

# NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY  
THE HARTFORD ELECTRIC LIGHT COMPANY  
WESTERN MASSACHUSETTS ELECTRIC COMPANY  
NEW YORK WATER POWER COMPANY  
NORTHEAST UTILITIES SERVICE COMPANY  
NORTHEAST NUCLEAR ENERGY COMPANY

P.O. BOX 270  
HARTFORD, CONNECTICUT 06101  
(203) 666-6911

September 22, 1980

Docket Nos. 50-245  
50-336  
50-423  
B10078

Director of Nuclear Reactor Regulation  
Attn: Mr. D. M. Crutchfield, Chief  
Operating Reactors Branch #5  
Mr. R. A. Clark, Chief  
Operating Reactors Branch #3  
Mr. Billy Joe Youngblood, Chief  
Licensing Branch #1  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Gentlemen:

Millstone Nuclear Power Station, Unit Nos. 1, 2, and 3  
NPDES Permit and Section 316(a) and (b) Approvals

Enclosed for your information are the following documents:

- (1) NPDES Renewal Permit, S. J. Pac, CT DEP, to W. G. Council, NNECO, issued July 2, 1980.
- (2) Sections 316(a) and 316(b) Approvals, R. E. Moore, CT DEP, to W. G. Council, NNECO, issued June 11, 1980.

These documents indicate Northeast Nuclear Energy Company's (NNECO) compliance with state and federal statutes and regulations under the Clean Water Act of 1977 as administered by the Connecticut Department of Environmental Protection.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

A handwritten signature in cursive script that reads 'W. G. Council'.

W. G. Council  
Senior Vice President

Enclosures

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STATE OF CONNECTICUT  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 STATE OFFICE BUILDING HARTFORD, CONNECTICUT 06115



WATER COMPLIANCE UNIT  
 DIVISION OF ENVIRONMENTAL QUALITY  
 CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 STATE OFFICE BUILDING  
 HARTFORD, CONNECTICUT 06115

RECEIVED

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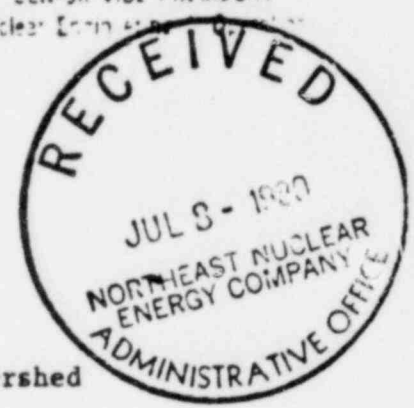
NPDES PERMIT

SENIOR VICE PRESIDENT  
 Nuclear Energy Company

Northeast Nuclear Energy Company  
 P. O. Box 270  
 Hartford, Connecticut 06101

Attention: Mr. W. G. Council  
 Vice President

Re: DEP/WPC-152-001  
 Town of Waterford  
 Long Island Sound Watershed



Gentlemen:

This order is authorized to be issued by Chapter 474a, Connecticut General Statutes and Section 402(b), Federal Water Pollution Control Act, as amended, 33 USC 1251, et. seq., and pursuant to an approval dated September 26, 1973, by the Administrator of the United States Environmental Protection Agency for the State of Connecticut to administer an N.P.D.E.S. permit program.

Your reapplication, filed with the Connecticut Department of Environmental Protection on June 26, 1979, has been reviewed by the Connecticut Department of Environmental Protection.

The Commissioner of Environmental Protection (hereinafter "the Commissioner") has determined that the effluent limitations which would require the use of cooling systems at the Millstone Nuclear Power Station, Units 1, 2 and 3 other than the once-through system proposed by the applicant for the control of the thermal component of the applicant's discharge are more stringent than necessary to assure the protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife in and on the receiving waters. In view of this finding, the Commissioner has herein established alternative and less stringent effluent limitations in accordance with Section 316(a) of the Clean Water Act.

However, the Commissioner has also determined that additional evidence based upon actual operating experience of Millstone Point Nuclear Power Station Units 1, 2 and 3 would be desirable in order to corroborate the Commissioner's findings. The Commissioner expressly reserves the right to impose more stringent effluent limitations with respect to the thermal

component of the Company's discharge pursuant to Section 25-54i of Chapter 474a, Connecticut General Statutes should further investigation of the effect of the Company's discharge fail to corroborate the Commissioner's determination that more stringent effluent limitations are not necessary to assure the protection and propagation of a balanced indigenous population of the shellfish, fish and wildlife in and on the receiving waters.

The Commissioner finds that insufficient data is presently available to review the applicable factors required to be considered under Section 316(b) of the Federal Act in order to determine the best available technology for minimizing the adverse environmental impact of the permittee's existing and proposed cooling water intake structures. Such data will be generated by the studies to be conducted pursuant to paragraphs 5, 12, and 14 of this order and permit. The Commissioner further finds in this instance that no such determination is necessary at this time to carry out the purposes of the Federal Act pursuant to Section 402(a)(1) thereof. The Director will make such a determination for the existing intake structures after the submission of the report required in paragraph 14. In making his determination as to best technology available and the need for implementation, the Director shall consider the studies conducted in accordance with paragraph 5 herein together with such other information as he deems competent, relevant and material.

The Company should take cognizance of the fact that additional evidence may result in the imposition of more stringent effluent limitations requiring the potential utilization of a cooling system other than one proposed. Accordingly, the company should take this potential into consideration in their design wherever feasible.

The Commissioner hereby finds that The Northeast Nuclear Energy Company is maintaining a facility known as Millstone Nuclear Power Station, described in the above-referenced application which reasonably can be expected to create a source of pollution to the waters of the state under the provisions of Chapter 474a of the Connecticut General Statutes as amended. The Commissioner, acting under Section 25-54k, hereby orders Northeast Nuclear Energy Company, Millstone Nuclear Power Station, to take such action as is necessary to:

- 1) Insure that all wastewaters generated by the activities of The Northeast Nuclear Energy Company, Millstone Nuclear Power Station Unit Nos. 1 and 2, described in the above-referenced application are collected, treated and discharged in accordance with associated engineering documents, correspondence and other data submitted to comply or obtained to verify compliance with the permits issued by the Director of Water Compliance on May 24, 1974 and/or discharged in accordance with this order.
- 2) Insure that all wastewaters which will be generated by the construction and/or operating activities carried on at the Millstone Nuclear Power Station Unit No. 3 described in the above referenced application will be collected, treated and discharged in accordance with plans and specifications submitted for the approval of the

Commissioner together with associated engineering documents, correspondence and other data submitted to comply or obtained to verify compliance with this order.

- 3) Insure that all discharges described in this order (after giving credit for condition of intake water, where applicable) shall not exceed and shall otherwise conform to the specific terms and general conditions specified herein.
  - A) Discharge Serial No. 001  
Receiving Stream - Long Island Sound  
Description - Discharge Point at Quarry Cut  
  
Average Daily Flow - 2,696,000,000 gallons  
Maximum Temperature - 105°F
    - 1) The maximum temperature increase at the Quarry Cut above the intake water temperature shall be 32°F.
    - 2) The differential temperature increase at the Quarry Cut above the intake water temperature under unusual conditions may be increased to 44°F for a period not exceeding 24 hours. In the event the temperature differential exceeds 32°F, the Department of Environmental Protection shall be immediately notified and a written report of the incident filed.
    - 3) The permittee shall operate all facilities in such a manner as not to raise the average temperature of the receiving waters more than 4°F or increase the normal temperature of the receiving waters above 83°F. For purposes of this condition, cognizance will be given to reasonable time and distance to allow mixing of effluent and receiving waters, but the boundary of the mixing zone shall not exceed a radius of 8,000 feet from the discharge outlet at the quarry cut.
    - 4) The thermal plume allowed within the permissible mixing zone as defined by these conditions shall not block zones of fish passage.
    - 5) The discharge and operation of all facilities shall not alter significantly the color, turbidity, taste, odor or levels of coliform bacteria from ambient levels in the receiving waters; nor shall the level of dissolved oxygen in the receiving waters fall below 5.0 mg/l as a result of such discharge.
    - 6) Discharge Serial Nos. 001, 001A, 001B and 001C shall:
      - a) Have a pH between 6.0 and 9.0.
      - b) Not contain as a result of additions from process operations any visible oil sheen, foam, sludge

deposits, grease, scum or cause silt or sand deposits other than of natural origin.

- c) Not contain more than 0.1 milliliters per liter settleable solids above the intake water concentration.
  - 7) The residual chlorine concentration in the discharge at the Quarry Cut shall not exceed 0.1 mg/l.
  - 8) The discharge shall contain no other chemical constituents in concentrations and combinations which are harmful to human, animal or aquatic life, or which make the waters unsafe or unsuitable for fish or shellfish or their propagation, impair the palatability of same, or impair the waters for other uses.
- B) Discharge Serial No. 001A  
Description - Unit No. 1 Discharge  
Average Daily Flow - 604,800,000 gallons per day  
Maximum Temperature - 105°F  
Average Design Temperature Increase - 22.5°F
- 1) The maximum temperature increase at the Unit No. 1 discharge above the intake water temperature shall be 32°F.
  - 2) The differential temperature increase at the Unit No. 1 discharge above the intake water temperature may be increased to 44°F for a period not exceeding 24 hours under conditions of reduced cooling water flow. In the event the temperature differential exceeds 32°F, the Department of Environmental Protection shall be notified in the monthly monitoring report.
  - 3) The normal operating procedures include, usually not more than 12 times a year, the elevation of the intake water temperature on each condenser by a thermal backwash process required for the control of sea mussels. It is expected that the true temperature difference between the receiving stream and discharge water will exceed the permit limit for brief periods during this treatment schedule.

<u>Parameter</u>	<u>Average Daily Quantity</u>	<u>Maximum Daily Quantity</u>	<u>Maximum Daily Concentration</u>
Free Available Chlorine	229.21 kg/day	573.04 kg/day	0.25 mg/l

- C) Discharge Serial No. 001A-1  
Description - Unit No. 1 Waste Sample Tank Discharge  
Average Flow per Batch - 25,000 gallons per batch  
Expected Frequency of Discharge - Once per day  
Temperature - Ambient

- D) Discharge Serial No. 001A-2  
 Description - Unit No. 1 Floor Drain Sample Tank Discharge  
 Average Flow per Batch - 10,000 gallons per batch  
 Expected Frequency of Discharge - Once per day  
 Temperature - Ambient

<u>Parameter</u>	<u>Average Quantity Per Batch</u>	<u>Average Concentration Per Batch</u>	<u>Maximum Concentration Per Batch</u>
Total Suspended Solids	1.14 kg/batch	30.0 mg/l	45.0 mg/l

- 1) The maximum concentration specified above shall not be exceeded at any time.

- E) Discharge Serial No. 001A-3  
 Description - Unit No. 1 Makeup Demineralizer Backwash Wastewater Discharge  
 Average Flow per Batch - 4,200 gallons per batch  
 Expected Frequency of Discharge - Once per day  
 Temperature - Ambient

<u>Parameter</u>	<u>Average Quantity Per Batch</u>	<u>Average Concentration Per Batch</u>	<u>Maximum Concentration Per Batch</u>
Total Suspended Solids	0.48 kg/batch	30.0 mg/l	45.0 mg/l

- 1) The maximum concentration specified above shall not be exceeded at any time.

- F) Discharge Serial No. 001A-4  
 Description - Unit No. 1 Decontamination Solution Tank Discharge  
 Average Flow per Batch - 3,500 gallons per batch  
 Expected Frequency of Discharge - Once per day  
 Temperature - Ambient

<u>Parameter</u>	<u>Maximum Quantity Per Batch</u>
Boric Acid	7.6 kg

- G) Discharge Serial No. 001A-5  
 Description - Unit No. 1 Auxiliary Heat Exchanger (Service Water) Discharge  
 Average Flow - 21,000 gallons per minute  
 Maximum Temperature - 85°F

<u>Parameter</u>	<u>Average Daily Quantity</u>	<u>Maximum Daily Quantity</u>	<u>Maximum Daily Concentration</u>
Free Available Chlorine	11.46 kg/day	28.65 kg/day	0.25 mg/l

- H) Discharge Serial No. 001A-5(a)  
 Description - Unit No. 1 Makeup Evaporator Discharge (Discharged to Discharge Serial No. 001A-5)  
 Average Flow - 30 gallons per minute  
 Maximum Temperature - 124°F
- I) Discharge Serial No. 001B  
 Description - Unit No. 2 Discharge  
 Average Daily Flow - 778,000,000 gallons  
 Maximum Temperature - 105°F  
 Average Design Temperature Increase - 23°F
- 1) The maximum temperature increase at the Unit No. 2 discharge above the intake water temperature shall be 32°F.
  - 2) The differential temperature increase at the Unit No. 2 discharge above the intake water temperature may be increased to 44°F for a period not exceeding 24 hours under conditions of reduced cooling water flow. In the event the temperature increase exceeds 32°F, the Department of Environmental Protection shall be notified in the monthly monitoring report.
  - 3) The normal operating procedures include, usually not more than 12 times a year, the elevation of the intake water temperature on each condenser by a thermal backwash process required for the control of sea mussels. It is expected that the true temperature difference between the receiving stream and discharge water will exceed the permit limit for brief periods during this treatment schedule.

<u>Parameter</u>	<u>Average Daily Quantity</u>	<u>Maximum Daily Quantity</u>	<u>Maximum Daily Concentration</u>
Free Available Chlorine	298.65 kg	737.15 kg	0.25 mg/l

- J) Discharge Serial No. 001B-1  
 Description - Unit No. 2 Blowdown Tank and Blowdown Quench Tank Discharge  
 Average Daily Flow - 60,000 gallons per day  
 Temperature - Ambient

<u>Parameter</u>	<u>Average Daily Quantity</u>	<u>Maximum Daily Quantity</u>	<u>Maximum Daily Concentration</u>	<u>Average Daily Concentration</u>
Total Suspended Solids	0.79 kg/day	1.59 kg/day	30.0 mg/l	15.0 mg/l

- 1) The maximum concentration specified above shall not be exceeded at any time.

- K) Discharge Serial No. 001B-2  
 Description - Unit No. 2 Aerated Waste Monitor Tank Discharge  
 Average Batch Flow - 4,500 gallons per batch  
 Expected Frequency Discharge - Twice per day  
 Temperature - Ambient

<u>Parameter</u>	<u>Average Quantity Per Batch</u>	<u>Maximum Quantity Per Batch</u>	<u>Average Concentration Per Batch</u>	<u>Maximum Concentration Per Batch</u>
Total Suspended Solids	0.51 kg/batch		30.0 mg/l	45.0 mg/l
Boric Acid	0.51 kg/batch	200.0 kg/batch		

- 1) A minimum of two (2) condenser circulating pumps shall be in service on Unit 2 during discharge.
- 2) The maximum concentrations specified above shall not be exceeded at any time.

- L) Discharge Serial No. 001B-3  
 Description - Unit No. 2 Coolant Waste Monitor Tank Discharge  
 Average Flow per Batch - 30,000 gallons per batch  
 Expected Frequency of Discharge - Once per day  
 Temperature - Ambient

<u>Parameter</u>	<u>Average Quantity Per Batch</u>	<u>Maximum Quantity Per Batch</u>	<u>Average Concentration Per Batch</u>	<u>Maximum Concentration Per Batch</u>
Boric Acid	3.40 kg/ batch	700.0 kg/ batch		
Total Suspended Solids	1.70 kg/ batch		15.0 mg/l	22.5 mg/l

- 1) If at any time the boric acid evaporator is not functional and the boric acid concentration exceeds 30 mg/l, a minimum of two (2) condenser circulating pumps shall be in service on Unit 2 during discharge.
- 2) The maximum concentration specified above shall not be exceeded at any time.

- M) Discharge Serial No. 001B-4  
 Description - Unit No. 2 Makeup Demineralizer Backwash Waste-water Discharge  
 Average Flow per Batch - 9,500 gallons per batch  
 Expected Frequency of Discharge - Once per day  
 Temperature - Ambient



<u>Parameter</u>	<u>Average Quantity Per Batch</u>	<u>Average Concentration Per Batch</u>	<u>Maximum Concentration Per Batch</u>
Total Suspended Solids	1.08 kg/batch	30.0 mg/l	45.0 mg/l

1) The maximum concentration specified above shall not be exceeded at any time.

N) Discharge Serial No. 001B-5  
 Description - Unit No. 2 Auxiliary Heat Exchanger (Service Water) Discharge  
 Average Flow - 10,000 gallons per minute  
 Maximum Temperature - 85°F

<u>Parameter</u>	<u>Average Daily Quantity</u>	<u>Maximum Daily Quantity</u>	<u>Maximum Daily Concentration</u>
Free Available Chlorine	5.45 kg/day	13.64 kg/day	0.25 mg/l

O) Discharge Serial No. 001B-6  
 Description - Unit No. 2 Condensate Polisher Regeneration Wastewater Neutralization Tank Discharge Including System Floor Drains  
 Average Flow per Batch - 25,000 gallons per batch  
 Expected Frequency of Discharge - Twice per day  
 Temperature - Ambient

<u>Parameter</u>	<u>Average Quantity Per Batch</u>	<u>Average Concentration Per Batch</u>	<u>Maximum Concentration Per Batch</u>
Total Suspended Solids	2.83 kg/ batch	30.0 mg/l	45.0 mg/l
Oil and Grease	0.94 kg/ batch	10.0 mg/l	20.0 mg/l

1) The maximum concentrations specified above shall not be exceeded at any time.

P) Discharge Serial No. 001B-7  
 Description - Unit No. 2 Condensate Polisher Auxiliary Heat Exchanger (Service Water) Discharge  
 Average Flow - 4,000 gpm  
 Maximum Temperature - 85°F

<u>Parameter</u>	<u>Average Daily Quantity</u>	<u>Maximum Daily Quantity</u>	<u>Maximum Daily Concentration</u>
Free Available Chlorine	2.18 kg/day	5.46 kg/day	0.25 mg/l

1) This discharge will occur only when effluent from Discharge Serial No. 001B-6 is being evaporated instead of discharged.

- Q) Discharge Serial No. 001C  
Description - Unit No. 3 Discharge  
Average Daily Flow - 1,313,200,000 gallons  
Maximum Temperature - 98°F  
Average Design Temperature Increase - 18°F

<u>Parameter</u>	<u>Average Daily Quantity</u>	<u>Maximum Daily Quantity</u>	<u>Maximum Daily Concentration</u>
Free Available Chlorine	553.7 kg/day	1386 kg/day	0.25 mg/l

- 1) The maximum temperature increase at the Unit No. 3 discharge above the intake water temperature shall be 24°F.
- 2) The differential temperature increase at the Unit No. 3 discharge above the intake water temperature under conditions of reduced cooling water flow may be increased to 30°F for a period not exceeding 24 hours. In the event the temperature differential exceeds 24°F, the Department of Environmental Protection shall be notified in the monthly monitoring report.
- 3) The normal operating procedures include, usually not more than 12 times a year, the elevation of the intake water temperature on each condenser by a thermal backwash process required for the control of sea mussels. It is expected that the true temperature difference between the receiving stream and discharge water will exceed the permit limit for brief periods during this treatment schedule.
- 4) Chlorine will be used to control biofouling in the event of malfunction or inadequate performance of the mechanical condenser cleaning system. It may also be required to prevent biofouling of the ball collection device.

- R) Discharge Serial No. 001C-1  
Description - Unit No. 3 Steam Generator Blowdown Discharge  
Average Daily Flow - 288,000 gallons  
Maximum Temperature - 200°F

<u>Parameter</u>	<u>Average Daily Quantity</u>	<u>Average Daily Concentration</u>	<u>Maximum Concentration</u>
Total Suspended Solids	32.7 kg/day	30.0 mg/l	60.0 mg/l

- 1) The maximum concentration specified above shall not be exceeded at any time.

- S) Discharge Serial No. 001C-2  
 Description - Unit No. 3 Waste Test Tank Discharge  
 Average Flow per Batch - 21,000 gallons per batch  
 Expected Frequency of Discharge - Twice per day  
 Temperature - Ambient

<u>Parameter</u>	<u>Maximum Quantity Per Batch</u>
Boric Acid	800 kg

- 1) A minimum of two (2) condenser circulating pumps shall be in service on Unit 3 during discharge.

- T) Discharge Serial No. 001C-3  
 Description - Low Level Waste Drain Tank Discharge  
 Average Flow per Batch - 4,000 gallons  
 Expected Frequency of Discharge - Four times per day  
 Temperature - Ambient

<u>Parameter</u>	<u>Average Quantity Per Batch</u>	<u>Maximum Quantity Per Batch</u>	<u>Average Concentration Per Batch</u>	<u>Maximum Concentration Per Batch</u>
Boric Acid	0.45 kg/ batch	200.0 kg/ batch		
Total Suspended Solids	0.45 kg/ batch		30.0 mg/l	45.0 mg/l

- 1) If at any time the boric acid evaporator units are not functional and the boric acid concentration exceeds 30 mg/l, a minimum of two (2) condenser circulating pumps shall be in service on Unit 3.

- U) Discharge Serial No. 001C-4  
 Description - Unit No. 3 Makeup Demineralizer Backwash Waste-water Discharge  
 Average Flow per Batch - 80,000 gallons  
 Expected Frequency of Discharge - Once per day  
 Temperature - Ambient

	<u>Average Quantity per Batch</u>	<u>Average Concentration per Batch</u>	<u>Maximum Concentration per Batch</u>
Total Suspended Solids	9.09 kg/batch	30.0 mg/l	45.0 mg/l

- 1) The maximum concentrations specified above shall not be exceeded at any time.

- V) Discharge Serial No. 001C-5  
 Description - Unit No. 3 Auxiliary Heat Exchanger (Service Water) Discharge  
 Average Flow - 30,000 gallons per minute  
 Maximum Temperature - 90°F

	<u>Average Daily Quantity</u>	<u>Maximum Daily Quantity</u>	<u>Maximum Daily Concentration</u>
Free Available Chlorine	16.37 kg/day	40.93 kg/day	0.25 mg/l

- W) Discharge Serial No. 002  
Description - Unit No. 1 Screen Washwater Discharge  
Receiving Stream - Niantic Bay  
Average Daily Flow - 252,000 gallons  
Maximum Daily Flow - 2,016,000 gallons  
Temperature - Ambient
- X) Discharge Serial No. 003  
Description - Unit No. 2 Screen Washwater Discharge  
Receiving Stream - Niantic Bay  
Average Daily Flow - 317,000 gallons  
Maximum Daily Flow - 2,540,000 gallons  
Temperature - Ambient
- Y) Discharge Serial No. 004  
Description - Unit No. 3 Screen Washwater Discharge  
Receiving Stream - Niantic Bay  
Average Daily Flow - 720,000 gallons  
Maximum Daily Flow - 5,760,000 gallons  
Temperature - Ambient
- Z) Discharge Serial No. 005  
Description - Unit No. 1 Non-contaminated Floor Drain, Transformer Yard Drains and Surface Water Runoff  
Receiving Stream - Long Island Sound via Quarry Cut  
Flow - Variable  
Temperature - Ambient

<u>Parameter</u>	<u>Average Daily Concentration</u>	<u>Maximum Concentration</u>
Oil and Grease	10.0 mg/l	20.0 mg/l

- 1) The maximum concentration specified above shall not be exceeded at any time.

- AA) Discharge Serial No. 006  
Description - Unit No. 2 Non-contaminated Floor Drains, Unit 3 Construction Water Discharge, and Surface Water Runoff  
Receiving Stream - Niantic Bay via Settling Basin  
Flow - Variable  
Temperature - Ambient

<u>Parameter</u>	<u>Average Daily Concentration</u>	<u>Maximum Concentration</u>
Oil and Grease	10.0 mg/l	20.0 mg/l

- 1) The maximum concentration specified above shall not be exceeded at any time.

BB) Discharge Serial No. 007  
Description - Unit No. 3 Non-contaminated Floor Drain Discharge  
Receiving Stream - Niantic Bay  
Flow - Variable  
Temperature - Ambient

<u>Parameter</u>	<u>Average Daily Concentration</u>	<u>Maximum Concentration</u>
Oil and Grease	10.0 mg/l	20.0 mg/l

- 1) The maximum concentration specified above shall not be exceeded at any time.

CC) Discharge Serial No. 008  
Description - Unit No. 1 Non-contaminated Floor Drains and Surface Water Runoff  
Receiving Stream - Niantic Bay  
Flow - Variable  
Temperature - Ambient

<u>Parameter</u>	<u>Average Daily Concentration</u>	<u>Maximum Concentration</u>
Oil and Grease	10.0 mg/l	20.0 mg/l

- 1) The maximum concentration specified above shall not be exceeded at any time.

DD) Discharge Serial No. 009  
Description - Unit No. 2 Non-contaminated Floor Drains, Fire Pump House Floor Drains, and Surface Water Runoff  
Receiving Stream - Long Island Sound via Quarry Cut  
Flow - Variable  
Temperature - Ambient

<u>Parameter</u>	<u>Average Daily Concentration</u>	<u>Maximum Concentration</u>
Oil and Grease	10.0 mg/l	20.0 mg/l

- 1) The maximum concentration specified above shall not be exceeded at any time.

4) Not discharge any new pollutant not authorized by this order which has or may have an adverse impact on the receiving waters.

5) The permittee shall conduct or continue to conduct biological studies of the supplying and receiving waters, entrainment studies, and intake impingement monitoring. The studies shall include studies of intertidal and subtidal benthic communities, finfish communities, and entrained plankton and shall include detailed studies of lobster populations and winter flounder populations.

6) Monitor and record the following for the purpose of reporting quality and quantity of each discharge according to the following schedule:

Unit Nos. 1, 2 and 3 Intakes (Before Condensers)

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Flow	Hourly	Instantaneous
Temperature (°F)	Hourly	Instantaneous
Settleable Solids	Weekly	Grab

A) Discharge Serial No. 001

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Flow	Hourly	Instantaneous
Temperature (°F)	Hourly	Instantaneous
pH	Hourly	Instantaneous
Settleable Solids	Weekly	Grab
Free Available Chlorine	Weekly	Grab
Total Residual Chlorine	Weekly	Grab

Report the following data:

- 1) Daily range of pH
- 2) Daily range of flow
- 3) Daily maximum temperature (°F)
- 4) Daily minimum temperature
- 5) Daily average temperature
- 6) Monthly standard deviation of temperature
- 7) Daily maximum temperature increase
- 8) Daily minimum temperature increase
- 9) Daily average temperature increase
- 10) Monthly standard deviation of temperature increase
- 11) Monthly maximum heat load (BTU/hr.)
- 12) Monthly minimum heat load
- 13) Monthly average heat load
- 14) Monthly maximum rate of change of heat load
- 15) Monthly standard deviation of heat load
- 16) Radioactive liquid releases
  - a) Gross radioactivity (less tritium, gases and alpha)
    - 1) total release (curies)
    - 2) average concentration released (uCi/ml)
  - b) Tritium
    - 1) total release (curies)
    - 2) average concentration released (uCi/ml)
  - c) Dissolved gases
    - 1) total release (curies)
    - 2) average concentration released (uCi/ml)
  - d) Gross alpha
    - 1) total release (curies)
    - 2) average concentration released (uCi/ml)

- e) Volume of liquid waste discharged (liters)
- f) Volume of dilution water (liters)
- g) Isotopes released (curies)
- h) Percent of 10 CFR 20, Appendix B, Table II for total release
- i) Percent of technical specifications limit if different from 10 CFR 20, for the total release if such specifications are established by N.R.C.

B) Discharge Serial No. 001A

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Flow	Hourly	Instantaneous
Temperature (°F)	Hourly	Instantaneous
pH	Hourly	Instantaneous
Settleable Solids	Weekly	Grab
Free Available Chlorine	Weekly	Grab

Report the following data:

- 1) Daily range of pH
- 2) Daily range of flow
- 3) Daily maximum temperature (°F)
- 4) Daily minimum temperature
- 5) Daily average temperature
- 6) Monthly standard deviation of temperature
- 7) Daily maximum temperature increase
- 8) Daily minimum temperature increase
- 9) Daily average temperature increase
- 10) Monthly standard deviation of temperature increase
- 11) Monthly maximum heat load (BTU/hr.)
- 12) Monthly minimum heat load
- 13) Monthly average heat load
- 14) Monthly maximum rate of change of heat load
- 15) Monthly standard deviation of heat load
- 16) Radioactive liquid releases
  - a) Gross radioactivity (less tritium, gases and alpha)
    - 1) total release (curies)
    - 2) average concentration released (uCi/ml)
  - b) Tritium
    - 1) total release (curies)
    - 2) average concentration released (uCi/ml)
  - c) Dissolved gases
    - 1) total release (curies)
    - 2) average concentration released (uCi/ml)
  - d) Gross alpha
    - 1) total release (curies)
    - 2) average concentration released (uCi/ml)

- e) Volume of liquid waste discharged (liters)
- f) Volume of dilution water (liters)
- g) Isotopes released (curies)
- h) Percent of 10 CFR 20, Appendix B, Table II for total release
- i) Percent of technical specifications limit if different from 10 CFR 20, for the total release if such specifications are established by N.R.C.

C) Discharge Serial No. 001A-1

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Specific conductivity	Weekly	Grab
pH	Weekly	Grab

- 1) Record the total flow of batch discharge.

D) Discharge Serial No. 001A-2

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Total Suspended Solids	Weekly	Grab
pH	Weekly	Grab

- 1) Record the total flow of batch discharge.
- 2) The monitoring report shall include a detailed explanation of any deviations from the limits specified in paragraph 2 and the corrective actions taken to achieve compliance.

E) Discharge Serial No. 001A-3

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Total Suspended Solids	Weekly	Grab
pH	Weekly	Grab

- 1) Record the total flow of batch discharge.
- 2) The monitoring report shall include a detailed explanation of any deviations from the limits specified in paragraph 2 and the corrective actions taken to achieve compliance.

F) Discharge Serial No. 001A-4 - No sampling point available

G) Discharge Serial No. 001A-5



<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Free Available Chlorine	Weekly	Grab
Total Suspended Solids	Weekly	Grab
pH	Weekly	Grab

- 1) Record the instantaneous flow at the time of grab sample collection.
- 2) The monitoring report shall include a detailed explanation of any deviations from the limits specified in paragraph 2 and the corrective actions taken to achieve compliance.

H) Discharge Serial No. 001A-5(a)

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Specific conductivity	Weekly	Grab

- 1) Record the instantaneous flow at the time of grab sample collection.

I) Discharge Serial No. 001B

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Flow	Hourly	Instantaneous
Temperature (°F)	Hourly	Instantaneous
pH	Hourly	Instantaneous
Settleable Solids	Weekly	Grab
Free Available Chlorine	Weekly	Grab

Report the following data:

- 1) Daily range of pH
- 2) Daily range of flow
- 3) Daily maximum temperature (°F)
- 4) Daily minimum temperature
- 5) Daily average temperature
- 6) Monthly standard deviation of temperature
- 7) Daily maximum temperature increase
- 8) Daily minimum temperature increase
- 9) Daily average temperature increase
- 10) Monthly standard deviation of temperature increase
- 11) Monthly maximum heat load (BTU/hr.)
- 12) Monthly minimum heat load
- 13) Monthly average heat load
- 14) Monthly maximum rate of change of heat load
- 15) Monthly standard deviation of heat load
- 16) Radioactive liquid releases

- a) Gross radioactivity (less tritium, gases and alpha)
  - 1) total release (curies)
  - 2) average concentration released (uCi/ml)
- b) Tritium
  - 1) total release (curies)
  - 2) average concentration released (uCi/ml)
- c) Dissolved gases
  - 1) total release (curies)
  - 2) average concentration released (uCi/ml)
- d) Gross alpha
  - 1) total release (curies)
  - 2) average concentration released (uCi/ml)
- e) Volume of liquid waste discharged (liters)
- f) Volume of dilution water (liters)
- g) Isotopes released (curies)
- h) Percent of 10 CFR 20, Appendix B, Table II for total release
- i) Percent of technical specifications limit if different from 10 CFR 20, for the total release if such specifications are established by N.R.C.

J) Discharge Serial No. 001B-1

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Total Suspended Solids	Weekly	Grab
1) Record the instantaneous flow at the time of grab sample collection.		
2) The monitoring report shall include a detailed explanation of any deviations from the limits specified in paragraph 2 and the corrective actions taken to achieve compliance.		

K) Discharge Serial No. 001B-2

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Boric Acid	Weekly	Grab
Total Suspended Solids	Weekly	Grab
pH	Weekly	Grab
1) Record the instantaneous flow at the time of grab sample collection.		
2) The monitoring report shall include a detailed explanation of any deviations from the limits specified in paragraph 2 and the corrective actions taken to achieve compliance.		

L) Discharge Serial No. 001B-3

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Boric Acid	Weekly	Grab
Total Suspended Solids	Weekly	Grab
pH	Weekly	Grab

- 1) Record the instantaneous flow at the time of grab sample collection.
- 2) The monitoring report shall include a detailed explanation of any deviations from the limits specified in paragraph 2 and the corrective actions taken to achieve compliance.

M) Discharge Serial No. 001B-4

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Total Suspended Solids	Weekly	Grab
pH	Weekly	Grab

- 1) Record the instantaneous flow at the time of grab sample collection.
- 2) The monitoring report shall include a detailed explanation of any deviations from the limits specified in paragraph 2 and the corrective actions taken to achieve compliance.

N) Discharge Serial No. 001B-5

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Free Available Chlorine	Weekly	Grab
Total Suspended Solids	Weekly	Grab
pH	Weekly	Grab

- 1) Record the instantaneous flow at the time of grab sample collection.
- 2) The monitoring report shall include a detailed explanation of any deviations from the limits specified in paragraph 2 and the corrective actions taken to achieve compliance.

O) Discharge Serial No. 001B-6

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Total Oil and Grease	Weekly	Grab
Total Suspended Solids	Weekly	Grab
pH	Weekly	Grab

- 1) Record the total flow of batch discharge.
- 2) The monitoring report shall include a detailed explanation of any deviations from the limits specified in paragraph 2 and the corrective actions taken to achieve compliance.

P) Discharge Serial No. 001B-7

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Free Available Chlorine	Weekly	Grab
Total Suspended Solids	Weekly	Grab
pH	Weekly	Grab

- 1) Record the instantaneous flow at the time of grab sample collection.

Q) Discharge Serial No. 001C

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Flow	Hourly	Instantaneous
Temperature (°F)	Hourly	Instantaneous
pH	Hourly	Instantaneous
Settleable Solids	Weekly	Grab
Free Available Chlorine	Weekly	Grab

Report the following data:

- 1) Daily range of pH
- 2) Daily range of flow
- 3) Daily maximum temperature (°F)
- 4) Daily minimum temperature
- 5) Daily average temperature
- 6) Monthly standard deviation of temperature
- 7) Daily maximum temperature increase
- 8) Daily minimum temperature increase
- 9) Daily average temperature increase
- 10) Monthly standard deviation of temperature increase
- 11) Monthly maximum heat load (BTU/hr.)
- 12) Monthly minimum heat load
- 13) Monthly average heat load
- 14) Monthly maximum rate of change of heat load

- 15) Monthly standard deviation of heat load
- 16) Radioactive liquid releases
  - a) Gross radioactivity (less tritium, gases and alpha)
    - 1) total release (curies)
    - 2) average concentration released (uCi/ml)
  - b) Tritium
    - 1) total release (curies)
    - 2) average concentration released (uCi/ml)
  - c) Dissolved gases
    - 1) total release (curies)
    - 2) average concentration released (uCi/ml)
  - d) Gross alpha
    - 1) total release (curies)
    - 2) average concentration released (uCi/ml)
  - e) Volume of liquid waste discharged (liters)
  - f) Volume of dilution water (liters)
  - g) Isotopes released (curies)
  - h) Percent of 10 CFR 20, Appendix B, Table II for total release
  - i) Percent of technical specifications limit if different from 10 CFR 20, for the total release if such specifications are established by N.R.C.

R) Discharge Serial No. 001C-1

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Boric Acid	Weekly	Grab
Total Suspended Solids	Weekly	Grab
pH	Weekly	Grab

- 1) Record the instantaneous flow at the time of grab sample collection.
- 2) The monitoring report shall include a detailed explanation of any deviations from the limits specified in paragraph 2 and the corrective actions taken to achieve compliance.

S) Discharge Serial No. 001C-2

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Boric Acid	Weekly	Grab
Lithium	Weekly	Grab
Specific conductivity	Weekly	Grab
pH	Weekly	Grab

- 1) Record the instantaneous flow at the time of grab sample collection.

T) Discharge Serial No. 001C-3

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Boric Acid	Weekly	Grab
Total Suspended Solids	Weekly	Grab
pH	Weekly	Grab

- 1) Record the total flow of batch discharge.
- 2) The monitoring report shall include a detailed explanation of any deviations from the limits specified in paragraph 2 and the corrective actions taken to achieve compliance.

U) Discharge Serial No. 001C-4

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Total Suspended Solids	Weekly	Grab
pH	Weekly	Grab

- 1) Record the total flow of batch discharge.
- 2) The monitoring report shall include a detailed explanation of any deviations from the limits specified in paragraph 2 and the corrective actions taken to achieve compliance.

V) Discharge Serial No. 001C-5

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Free Available Chlorine	Weekly	Grab
Total Suspended Solids	Weekly	Grab
pH	Weekly	Grab

- 1) Record the instantaneous flow at the time of grab sample collection.

W) Discharge Serial No. 005

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Oil and Grease	See Note 1	Grab

- 1) Monitor monthly for oil and grease when oil separator discharge occurs.
- 2) Record the instantaneous flow at the time of grab sample collection.
- 3) The monitoring report shall include a detailed explanation of any deviations from the limits specified in paragraph 2 and the corrective actions taken to achieve compliance.

X) Discharge Serial No. 006

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Oil and Grease	See Note 1	Grab

- 1) Monitor monthly for oil and grease when oil separator discharge occurs.
- 2) Record the instantaneous flow at the time of grab sample collection.
- 3) The monitoring report shall include a detailed explanation of any deviations from the limits specified in paragraph 2 and the corrective actions taken to achieve compliance.

Y) Discharge Serial No. 007

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Oil and Grease	Monthly	Grab

- 1) Record the instantaneous flow at the time of grab sample collection.
- 2) The monitoring report shall include a detailed explanation of any deviations from the limits specified in paragraph 2 and the corrective actions taken to achieve compliance.

2) Discharge Serial No. 008

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Oil and Grease	See Note 1	Grab

- 1) Monitor monthly for oil and grease when oil separator discharge occurs.
- 2) Record the instantaneous flow at the time of grab sample collection.
- 3) The monitoring report shall include a detailed explanation of any deviations from the limits specified in paragraph 2 and the corrective actions taken to achieve compliance.

AA) Discharge Serial No. 009

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Oil and Grease	See Note 1	Grab

- 1) Monitor monthly for oil and grease when oil separator discharge occurs.
  - 2) Record the instantaneous flow at the time of grab sample collection.
  - 3) The monitoring report shall include a detailed explanation of any deviations from the limits specified in paragraph 2 and the corrective actions taken to achieve compliance.
- 7) Not bypass the treatment facilities or any part thereof at any time. If any part of the waste treatment facilities becomes inoperable at any time, the Water Compliance Unit shall be notified immediately. A written report shall follow, giving the cause of the problem, duration and corrective measures taken.
  - 8) Dispose of screenings, sludges and other solids or oils and other liquid chemicals at locations approved in accordance with the provisions of Chapter 474a and/or Chapter 361a of the Connecticut General Statutes or to waste haulers licensed under Chapter 474a of the Connecticut General Statutes.
  - 9) Provide an alternate power source adequate to operate the treatment facilities and/or such other means as may be appropriate to insure that no discharge of untreated or partially treated wastewater will occur during a failure of the primary power source.
  - 10) On or before July 31, 1980 verify to the Commissioner that compliance with paragraph 1 is being achieved and that the provisions of paragraphs 2, 3, 4, 5, 6, 7, 8, and 9 will be complied with.
  - 11) On or before July 31, 1980 and monthly thereafter, submit to the Commissioner all detailed monitoring data required under the provisions of paragraph 6.



- 12) On or before July 31, 1980 and annually thereafter, submit for the review and approval of the Commissioner a detailed proposal for continuing biological studies, entrainment studies, and impingement monitoring as required by paragraph 5.
- 13) On or before April 30, 1981 and annually thereafter submit for the review and approval of the Commissioner a detailed report of the ongoing biological studies required by paragraph 5 and as approved under paragraph 12.
- 14) On or before July 31, 1981 submit for the review and approval of the Commissioner of Environmental Protection an engineering report studying the feasibility of modifying the cooling water intake screen wash system to improve the return of fish back to Long Island Sound.

The above described specific terms may be revised following public notice and public hearing, if required, on the basis of a detailed engineering study if agreed to by the Commissioner.

This order shall be considered as the permit required by Section 402 of the federal Clean Water Act and shall expire on July 2, 1985.

This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitation issued 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:

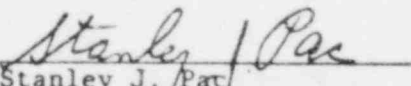
- 1) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
- 2) Controls any pollutant not limited in the permit.

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

This order shall be subject to all the NPDES General Conditions dated December 27, 1974 which are hereby incorporated into this order.

Upon verification of full compliance with this order, a letter acknowledging this order to be equivalent of a permit issued under Section 25-54; and/or a revised NPDES permit will be issued.

Entered as an Order of the Commissioner on the 2nd day of July, 1980.

  
Stanley J. Pac  
Commissioner

Order No. 2859  
NPDES NO. CT0003263

cc: Northeast Utilities Service Company  
Attention: Mr. William C. Renfro

WATER COMPLIANCE UNIT  
DIVISION OF ENVIRONMENTAL QUALITY  
CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
STATE OFFICE BUILDING  
HARTFORD, CONNECTICUT 06115

FACT SHEET OF ISSUANCE OF ORDERS FOR THE FOLLOWING  
DISCHARGERS TO DISCHARGE INTO WATERS OF THE  
STATE OF CONNECTICUT

Applicant Information

Name and Mailing Address

Northeast Nuclear Energy Company  
P. O. Box 270  
Hartford CT 06101

Location of Discharge

Town of Waterford - Millstone Road, Long Island Sound Watershed

Statement of Basis

The reissued permit to Northeast Nuclear Energy Company is issued under Chapter 4742, Connecticut General Statutes and Section 402 (b), Federal Water Pollution Control Act, as amended, 33 USC 1251, et. seq., and pursuant to an approval dated September 26, 1973, by the Administrator of the United States Environmental Protection Agency for the State of Connecticut to administer an NPDES permit program.

The effluent limitations are based upon Sections 316 (a) and (b) of the Clean Water Act.

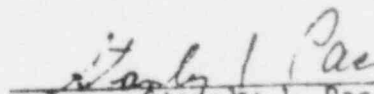
The existing discharges at Northeast Nuclear Energy Company are:

- Discharge Serial No. 001 - 2,696,000,000 gallons per day condensor cooling water.
- Discharge Serial No. 001A-1 - Unit No. 1 waste sample tank discharge.
- Discharge Serial No. 001A-2 - Unit No. 1 floor drain sample tank discharge.
- Discharge Serial No. 001A-3 - Unit No. 1 makeup demineralizer backwash wastewater discharge.
- Discharge Serial No. 001A-4 - Unit No. 1 decontamination solution tank discharge.
- Discharge Serial No. 001A-5 - Unit No. 1 auxiliary heat exchanger (service water) discharge.
- Discharge Serial No. 001A-5(a) - Unit No. 1 makeup evaporator discharge.
- Discharge Serial No. 001B-1 - Unit No. 2 blowdown tank and blowdown quench tank discharge.

- Discharge Serial No. 001B-2 - Unit No. 2 aerated waste monitor tank discharge.
- Discharge Serial No. 001B-3 - Unit No. 2 coolant waste monitor tank discharge.
- Discharge Serial No. 001B-4 - Unit No. 2 makeup demineralizer backwash wastewater discharge.
- Discharge Serial No. 001B-5 - Unit No. 2 auxiliary heat exchanger (service water) discharge.
- Discharge Serial No. 001B-6 - Unit No. 2 condensate polisher regeneration wastewater neutralization tank discharge including system floor drains.
- Discharge Serial No. 001B-7 - Unit No. 2 condensate polisher auxiliary heat exchanger (service water ) discharge.
- Discharge Serial No. 001C-1 - Unit No. 3 steam generator blowdown discharge.
- Discharge Serial No. 001C-2 - Unit No. 3 waste test tank discharge.
- Discharge Serial No. 001C-3 - Low level waste drain tank discharge.
- Discharge Serial No. 001C-4 - Unit No. 3 makeup demineralizer backwash wastewater discharge.
- Discharge Serial No. 001C-5 - Unit No. 3 auxiliary heat exchanger (service water) discharge.
- Discharge Serial No. 002 - Unit No. 1 screen washwater discharge.
- Discharge Serial No. 003 - Unit No. 2 screen washwater discharge.
- Discharge Serial No. 004 - Unit No. 3 screen washwater discharge.
- Discharge Serial No. 005 - Unit No. 1 non-contaminated floor drain, transformer yard drains and surface water runoff.
- Discharge Serial No. 006 - Unit No. 2 non-contaminated floor drains, Unit 3 construction water discharge, and surface water runoff.
- Discharge Serial No. 007 - Unit No. 3 non-contaminated floor drain discharge.
- Discharge Serial No. 008 - Unit No. 1 non-contaminated floor drains and surface water runoff.
- Discharge Serial No. 009 - Unit No. 2 non-contaminated floor drain, fire dump ho floor drains, and surface water runoff.

The reissued permit will require: continued study of the effects of the thermal discharge, continued study of entrapment/entrainment by intake structures, study of the feasibility of modifications to the Unit Nos. 1 and 2 intake structures to further minimize entrapment/entrainment, and compliance with all state and/or federal regulations promulgated subsequent to permit reissuance.

Further questions concerning the reissued permit should be directed to Wesley L. Winterbottom at 203-566-2719.

  
\_\_\_\_\_  
Stanley J. Pac  
COMMISSIONER

Dated: July 2, 1980

### NPDES GENERAL CONDITIONS

These general conditions apply to all orders or permits issued by the Department of Environmental Protection which are considered NPDES Permits under the provisions of Section 402 of the Federal Water Pollution Control Act.

1. Any person or municipality wishing to initiate, create or originate any new discharge of water, substance or material into the waters of the State of Connecticut shall file an application for a permit which shall include a complete NPDES application no later than 180 days in advance of the date on which it is desired to commence the discharge.

2. Any application filed in accordance with condition (1) shall be signed as follows:

- (a) In the case of corporations, by a principal executive officer of at least the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates.
- (b) In the case of a partnership, by a general partner.
- (c) In the case of sole proprietorship, by the proprietor.
- (d) In the case of a municipal, state, or other public facility, by either a principal executive officer, ranking elected official or other duly authorized employee.

3. The recipient of any order or permit shall immediately notify the Commissioner of the Department of Environmental Protection (hereinafter "the Commissioner") and the Regional Administrator of the Environmental Protection Agency when it is known that any interim or final requirement of the order or permit will not be complied with and the reasons therefor. The Commissioner may require the filing of a written statement itemizing the reasons for non-compliance.

4. All discharges authorized by any order or permit shall be consistent with the terms and conditions of the order or permit.

5. Facility expansion, production increases or process modifications which may result in new or increased discharges of water, substance or material to the waters of the State of Connecticut must be authorized by the issuance of a new or revised permit or order prior to being initiated, created or originated unless such discharges do not violate the terms and conditions of an existing order or permit.

- (a) If a new or increased or decreased discharge of water, substance or material to the waters of the State of Connecticut does not violate the terms and conditions of the existing order or permit, notice of such new or increased or decreased discharge shall be sent to the Commissioner and the Regional Administrator of the Environmental Protection Agency.
- (b) If the new or increased discharge of water, substance or material will violate the terms and conditions of an existing order or permit, an application shall be filed in accordance with condition (1).

6. The discharge of water, substance or material more frequently than, or at a level in excess of the terms and conditions of any existing order or permit shall constitute a violation of the terms and conditions of the order or permit.

7. Any order or permit may be modified, revoked, or suspended in accordance with applicable federal and state statutes, regulations and other administrative procedures in whole or part during its term for cause including, but not limited to, the following:

- (a) Violation of any term or condition of the order or permit;
- (b) Obtaining an order or permit by misrepresentation or failure to disclose fully all relevant facts; and
- (c) A change in any condition that requires either a temporary or permanent reduction or elimination of the discharge.

POOR ORIGINAL

8. The Commissioner or the Regional Administrator of the Environmental Protection Agency or their authorized representatives, on presentation of credentials shall be permitted:

- (a) To enter upon the premises in which the effluent source is located or in which any records are required to be kept under the terms and conditions of the order or permit;
- (b) To have access to and copy any records required to be kept under the terms and conditions of the order or permit;
- (c) To inspect any monitoring equipment or method required in the order or permit; or
- (d) To sample any discharge of water, substance or material to the waters of the State of Connecticut.

9. The recipient of any order or permit shall at all times maintain in good working order, and operate as efficiently as possible, any facility or systems of control installed to achieve compliance with the terms and conditions in the order or permit.

10. If a toxic effluent standard or prohibition including any schedule of compliance specified in such effluent standard or prohibition is established under Section 307(a) of the Federal Water Pollution Control Act for a toxic pollutant which is present in any discharge of water, substance or material to the waters of the State of Connecticut and such standard or prohibition is more stringent than any term or condition of an order or permit the Commissioner shall revise or modify that order or permit in accordance with the toxic effluent standard or prohibition and so notify the permittee.

11. Any recipient of an order or permit who wishes to continue to discharge water, substance or material to the waters of the State of Connecticut after the expiration date of the order or permit shall file for a reissuance of the order or permit on a form prescribed by the Commissioner which shall include a complete NPDES application no less than 180 days in advance of the date of expiration.

12. The recipient of any order or permit shall:

- (a) Maintain records of all information resulting from any monitoring program contained in the terms and conditions of the order or permit.
- (b) Identify in the monitoring records 1) the date, the exact place and the time of sampling; 2) the dates analyses were performed; 3) who performed the analyses; 4) the analysis techniques and methods used; 5) the results of such analysis;
- (c) Retain for a minimum of three years, or longer if specifically required by the Commissioner, any records of monitoring activities and results including all original strip chart readings from continuous monitoring instrumentation and calibration and maintenance records;
- (d) Report on forms prescribed by the Commissioner the monitoring results obtained in accordance with specified terms and conditions of any order or permit.

13. For the purpose of complying with the monitoring requirements prescribed in the terms and conditions of any order or permit, the sampling, preservation, handling and analytical methods used must conform to the following references methods, latest edition. However, different but equivalent methods are allowed if they receive prior written approval of the Commissioner.

- (a) Standard Methods for the Examination of Water and Wastewaters, 13th Edition, 1971, American Public Health Association, New York, New York 10019
- (b) A.S.T.M. Standards, Part 23, Water; Atmospheric Analysis, 1970; American Society of Testing and Materials, Philadelphia, Pennsylvania 19103, or
- (c) Methods for Chemical Analysis of Water and Wastewaters, April 1971, Environmental Protection Agency, Water Quality Office, Analytical Water Quality Control Laboratory, 1014 Broadway, Cincinnati, Ohio 45268

POOR ORIGINAL

14. Abbreviations and Definitions

mg/l - milligrams per liter

lbs/day - pounds per day

kg/day - kilograms per day

Composite Sample - 1) Industrial wastewaters - A mixture of aliquot samples obtained at regular intervals over a time period. The volume of each individual aliquot shall be proportional to the discharge flow rate or the sampling interval (for constant volume samples) shall be proportional to the flow rate over the time period used to obtain the composite. A composite sample shall contain at least four aliquot samples collected over a four-hour period.  
2) Municipal and sanitary wastewater - A sample consisting of a minimum of eight grab samples collected at equal intervals of no less than 30 minutes during a 24-hour period and combined proportional to flow, or a sample continuously collected proportionally to flow over that same time period.

Grab Sample - An individual sample collected in less than 15 minutes.

Range During Composite - The maximum and minimum values of a parameter observed in the aliquot samples used to make a composite sample.

Four-Hour Average - The average of a minimum of four measurements obtained at regular intervals during composite sample collection.

Average - The arithmetic average

Daily Average - The average of a minimum of eight measurements obtained at regular intervals over an operating day.

Average Daily Concentration - The average concentration during a 24-hour period of an operating day. The minimum procedure for determining the average daily concentration will be a four-hour composite.

Maximum Concentration - Maximum concentration at any time as determined by a grab sample.

Average Daily Flow - The average flow rate during an operating day.

Average Daily Quantity - The average quantity of waste generated during an operating day.

Monthly Average - The average of a minimum of twelve composite samples taken on twelve separate days, or at least one grab sample per day, taken on twelve separate days, as required for the parameter being reported within a calendar month.

Weekly Average - The average of a minimum of three composite samples taken on three separate days, or at least one grab sample per day, taken on three separate days, as required for the parameter being reported within a week.

Maximum Daily Quantity - The maximum quantity of waste generated during a 24-hour period.

Cooling Water - Water used for cooling purpose only, which contains heat, but which has no direct contact with any product or raw material.

Metal Concentration - All metal concentrations are expressed as total metal concentrations.

Cyanide - Cyanide which is amenable to destruction by chlorine.

APPROVED

*Stanley J. Pag*  
Stanley J. Pag  
COMMISSIONER

DATE 4 27 79

DEPARTMENT OF ENVIRONMENTAL PROTECTION

POOR ORIGINAL



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE OFFICE BUILDING HARTFORD, CONNECTICUT 06115

June 11, 1980



Approval

RECEIVED

JUN 13 1980

*SC* VICE PRESIDENT  
Nuclear Engineering & Operations

Northeast Nuclear Energy Company  
P.O. Box 270  
Hartford, Connecticut 06101

Attention: Mr. W.G. Council,  
Vice President

Re: DEP/WPC 152-001  
Town of Waterford  
Long Island Sound Watershed

Dear Mr. Council:

The following reports have been reviewed by the Department of Environmental Protection:

Millstone Nuclear Power Station Units 1,2, and 3 Environmental Assessment of the Condenser Cooling Water Intake Structure 316 (b) Demonstration, Volumes I and II, September 1976 prepared for Northeast Nuclear Energy Company by Northeast Utilities Service Company.

Thermal Plume Modeling at the Millstone Nuclear Power Station August 1979 prepared for Northeast Utilities Service Company by Stolzenbach and Adams.

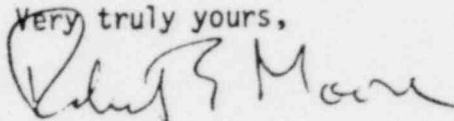
Annual Reports on a Monitoring Program of the Marine Environment of the Millstone Point, Connecticut Area 1975, 1976, 1977, 1978 prepared by Battelle Laboratories for Northeast Utilities Service Company.

These reports comply with Department of Environmental Protection Water Compliance Unit's Order No. 1505 to Northeast Nuclear Energy Company entered on December 30, 1974, fulfilling requirements of steps 5,14, 15,16, and 17 of the Order. The reports are hereby approved in accordance with Sections 25-54k and 25-54e of the Connecticut General Statutes as amended.

These reports shall be the basis for corroborating the Director's finding that the thermal component of the discharge does not result in a violation of Connecticut Water Quality Standards. These reports shall be the basis of the functional design of the intake structures to minimize adverse environmental impacts which may result from impingement and entrainment.

This approval does not relieve the discharger obligation to obtain any other authorizations as may be required by other provisions of the Connecticut General State agencies.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Robert E. Moore". The signature is written in dark ink and is positioned directly below the closing "Very truly yours,".

Robert E. Moore  
Director  
Water Compliance Unit

REM/dsm

cc: Northeast Utilities Service Co.