

AR 164

The State of New Hampshire



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Water Supply and Pollution Control Commission

6 Hazen Drive - P.O. Box 95

Concord, N.H. 03301-6528

May 2, 1986

Mr. Warren A. Harvey, Vice President
Public Service Company of New Hampshire
P. O. Box 330
Manchester, New Hampshire 03105

Subject: NPDES Permit No. NH0001473 - Schiller Station

Dear Mr. Harvey:

The purpose of this letter is to inform you of our evaluation of your compliance with the subject NPDES permit. A copy of this compliance evaluation will be included, as required, in our annual report to the U.S. Environmental Protection Agency.

Enclosed are copies of the Compliance Monitoring Results, Summary of Self-Monitoring Results, and the NPDES Compliance Inspection Report.

The Compliance Monitoring Results, pages 2-4, indicate that Schiller Station had one permit violation at discharge 012B for pH. The presence of trichloromethane was also detected in discharge 012A (wastewater treatment facility).

The Summary of Self-Monitoring Results, pages 5-10, indicate that Schiller Station violated maximum daily limits for iron at discharge 012A. At the remaining cooling water discharges the results indicate several violations of monthly average flow limits and daily maximum flow, temperature, temperature change, and pH limits.

Violations of permit limits could have adverse effects on the water quality of the Piscataqua River. Every effort should be made to correct these violations.

Mr. Warren A. Harvey, Vice-President
May 2, 1986
Page 2

In addition to the above, the following deficiencies were noted during our inspection:

- The fireside equalization basin contains five feet of sludge out of a total depth of eleven feet.
- Although analyses are being performed, the oil and grease results for discharge 011 are not being reported.
- The composite sampler for discharge 012A is not cooled to 4^o Celsius.
- It was reported that two cooling water discharges, possibly from sump drains in the valve shacks, are not permitted.
- Discharge 005 has been tied into the fireside equalization basin and discharges 007, 008, and 009 may also be eliminated. Permit modifications are required for these changes.

Relative to the above deficiencies, please perform the following as soon as time permits but no later than the dates indicated:

1. On or before July 1, 1986 remove the sludge from the fireside basin. Please also report on the results of the proposed installation of mixers in this basin.
2. On or before May 15, 1986 submit the past year's oil and grease sampling results for discharge 011 and begin reporting the results-monthly.
3. Immediately provide cooling for the composite sampler to insure a temperature of 4^o Celsius.
4. On or before May 15, 1986 write to:

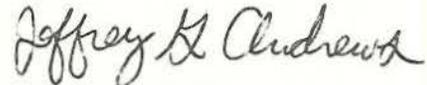
Mr. Stephen Silva, Chief
Industrial Permits Section
Compliance Branch
U. S. Environmental Protection Agency
John F. Kennedy Federal Building
Boston, Massachusetts 02203

with a copy to this office, and request that your permit be modified to include the two unpermitted cooling water discharges, and report that discharge 005 has been directed to the fireside basin. If discharges 007, 008 and 009 are to be eliminated, this fact should also be reported.

Mr. Warren A. Harvey, Vice-President
May 2, 1986
Page 3

If you have any questions relative to this report or our requirements, do not hesitate to call me at (603)271-2457.

Very truly yours,



Jeffrey G. Andrews, P.E.
Sanitary Engineer II
Industrial Waste Division

JGA/mjh
Enclosures

cc: Stephen Silva, EPA - Boston
Allan Palmer, PSNH - Manchester

NEW HAMPSHIRE
WATER SUPPLY
and
POLLUTION CONTROL
COMMISSION

COMPLIANCE MONITORING REPORT

Permit No: NH0001473

Discharger: Public Service Company of New Hampshire
Schiller Station

Address: P. O. Box 150, Portsmouth, NH

Receiving Water: Piscataqua River

Sampling Period: March 31, 1986 - April 1, 1986

Sample Type: Automatic 13.5 - Hour Composite, Grabs

Collected By: Jeffrey G. Andrews

Analysis By: N.H. Water Supply & Pollution Control Commission Laboratory

PSNH - SCHILLER STATION
COMPLIANCE MONITORING RESULTS

Permit No. NH0001473

Sampling Date: March 31, 1986 - April 1, 1986

<u>Effluent Characteristic</u>	<u>Discharge Limitations*</u>			<u>Monitoring Results</u>		
	<u>mg/l</u>	<u>lbs/day</u>	<u>other</u>	<u>mg/l</u>	<u>lbs/day</u>	<u>other</u>
<u>Discharge 012A (Wastewater Treatment Facility)</u>						
Flow, MGD			.216(.360)			.088
Oil and Grease	15.0(20.0)			<0.1		
TSS	30.0(100.0)			22.0		
Iron	(1.0)			0.3		
Copper	(1.0)			Lab Error		
pH			6.5-8.0 S.U.			7.4 S.U.
Volatile Organics** trichloromethane						5.0 ug/l
Biototoxicity (<u>Daphnia Pulex</u>)**						NCIST [#]

*This refers to calendar month average, with operating day maximum in parentheses.
 **Additional sampling, not required in permit.
 #No calculated in stream toxicity.

PSNH - SCHILLER STATION

COMPLIANCE MONITORING RESULTS (Page 2)

Permit No. NH0001473

Sampling Date: March 31, 1986 - April 1, 1986

<u>Effluent Characteristic</u>	<u>Discharge Limitations*</u>			<u>Monitoring Results</u>		
	<u>mg/l</u>	<u>lbs/day</u>	<u>other</u>	<u>mg/l</u>	<u>lbs/day</u>	<u>other</u>
<u>Discharge 001A</u>						
Flow, MGD (Estimated)			.0066(.026)			Not Estimated
Oil and Grease	15.0(20.0)			<0.1		
pH			6.5-8.0 S.U.			8.0 S.U.
<u>Discharge 001B (No Discharge, Unit No. 3 Seawater Recirculation Water)</u>						
<u>Discharges 002, 003, 004 (Not Monitored, Units No. 4-6 Seawater Recirculation Water)</u>						
<u>Discharge 005 (Discharge Has Been Eliminated)</u>						
<u>Discharge 006</u>						
Flow, MGD (Estimated)			.0163(.0327)			Not Estimated
pH			6.5-8.0 S.U.			7.6 S.U.
<u>Discharges 007, 008, 009 (No Discharges - Dock House Boiler Off Line)</u>						

*This refers to calendar month average, with operating day maximum in parentheses.

PSNH - SCHILLER STATION
COMPLIANCE MONITORING RESULTS (Page 3)

Permit No. NH0001473

Sampling Date: March 31, 1986 - April 1, 1986

<u>Effluent Characteristic</u>	<u>Discharge Limitations*</u>			<u>Monitoring Results</u>		
	<u>mg/l</u>	<u>lbs/day</u>	<u>other</u>	<u>mg/l</u>	<u>lbs/day</u>	<u>other</u>
<u>Discharge 010</u>						
Flow, MGD (Estimated)			.0072(.02)			Not Estimated
Oil and Grease	15.0(20.0)			<0.1		
<u>Discharge 011</u>						
Flow, MGD (Estimated)			.115(.23)			Not Estimated
Oil and Grease	15.0(20.0)			<0.1		
pH			6.5-8.0 S.U.			7.1 S.U.
<u>Discharge 012B</u>						
Flow, MGD (Estimated)			.269(.538)			Not Estimated
Oil and Grease	15.0(20.0)			<0.1		
pH			6.5-8.0 S.U.			8.5 S.U.
<u>Discharge 013 (Emergency Spillway - No Discharge)</u>						
<u>Sump in Valve Shacks[#]</u>						
Oil and Grease				<0.1		
pH						7.9 S.U.

*This refers to calendar month average, with operating day maximum in parentheses.

#Unpermitted Discharge - 2 pipes, 50% of sample from each.

PSNH - SCHILLER STATION

SUMMARY OF SELF MONITORING RESULTS

Permit No. NH0001473

Report Period: March 31, 1986 - April 1, 1986

<u>Effluent Characteristics</u>	<u>Units</u>	<u>Discharge Limitations*</u>	<u>Number of Permit Exceptions*</u>	<u>Number of Samples</u>	<u>Range of Calendar Month Averages</u>	<u>Operating Day Maximum</u>
<u>Discharge 012A</u>						
Flow	MGD	.216(.360)		Continuous	.019-.067	.127
Oil and Grease	mg/l	15.0(20.0)		52	<1.0-6.7	19.5
TSS	mg/l	30.0(100.0)		52	1.3-17.4	34.0
Iron	mg/l	(1.0)	(2)	52		2.4
Copper	mg/l	(1.0)		52		0.9
pH	S.U.	6.5-8.0		Continuous		6.5-8.0
<u>Discharge 001A</u>						
Flow	MGD	.0066(.026)	12(11)	12	.067-.58	.618
Oil and Grease	mg/l	15.0(20.0)		12	<1.0-6.6	6.6
pH	S.U.	6.5-8.0		12		6.5-8.0

*This refers to calendar month average, with operating day maximum in parentheses.

**For pH, "Number of Permit Exceptions" refers to number of months in which pH violations occurred, and "Operating Day Maximum" refers to both maximum and minimum pH reported.

PSNH - SCHILLER STATION
SUMMARY OF SELF MONITORING RESULTS (Page 2)

Permit No. NH0001473

Report Period: March 31, 1986 - April 1, 1986

<u>Effluent Characteristics</u>	<u>Units</u>	<u>Discharge Limitations*</u>	<u>Number of Permit Exceptions*</u>	<u>Number of Samples</u>	<u>Range of Calendar Month Averages</u>	<u>Operating Day Maximum</u>
<u>Discharge 001B</u>						
Flow	MGD	13.8(27.6)	(2)	Continuous	.3-10.6	30.8
Temperature	°F	95.0		Continuous	57-73	73
Temperature Change	°F	25.0		Continuous	8-29	29
<u>Discharge 002</u>						
Flow	MGD	43.5(52.2)		Continuous	23-43.5	43.5
Temperature	°F	95		210	65-95	95
Temperature Change	°F	25		12	18-25	25
TRC	mg/l	(0.2)		Continuous		0.2
Ferrous Sulfate	mg/l	(0.5)		Continuous		.49

*This refers to calendar month average, with operating day maximum in parentheses.

**For pH, "Number of Permit Exceptions" refers to number of months in which pH violations occurred, and "Operating Day Maximum" refers to both maximum and minimum pH reported.

PSNH - SCHILLER STATION
SUMMARY OF SELF MONITORING RESULTS (Page 3)

Permit No. NH0001473

Report Period: March 31, 1986 - April 1, 1986

<u>Effluent Characteristics</u>	<u>Units</u>	<u>Discharge Limitations*</u>	<u>Number of Permit Exceptions*</u>	<u>Number of Samples</u>	<u>Range of Calendar Month Averages</u>	<u>Operating Day Maximum</u>
<u>Discharge 003</u>						
Flow	MGD	41.8(50.2)		Continuous	0.4-41.8	41.8
Temperature	°F	95.0	(1)	Continuous	49-96	96
Temperature Change	°F	25.0	(4)	Continuous	7-35	35
TRC	mg/l	(0.2)		180		0.2
Ferrous Sulfate	mg/l	(0.5)		9		.49
<u>Discharge 004</u>						
Flow	MGD	41.8(50.2)		Continuous	1.3-41.6	41.8
Temperature	°F	95.0	(1)	Continuous	65-96	96
Temperature Change	°F	25.0	(3)	Continuous	17-31	31
TRC	mg/l	(0.2)		210		0.2
Ferrous Sulfate	mg/l	(0.5)		11		0.49

*This refers to calendar month average, with operating day maximum in parentheses.

**For pH, "Number of Permit Exceptions" refers to number of months in which pH violations occurred, and "Operating Day Maximum" refers to both maximum and minimum pH reported.

PSNH - SCHILLER STATION
SUMMARY OF SELF MONITORING RESULTS (Page 4)

Permit No. NH0001473

Report Period: March 31, 1986 - April 1, 1986

<u>Effluent Characteristics</u>	<u>Units</u>	<u>Discharge Limitations*</u>	<u>Number of Permit Exceptions*</u>	<u>Number of Samples</u>	<u>Range of Calendar Month Averages</u>	<u>Operating Day Maximum</u>
<u>Discharge 005</u>						
Flow	MGD	.072(.144)		150	.00108-.029	.038
Temperature	°F	109.0		10	67-104	104
Oil and Grease	mg/l	15.0(20.0)		10	4.6-10.9	18.7
pH	S.U.	6.5-8.0		10		6.5-7.9
<u>Discharge 006</u>						
Flow	MGD	.01634(.03268)		180	.0004-.0097	.0237
pH	S.U.	6.5-8.0	(6)	6		8.5-11.2
<u>Discharge 007</u>						
Flow	MGD	.016(.0245)		Continuous	.0014-.0032	.0048
pH	S.U.	6.5-8.0	(1)	Continuous		5.7-8.0

*This refers to calendar month average, with operating day maximum in parentheses.

**For pH, "Number of Permit Exceptions" refers to number of months in which pH violations occurred, and "Operating Day Maximum" refers to both maximum and minimum pH reported.

PSNH - SCHILLER STATION
SUMMARY OF SELF MONITORING RESULTS (Page 5)

Permit No. NH0001473

Report Period: March 31, 1986 - April 1, 1986

<u>Effluent Characteristics</u>	<u>Units</u>	<u>Discharge Limitations*</u>	<u>Number of Permit Exceptions*</u>	<u>Number of Samples</u>	<u>Range of Calendar Month Averages</u>	<u>Operating Day Maximum</u>
<u>Discharge 008</u>						
Flow	MGD	.00375(.0075)		7	.000074-.00076	.00076
Oil and Grease	mg/l	15.0(20.0)		7	<1-8.5	8.5
pH	S.U.	6.5-8.0		7		6.9-7.8
<u>Discharge 009</u>						
Flow	MGD	.00025(.004)		120	.000116-.00023	.0036
<u>Discharge 010</u>						
Flow	MGD	.0072(.02)	1(1)	11	.00046-.0079	.0079
Oil and Grease	mg/l	15.0(20.0)		12	0-10	10
<u>Discharge 011</u>						
Flow	MGD	.115(.23)		300	.0014-.0607	.225
Oil and Grease	mg/l	15.0(20.0)		0		
pH	S.U.	6.5-8.0		10		6.8-7.5

*This refers to calendar month average, with operating day maximum in parentheses.

**For pH, "Number of Permit Exceptions" refers to number of months in which pH violations occurred, and "Operating Day Maximum" refers to both maximum and minimum pH reported.

PSNH - SCHILLER STATION
SUMMARY OF SELF MONITORING RESULTS (Page 6)

Permit No. NH0001473

Report Period: March 31, 1986 - April 1, 1986

<u>Effluent Characteristics</u>	<u>Units</u>	<u>Discharge Limitations*</u>	<u>Number of Permit Exceptions*</u>	<u>Number of Samples</u>	<u>Range of Calendar Month Averages</u>	<u>Operating Day Maximum</u>
<u>Discharge 012B</u>						
Flow	MGD	.269(.538)		270	.0021-.06	.242
Oil and Grease	mg/l	15.0(20.0)		9	<1.0-<5.0	<5.0
pH	S.U.	6.5-8.0		9		6.6-7.4
<u>Discharge 013</u>						
Flow	MGD			1	.866-.107	.107
Flow Duration	Hours			1		15.5
Effluent pH	S.U.			1		2.9
Rain pH	S.U.			1		4.4

*This refers to calendar month average, with operating day maximum in parentheses.

**For pH, "Number of Permit Exceptions" refers to number of months in which pH violations occurred, and "Operating Day Maximum" refers to both maximum and minimum pH reported.



NPDES Compliance Inspection Report

Form Approved
OMB No. 2040-0003
Approval Expires 7-31-85

Section A: National Data System Coding

Transaction Code 1 <input type="checkbox"/> 2 <input type="checkbox"/> 5 <input type="checkbox"/>	NPDES 3 N H 0 0 0 1 4 7 3 11	yr/mo/day 12 8 6 0 3 3 1 17	Inspection Type 18 S	Inspector 19 S	Fac Type 20 2
Remarks					
Reserved 67 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 69	Facility Evaluation Rating 70 4	BI 71 D	QA 72 N	Reserved 73 <input type="checkbox"/> 74 <input type="checkbox"/> 75 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 80	66

Section B: Facility Data

Name and Location of Facility Inspected Public Service Company of New Hampshire Schiller Station Gosling Road, Portsmouth, NH 03801		Entry Time <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	Permit Effective Date 12-31-84
		Exit Time/Date 10:45/04-01-86	Permit Expiration Date 12-31-89
Name(s) of On-Site Representative(s) Nelson Goodwin Allan Palmer		Title(s) Chemical Department Supervisor Engineer	Phone No(s) (603)431-2550 Ext. 327 (603)669-4000 Ext. 2439
Name, Address of Responsible Official Warren A. Harvey Public Service Company of New Hampshire 1000 Elm St., P.O. Box 330 Manchester, NH 03105		Title Vice President	Phone No. (603)669-4000
		Contacted <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Section C: Areas Evaluated During Inspection

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

M	Permit	S	Flow Measurement		Pretreatment	S	Operations & Maintenance
S	Records/Reports	S	Laboratory		Compliance Schedules	N	Sludge Disposal
S	Facility Site Review	S	Effluent/Receiving Waters	M	Self-Monitoring Program		Other:

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

Five feet of sludge in fireside equalization basin. Discharge 011 oil and grease results not reported. Composite sampler not cooled to 4° Celsius. Two cooling water discharges, possibly from sumps in valve shacks, are not permitted. Discharge 005 tied into fireside basin and discharges 007, 008, and 009 may also be eliminated. Permit modifications needed for these changes. DMRQA samples sent to company, results not available yet.

Name(s) and Signature(s) of Inspector(s) Jeffrey G. Andrews	Agency/Office/Telephone NHWSPPC/Ind. Waste/(603)271-2457	Date May 2, 1986
Signature of Reviewer	Agency/Office	Date
Regulatory Office Use Only		
Action Taken	Date	Compliance Status <input type="checkbox"/> Noncompliance <input type="checkbox"/> Compliance