoring

No biological monitoring is required. Future monitoring may be required, however, upon permit reissuance. Any incidence of unusual fish entrapment shall be reported to the Regional Administrator, the Director, and the Executive Director of the New Hampshire Fish and Game Department immediately, by telephone report. A written confirmation report is to be provided within 30 days. These reports should include the following:

- a. The kinds, sizes and approximate number of fish entrapped.
- b. The time and date of the occurrence.
- c. The operating mode of the plant at the time of occurrence.
- d. The opinion of the Company as to the reason that the entrapment occurred.

C. MONITORING AND REPORTING

1. Reporting

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

Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Director and the State at the following addresses:

Environmental Protection Agency
NPDES Program Operations Section
P.O. Box 8127
Boston, MA 02114

The state agency is:

Department of Environmental Services
Water Supply & Pollution Control Division
Permits and Compliance Section
Hazen Drive, P.O. Box 95
Concord, New Hampshire 03301

D. STATE PERMIT CONDITIONS

1. The permittee shall comply with the following conditions which are included as State Certification requirements.

- a. The permittee shall not at any time, either alone or in conjunction with any person or persons, cause directly or indirectly the discharge of any waste into the said receiving waters except that has been treated in such a manner as will not lower the Class B quality or interfere with the uses assigned to said waters by the New Hampshire Legislature (Chapter 311, Laws of 1967).
- b. The total chlorine residual of the effluent shall not 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, the permittee being so notified.