STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NPDES PERMIT

issued to

Connecticut Resources Recovery Authority (CRRA)
100 Constitution Plaza, 17th Floor
Hartford, CT 06103-1722

Location Address:

Reserve Road, Gate 20
Hartford, CT 06114

Facility ID: 064-067

Permit ID: CT0003875

Receiving Stream: Connecticut River

Permit Expires: November 17, 2009

SECTION 1: GENERAL PROVISIONS

(A) This permit is reissued in accordance with section 22a-430 of Chapter 446k, Connecticut General Statutes ("CGS"), and Regulations of Connecticut State Agencies ("RCSA") adopted thereunder, as amended, and section 402(b) of the Clean Water 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.

(B) Connecticut Resources Recovery Authority (CRRA), ("Permittee"), shall comply with all conditions of this permit including the following sections of the RCSA which have been adopted pursuant to section 22a-430 of the CGS and are hereby incorporated into this permit. Your attention is especially drawn to the notification requirements of subsection (i)(2), (i)(3), (j)(1), (j)(6), (j)(8), (j)(9)(C), (j)(10)(C), (j)(11)(C), (D), (E), and (F), (k)(3) and (4) and (l)(2) of section 22a-430-3.

section 22a-430-3 General Conditions

(a)Definitions
(b)General
(c)Inspection and Entry
(d)Effect of a Permit
(e)Duty
(f)Proper Operation and Maintenance
(g)Sludge Disposal
(h)Duty to Mitigate
(i)Facility Modifications; Notification
(j)Monitoring, Records and Reporting Requirements
(k)Bypass
(l)Conditions Applicable to POTWs
(m)Effluent Limitation Violations (Upsets)
(n)Enforcement
(o)Resource Conservation
(p)Spill Prevention and Control
(q)Instrumentation, Alarms, Flow Recorders
(r)Equalization

section 22a-430-4 Procedures and Criteria

(a)Duty to Apply
(b)Duty to Reapply
(c)Application Requirements
(d)Preliminary Review
(e)Tentative Determination
(f)Draft Permits, Fact Sheets
(g)Public Notice, Notice of Hearing
(h)Public Comments
(i)Final Determination
(j)Public Hearings
(k)Submission of Plans and Specifications. Approval.
(l)Establishing Effluent Limitations and Conditions
(m)Case by Case Determinations
(n)Permit issuance or renewal
(o)Permit Transfer
(p)Permit revocation, denial or modification
(q)Variances
(r)Secondary Treatment Requirements
(s)Treatment Requirements for Metals and Cyanide
(t)Discharges to POTWs - Prohibitions

(C) Violations of any of the terms, conditions, or limitations contained in this permit may subject the permittee to enforcement action including, but not limited to, seeking penalties, injunctions and/or forfeitures pursuant to applicable sections of the CGS and RCSA.

(D) Any false statement in any information submitted pursuant to this section of the permit may be punishable as a criminal offense under section 22a-438 or 22a-131a of the CGS or in accordance with section 22a-6, under section 53a-157b of the CGS.

(E) The authorization to discharge under this permit may not be transferred without prior written approval of the Commissioner. To request such approval, the permittee and proposed transferee shall register such proposed transfer with the Commissioner, at least 30 days prior to the transferee becoming legally responsible for creating or maintaining any discharge which is the subject of the permit transfer. Failure, by the transferee, to obtain the Commissioner's approval prior to commencing such discharge(s) may subject the transferee to enforcement action for discharging without a permit pursuant to applicable sections of the CGS and RCSA.

(F) No provision of this permit and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by the permittee pursuant to this permit will result in compliance or prevent or abate pollution.

(G) Nothing in this permit shall relieve the permittee of other obligations under applicable federal, state and local law.

(H) An annual fee shall be paid for each year this permit is in effect as set forth in section 22a-430-7 of the Regulations of Connecticut State Agencies.

SECTION 2: DEFINITIONS

(A) The definitions of the terms used in this permit shall be the same as the definitions contained in section 22a-423 of the CGS and section 22a-430-3(a) and 22a-430-6 of the RCSA, except for "No observable acute effect level (NOAEL)" which is redefined below.

(B) In addition to the above, the following definitions shall apply to this permit:

"-----" in the limits column on the monitoring table means a limit is not specified but a value must be reported on the DMR

"Annual" in the context of a sampling frequency, means the sample must be collected in the month of January. If there is no discharge during the sampling month the permittee shall sample during the following month when discharge is available and submit the result as an attachment with the DMR.

"Average Monthly Limit"; means the maximum allowable "Average Monthly Concentration" as defined in section 22a-430-3(a) of the RCSA when expressed as a concentration (e.g. mg/l); otherwise, it means "Average Monthly Discharge Limitation" as defined in section 22a-430-3(a) of the RCSA.

"Critical Test Concentration (CTC)" means the specified effluent dilution at which the permittee is to conduct a single-concentration Aquatic Toxicity test.

"Daily Concentration" means the concentration of a substance as measured in a daily composite sample, or, the arithmetic average of all grab sample results defining a grab sample average.

"Daily Composite" means (1) a composite sample taken over a full operating day consisting of grab samples collected at equal intervals of no more than sixty (60) minutes and combined proportionally to flow, or (2) a composite sample continuously collected over a full operating day proportionally to flow. Upon submission of documentation by the applicant satisfactory to the Commissioner that a discharge is of consistent effluent quality, the Commissioner may allow equal sampling intervals of up to four (4) hours for a daily composite sample.

"Daily Quantity" means the quantity of waste discharged during an operating day.

"Instantaneous Limit" means the highest allowable concentration of a substance as measured by a grab sample, or the highest allowable measurement of a parameter as obtained through instantaneous monitoring.

"In stream Waste Concentration (IWC)" means the concentration of a discharge in the receiving water after mixing has occurred in the allocated zone of influence.

"Maximum Daily Limit", means the maximum allowable "Daily Concentration" (defined above) when expressed as a concentration (e.g. mg/l); otherwise, it means the maximum allowable "Daily Quantity" as defined above, unless it is expressed as a flow quantity. If expressed as a flow quantity it means "Maximum Daily Flow" as defined in section 22a-430-3(a) of the RCSA.

"NA" as a Monitoring Table abbreviation means "not applicable".

"NR" as a Monitoring Table abbreviation means "not required".

"No Observable Acute Effect Level (NOAEL)" means any concentration equal to or less than the critical test concentration in a single concentration (pass/fail) toxicity test conducted pursuant to section 22a-430-3(j)(7)(A)(i) RCSA demonstrating greater than 50% survival of test organisms in 100% (undiluted) effluent and 90% or greater survival of test organisms at the CTC.

"Quarterly", in the context of a sampling frequency, means sampling is required in the months of January, April, July, and October. If there is no discharge during the sampling month the permittee shall sample during the following month when discharge is available and submit the result as an attachment with the DMR.

"Range During Sampling" ("RDS"), as a sample type, means the maximum and minimum of all values recorded as a result of analyzing each grab sample of; 1) a Composite Sample, or, 2) a Grab Sample Average. For those permittees with continuous monitoring and recording pH meters, Range During Sampling means the maximum and minimum readings recorded with the continuous monitoring device during the Composite or Grab Sample Average sample collection.

"Range During Month" ("RDM"), as a sample type, means the lowest and the highest values of all of the monitoring data for the reporting month.

"Semi-Annual" in the context of a sampling frequency, means the sample must be collected in the months of April and October. If there is no discharge during the sampling month the permittee shall sample during the following month when discharge is available and submit the result as an attachment with the DMR.

"Total Residual Oxidant" is defined as the arithmetic sum of total residual chlorine and bromine.

"ug/l" means micrograms per liter.

SECTION 3: COMMISSIONER'S DECISION

(A) The Commissioner of Environmental Protection ("Commissioner"), has issued a final decision and found that continuance of the existing discharge will not cause pollution of the waters of the state. The Commissioner's decision is based on application #200201838 for permit reissuance received on April 5, 2002 and revised on June 3, 2004 and the administrative record established in the processing of that application.

(B) The Commissioner hereby authorizes the Permittee to discharge in accordance with the provisions of this permit, the above referenced application, and all approvals issued by the Commissioner or his authorized agent for the discharges and/or activities authorized by, or associated with, this permit.

(C) The Commissioner reserves the right to make appropriate revisions to the permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the Federal Clean Water Act or the CGS or regulations adopted thereunder, as amended. The permit as modified or renewed under this paragraph may also contain any other requirements of the Federal Clean Water Act or CGS or regulations adopted thereunder which are then applicable.

(D) The Commissioner has determined that the current location, design, construction and capacity of the once through cooling water intake structure, and compliance with the requirements of Section 9 of this permit as approved in writing by the Commissioner reflects the best technology available to minimize adverse environmental impact from impingement and entrainment pursuant to Section 316(b) of the federal Clean Water Act. This determination is made consistent with Section 22a-430-4(m) of the RCSA and in

accordance with the provisions of 40 CFR Part 125.95(a)(ii) of Subpart J - Requirements Applicable to Cooling Water Intake Structures for Phase II Existing Facilities under Section 316(b) of the Act.

SECTION 4: GENERAL EFFLUENT LIMITATIONS

(A) The discharge shall not contain or cause in the receiving stream a visible oil sheen or floating solids.

(B) The discharge shall not cause visible discoloration or foaming in the receiving waters beyond any zone of influence as provided in the "Connecticut Water Quality Standards & Criteria" as amended.

(C) No discharge shall cause acute or chronic toxicity in the receiving water body beyond any zone of influence specifically allocated to that discharge in this permit.

(D) The thermal plume allowed within the permissible mixing zone as defined by these conditions shall not block zones of fish passage.

(E) Except as specified in this permit, the permittee is not authorized to discharge to the Connecticut River a final effluent to which it has added any pollutants.

(F) When the temperature of the incoming river water is less than or equal to 81 °F, the temperature of the discharge shall not increase the temperature of the receiving stream above 85 °F or raise the normal temperature of the receiving stream more than 4 °F beyond any zone of influence as provided in the "Connecticut Water Quality Standards & Criteria" as amended. When the temperature of the incoming river water is greater than 81 °F, the temperature of the discharge shall not raise the normal temperature of the receiving stream more than 4 °F beyond any zone of influence as provided in the "Connecticut Water Quality Standards & Criteria" as amended.

(G) 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 levels of dissolved oxygen in the receiving waters fall below 5.0 mg/l as a result of the discharge.

SECTION 5: SPECIFIC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

(A) The discharges shall not exceed and shall otherwise conform to the specific terms and conditions listed below. The discharges are restricted by, and shall be monitored in accordance with, the tables below:

Table A

Discharge Serial Number: 001-1 | **Monitoring Location:** 1

Wastewater Description: Combined discharges of the once through non-contact cooling water for Turbine Unit No. 5 Condenser (DSN 001-A), once through non-contact cooling water for turbine unit No. 6 Condenser (DSN 001-B) and once through non-contact cooling water for Plant Service Loads (DSN 001-C).

Monitoring Location Description: At the combined discharge canal for DSN's 001-A, 001-B and 001-C

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test
		Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency [2]	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample// Reporting Frequency [2]	Sample Type or measurement to be reported	
Flow, Average [1]	MGD	108.02	NA	Daily//Monthly	Daily Flow	NA	NR	NA	
Flow, Maximum [1]	MGD	NA	110.42	Daily//Monthly	Daily Flow	NA	NR	NA	
Temperature, Maximum	°F	NA	NA	NR	NA	118	continuous//Monthly	RDM	
pH (see remark below)	S.U.	NA	NA	NR	NA	6.0 - 9.0	Monthly	RDS	
pH, Continuous (see remark below)	S.U.	NA	NA	NR	NA	6.0 - 9.0	continuous//Monthly	RDM	

Table Footnotes and Remark:

Footnotes:

[1] For this parameter the permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report the Average Daily Flow and the Maximum Daily Flow for each month.

[2] The first entry in this column is the 'Sample Frequency'. If this entry is not followed by a 'Reporting Frequency' and the 'Sample Frequency' is more frequent than monthly then the 'Reporting Frequency' is monthly. If the 'Sample frequency' is specified as monthly, or less frequent, then the 'Reporting Frequency' is the same as the 'Sample Frequency'

Remark

1. The pH of the discharge shall not be less than 6.0 S.U. or greater than 9.0 S.U. at any time except when the pH of the incoming river water is outside these limits, in which case the pH of the discharge shall not deviate from the pH of the incoming river water by more than 0.5 S.U.

Table B

Discharge Serial Number: 001-A | **Monitoring Location:** 1

Wastewater Description: Once through non-contact cooling water for unit 5 turbine condenser

Monitoring Location Description: Effluent samples are taken from the discharge pipe in the turbine basement hall. Temperature and pH monitoring probes are downstream of the effluent sample point.

Allocated Zone of Influence (ZOI): None | In stream Waste Concentration (IWC): 100%

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test [3]
		Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency [2]	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample// Reporting Frequency [2]	Sample Type or measurement to be reported	
Aquatic Toxicity, Ceriodaphnia dubia [4]	%	NA	NOAEL>100 [5]	Semi-Annual	Daily Composite	NOAEL>100% [6]	NR	NA	
Aquatic Toxicity, Pimephales promelas [4]	%	NA	NOAEL>100 [5]	Semi-Annual	Daily Composite	NOAEL>100% [6]	NR	NA	
Ammonia as Nitrogen*, [4]	mg/l	NA	------	Quarterly	Daily Composite	NA	NR	NA	
Total Residual Oxidant (see remarks)	mg/l	NA	NA	NR	NA	0.2	Weekly	Grab	*
Copper, Total*, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	*
Flow, Average [1]	MGD	------	NA	Daily//Monthly	Daily Flow	NA	NR	NA	
Flow, Maximum [1]	MGD	NA	51.84	Daily//Monthly	Daily Flow	NA	NR	NA	
Flow, Day of Sampling	MGD	NA	51.84	Daily//Monthly	Daily Flow	NA	NR	NA	
Iron, Total*, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	
Lead, Total*, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	*
Manganese, Total [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	
Nickel, Total*, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	*
Nitrogen, Nitrate[4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	
Nitrogen, Nitrite[4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	
Oil & Grease, Total	mg/l	NA	NA	NR	NA	20.0	Quarterly	Grab	
pH [4] (see remark below)	S.U.	NA	NA	NR	NA	6.0 - 9.0	Monthly	RDS	
pH, Continuous (see remark below)	S.U.	NA	NA	NR	NA	6.0 - 9.0	Continuous// Monthly	RDM	
Total Kjeldahl Nitrogen [4]	mg/l	NA	------	Quarterly	Daily Composite	NA	NR	NA	
Total Suspended Solids*, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	
Temperature**	°F	NA	NA	NR	NA	118	Continuous// Monthly	RDM	
Zinc, Total*, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	*

Table B Footnotes and Remarks:

Footnotes:

[1] For this parameter the permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report the Average Daily Flow and the Maximum Daily Flow for each sampling month.

[2] The first entry in this column is the 'Sample Frequency'. If this entry is not followed by a 'Reporting Frequency' and the 'Sample Frequency' is more frequent than monthly then the 'Reporting Frequency' is monthly. If the 'Sample frequency' is specified as monthly, or less frequent, then the 'Reporting Frequency' is the same as the 'Sample Frequency'

[3] Minimum Level Test refers to Section 6 Paragraph A of this permit.

[4] All analysis shall be on the same sample. The results of the Toxicity Tests are recorded in % survival, however, the permittee shall report pass/fail on the DMR based on criteria in Section 6(B) of the permit.

[5] See section 6(C)(10) for compliance with this permit limit.

[6] See section 6(B)(5)(a) for compliance with instantaneous limit.

Remarks:

1. The maximum temperature increase at the discharge canal outlet above the intake water temperature shall be 32 °F. In the event the average temperature differential exceeds 32 °F for a period exceeding 24 hours or exceeds 35 °F at any time, the DEP shall be immediately notified and a written report of the incident filed within 10 days.

2. Total residual oxidant (chlorine and/or bromine) shall be analyzed during periods of oxidant addition and shall not be discharged from any unit for a period of more than two hours per day unless otherwise approved by the Commissioner. Sampling for total residual oxidant need only be conducted during weeks when oxidant is added to this discharge.

3. Total residual oxidant is defined as the arithmetic sum of total residual chlorine and bromine.

4. *Sampling for these parameters shall be conducted concurrently at both the influent monitoring location 01H (See Table G) and effluent at the frequency stated above.

5. **Maximum Instantaneous Temperature Increase: 35 °F

6. **Maximum Design Temperature Increase: 32 °F

7. The permittee shall record and report the following data:

    1. Daily range of pH
    2. Daily average flow
    3. Daily range of flow

4. Daily maximum temperature (°F)
5. Daily minimum temperature (°F)
6. Daily average temperature (°F)
7. Daily maximum temperature increase
8. Daily minimum temperature increase
9. Monthly standard deviation of temperature
10. Daily average temperature increase
11. Monthly standard deviation of temperature increase
12. Monthly maximum heat load (BTU/hr)
13. Monthly minimum heat load
14. Monthly average heat load
15. Monthly maximum rate of change of heat load
16. Monthly standard deviation of heat load

Report items 1) through 8) only. Retain items 9) through 16) or raw data for calculating items 9) through 16) for a period of at least five years from the month during which the data was collected.

8. The pH of the discharge shall not be less than 6.0 S.U. or greater than 9.0 S.U. at any time except when the pH of the incoming river water is outside of these limits, in which case the pH of the discharge shall not deviate from the pH of the incoming river water by more than 0.5 S.U.

Table C

Discharge Serial Number: 001-B | **Monitoring Location:** 1

Wastewater Description: Once through non-contact cooling water for unit 6 turbine condenser

Monitoring Location Description: Effluent sample is taken from the discharge pipe in the turbine basement hall. Temperature and pH monitoring probes are downstream of the effluent sample point

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test [3]
		Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency [2]	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample// Reporting Frequency [2]	Sample Type or measurement to be reported	
Aquatic Toxicity, Ceriodaphnia dubia [4]	%	NA	NOAEL>100% [5]	Semi-Annual	Daily Composite	NOAEL>100 [6]	NR	NA	
Aquatic Toxicity, Pimephales promelas [4]	%	NA	NOAEL>100% [5]	Semi-Annual	Daily Composite	NOAEL>100 [6]	NR	NA	
Ammonia as Nitrogen [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	
Total Residual Oxidant (see remark)	mg/l	NA	NA	NR	NA	0.2	Weekly	Grab	*
Copper, Total *, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	*
Flow, Average [1]	MGD	------	NA	Daily//Monthly	Daily Flow	NA	NR	NA	
Flow, Maximum [1]	MGD	NA	53.18	Daily//Monthly	Daily Flow	NA	NR	NA	
Flow, Day of Sampling	MGD	NA	53.18	Daily//Monthly	Daily Flow	NA	NR	NA	
Iron, Total *, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	
Lead, Total *, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	*
Manganese, Total *, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	
Nickel, Total *, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	*
Nitrogen, Nitrate *, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	
Nitrogen, Nitrite *, [4]	mg/l	NA	------	Quarterly	Daily Composite	NA	NR	NA	
Oil & Grease, Total	mg/l	NA	NA	NR	NA	20.0	NR	NA	
pH [4]	S.U.	NA	NA	NR	NA	6.0 - 9.0	Monthly	RDS	

pH, Continuous	S.U.	NA	NA	NR	NA	6.0 - 9.0	Continuous// Monthly	RDM	
Total Kjeldahl Nitrogen [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	
Total Suspended Solids *, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	
Temperature**	°F	NA	NA	NR	NA	118	Continuous//Monthly	RDM	
Zinc, Total *, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	*

Table C Footnotes and Remarks:
Footnotes:

[1] For this parameter the permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report the Average Daily Flow and the Maximum Daily Flow for each sampling month.

[2] The first entry in this column is the 'Sample Frequency'. If this entry is not followed by a 'Reporting Frequency' and the 'Sample Frequency' is more frequent than monthly then the 'Reporting Frequency' is monthly. If the 'Sample frequency' is specified as monthly, or less frequent, then the 'Reporting Frequency' is the same as the 'Sample Frequency'

[3] Minimum Level Test refers to Section 6 Paragraph A of this permit.

[4] All analysis shall be on the same sample. The results of the Toxicity Tests are recorded in % survival, however, the permittee shall report pass/fail on the DMR based on criteria in Section 6(B) of the permit.

[5] See section 6(C)(10) for compliance with this permit limit.

[6] See section 6(B)(5)(a) for compliance with instantaneous limit.

Remarks:

1. The maximum temperature increase at the discharge canal outlet above the intake water temperature shall be 32 °F. In the event the average temperature differential exceeds 32 °F for a period exceeding 24 hours or exceeds 35 °F at any time, the DEP shall be immediately notified and a written report of the incident filed within 10 days.

2. Total residual oxidant (chlorine and/or bromine) shall be analyzed during periods of oxidant addition and shall not be discharged from any unit for a period of more than two hours per day unless otherwise approved by the Commissioner. Sampling for total residual oxidant need only be conducted during weeks when oxidant is added to this discharge.

3. Total residual oxidant is defined as the arithmetic sum of total residual chlorine and bromine.

4. *Sampling for these parameters shall be conducted concurrently at both the influent monitoring location 001H (See Table G) and effluent at the frequency stated above.

5. **Maximum Instantaneous Temperature Increase: 35 °F

6. **Maximum Design Temperature Increase: 32 °F

7. The permittee shall record and report the following data:

    1. Daily range of pH
    2. Daily average flow
    3. Daily range of flow

4. Daily maximum temperature
5. Daily minimum temperature
6. Daily average temperature
7. Daily maximum temperature increase
8. Daily minimum temperature increase
9. Monthly standard deviation of temperature
10. Daily average temperature increase
11. Monthly standard deviation of temperature increase
12. Monthly maximum heat load (BTU/hr)
13. Monthly minimum heat load
14. Monthly average heat load
15. Monthly maximum rate of change of heat load
16. Monthly standard deviation of heat load

Report items 1) through 8) only. Retain items 9) through 16) or raw data for calculating items 9) through 16) for a period of at least five years from the month during which the data was collected.

8. The pH of the discharge shall not be less than 6.0 S.U. or greater than 9.0 S.U. at any time except when the pH of the incoming river water is outside of these limits, in which case the pH of the discharge shall not deviate from the pH of the incoming river water by more than 0.5 S.U.

Table D

Discharge Serial Number: 001-C | **Monitoring Location:** 1

Wastewater Description: Once through non-contact cooling water from plant service loads

Monitoring Location Description: Effluent samples are taken from the discharge pipe in the turbine basement hall. Temperature and pH probes are downstream of the effluent sample point.

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test [3]
		Average Monthly Limit	Maximum Daily Limit	Sample// Reporting Frequency [2]	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample// Reporting Frequency [2]	Sample Type or measurement to be reported	
Aquatic Toxicity, Ceriodaphnia dubia [4]	%	NA	NOAEL>100% [5]	Semi-Annual	Daily Composite	NOAEL>100% [6]	NR	NA	
Aquatic Toxicity, Pimephales promelas [4]	%	NA	NOAEL>100% [5]	Semi-Annual	Daily Composite	NOAEL>100% [6]	NR	NA	
Ammonia as Nitrogen*, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	
Total Residual Oxidant (see remark)	mg/l	NA	NA	NR	NA	0.2	Weekly	Grab	*
Copper, Total*, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	*
Flow, Average [1]	MGD	------	NA	Daily//Monthly	Daily Flow	NA	NR	NA	
Flow, Maximum [1]	MGD	NA	5.4	Daily//Monthly	Daily Flow	NA	NR	NA	
Flow, Day of Sampling	MGD	NA	5.4	Daily//Monthly	Daily Flow	NA	NR	NA	
Iron, Total*, [4]	mg/l	NA	------	Quarterly	Daily Composite	NA	NR	NA	
Lead, Total*, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	*
Manganese, Total [4]	mg/l	NA	------	Quarterly	Daily Composite	NA	NR	NA	
Nickel, Total*, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	*
Nitrogen, Nitrate [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	
Nitrogen, Nitrite [4]	mg/l	NA	------	Quarterly	Daily Composite	NA	NR	NA	
Oil & Grease, Total	mg/l	NA	NA	NR	NA	20.0	Quarterly	Grab	
pH [4]	S.U.	NA	NA	NR	NA	6.0 - 9.0	Monthly	RDS	
pH, Continuous	S.U.	NA	NA	NR	NA	6.0 - 9.0	Continuous //Monthly	RDM	
Total Kjeldahl Nitrogen [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	
Total Suspended Solids*, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	
Temperature**	°F	NA	NA	NR	NA	101	Continuous //Monthly	RDM	
Zinc, Total*, [4]	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	*

Table D Footnotes and Remarks:

Footnotes:

[1] For this parameter the permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report the Average Daily Flow and the Maximum Daily Flow for each sampling month.

[2] The first entry in this column is the 'Sample Frequency'. If this entry is not followed by a 'Reporting Frequency' and the 'Sample Frequency' is more frequent than monthly then the 'Reporting Frequency' is monthly. If the 'Sample frequency' is specified as monthly, or less frequent, then the 'Reporting Frequency' is the same as the 'Sample Frequency'

[3] Minimum Level Test refers to Section 6 Paragraph A of this permit.

[4] All analysis shall be on the same sample. The results of the Toxicity Tests are recorded in % survival, however, the permittee shall report pass/fail on the DMR based on criteria in Section 6(B) of this permit.

[5] See section 6(c)(10) for compliance with this permit limit.

[6] See Section 6(B)(5)(a) for compliance with instantaneous limit.

Remarks:

1. The maximum temperature increase at the discharge canal outlet above the intake water temperature shall be 32 °F. In the event the average temperature differential exceeds 32 °F for a period exceeding 24 hours or exceeds 35 °F at any time, the DEP shall be immediately notified and a written report of the incident filed within 10 days.

2. Total residual oxidant (chlorine and/or bromine) shall be analyzed during periods of oxidant addition and shall not be discharged from any unit for a period of more than two hours per day unless otherwise approved by the Commissioner. Sampling for total residual oxidant need only be conducted during weeks when oxidant is added to this discharge.

3. Total residual oxidant is defined as the arithmetic sum of total residual chlorine and bromine.

4. *Sampling for these parameters shall be conducted concurrently at both the influent monitoring location 01H (See Table G) and effluent at the frequency stated above.

5. **Maximum Instantaneous Temperature Increase: 12 °F

6. The permittee shall record the following data and maintain the records onsite:

    1. Daily range of pH
    2. Daily average flow
    3. Daily range of flow

4. Daily maximum temperature (°F)
5. Daily minimum temperature (°F)
6. Daily average temperature
7. Daily maximum temperature increase
8. Daily minimum temperature increase
9. Monthly standard deviation of temperature
10. Daily average temperature increase
11. Monthly standard deviation of temperature increase
12. Monthly maximum heat load (BTU/hr)
13. Monthly minimum heat load
14. Monthly average heat load
15. Monthly maximum rate of change of heat load
16. Monthly standard deviation of heat load

Report items 1) through 8) only. Retain items 9) thru 16) or the raw data for calculating items 9) thru 16) for a period of least five years from the month during which the data was collected.

7. The pH of the discharge shall not be less than 6.0 S.U. or greater than 9.0 S.U. at any time except when the pH of the incoming river water is outside of these limits, in which case the pH of the discharge shall not deviate from the pH of the incoming river water by more than 0.5 S.U.

Table E

Discharge Serial Number: 002-1 | **Monitoring Location:** 1

Wastewater Description: Discharge of building #1 intake screen wash and sump pump wastewater

Monitoring Location Description: Screen wash discharge basin located in screen house #1

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test [5]
		Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency [2]	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample// Reporting Frequency [2]	Sample Type or measurement to be reported	
Aquatic Toxicity, Daphnia pulex [3] (See Remark)	%	NA	NA	NR	NA	NOAEL>100% [4]	Annual (July)	Grab	
Aquatic Toxicity, Pimephales promelas [3] (See Remark)	%	NA	NA	NR	NA	NOAEL>100% [4]	Annual (July)	Grab	
Flow, Average [1]	gpd	360,000	NA	Monthly	Daily Flow	NA	NR	NA	
Flow, Maximum [1]	gpd	NA	691,200	Monthly	Daily Flow	NA	NR	NA	
Total Suspended Solids [3]	mg/l	NA	NA	NR	NA	-----	Quarterly	Grab	
Total Residual Oxidant [3] (see remark)	mg/l	NA	NA	NR	NA	-----	Weekly//Monthly	Grab	*

Table E Footnotes and Remarks:

Footnotes:

[1] For this parameter the permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report the Average Daily Flow and the Maximum Daily Flow for each month.

[2] The first entry in this column is the 'Sample Frequency'. If this entry is not followed by a 'Reporting Frequency' and the 'Sample Frequency' is more frequent than monthly then the 'Reporting Frequency' is monthly. If the 'Sample frequency' is specified as monthly, or less frequent, then the 'Reporting Frequency' is the same as the 'Sample Frequency'

[3] All analysis shall be on the same sample. The results of the Toxicity Tests are recorded in % survival, however, the permittee shall report pass/fail on the DMR based on criteria in Section 6(B) of this permit.

[4] See Section 6(B)(5)(a) for compliance with instantaneous limit.

[5] Minimum Level Test refers to Section 6 Paragraph A of this permit.

Remarks:

Permittee shall sample the screen wash discharge and test for aquatic toxicity annually if the intake screen is cleaned with chlorinated water.

Total residual oxidant (chlorine and/or bromine) sample shall be collected and analyzed during periods of oxidant addition and shall not be discharged from any unit for a period of more than two hours per day unless otherwise approved by the Commissioner. Sampling for total residual oxidant need only be conducted during weeks when oxidant is added to this discharge.

Table F

Discharge Serial Number: 003-1 | **Monitoring Location:** 1

Wastewater Description: Discharge of building #3 intake screen wash water and sump pump

Monitoring Location Description: Screen wash discharge basin located in screen house #3

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test [5]
		Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency [2]	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample// Reporting Frequency [2]	Sample Type or measurement to be reported	
Aquatic Toxicity, Daphnia pulex [3] (See Remark)	%	NA	NA	NR	NA	NOAEL>100% [4]	Annual	Grab	
Aquatic Toxicity, Pimephales promelas [3] (see remark)	%	NA	NA	NR	NA	NOAEL>100% [4]	Annual	Grab	

Flow, Average [1]	gpd	360,000	NA	Monthly	Daily Flow	NA	NR	NA	
Flow, Maximum [1]	gpd	NA	691,200	Monthly	Daily Flow	NA	NR	NA	
Total Suspended Solids [3]	mg/l	NA	NA	NR	NA	-----	Quarterly	Grab	
Total Residual Oxidant [3] (see remark)	mg/l	NA	NA	NR	NA	-----	Weekly//Monthly	Grab	*

Table F Footnotes and Remarks:

Footnotes:

[1] For this parameter the permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report the Average Daily Flow and the Maximum Daily Flow for each month.

[2] The first entry in this column is the 'Sample Frequency'. If this entry is not followed by a 'Reporting Frequency' and the 'Sample Frequency' is more frequent than monthly then the 'Reporting Frequency' is monthly. If the 'Sample frequency' is specified as monthly, or less frequent, then the 'Reporting Frequency' is the same as the 'Sample Frequency'

[3] All analysis shall be on the same sample. The results of the Toxicity Tests are recorded in % survival, however, the permittee shall report pass/fail on the DMR based on criteria in Section 6(B) of this permit.

[4] See Section 6(B)(5)(a) for compliance with instantaneous limit.

[5] Minimum Level Test refers to Section 6 Paragraph A of this permit.

Remarks:

Permittee shall sample the screen wash discharge and test for aquatic toxicity annually if the intake screen is cleaned with chlorinated water.

Total residual oxidant (chlorine and/or bromine) sample shall be collected and analyzed during periods of oxidant addition and shall not be discharged from any unit for a period of more than two hours per day unless otherwise approved by the Commissioner. Sampling for total residual oxidant need only be conducted during weeks when oxidant is added to this discharge.

Table G

Discharge Serial Number: 001-H | **Monitoring Location:** G

Wastewater Description: Inlet to screen house 1 or 3

Monitoring Location Description: Service water pump common discharge pressure connection located in screen house #3

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test [3]
		Average Monthly Limit	Maximum Daily Limit	Sample//Reporting Frequency [2]	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample// Reporting Frequency [2]	Sample Type or measurement to be reported	
Copper, Total*	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	*
Flow, Instantaneous	gpm	NA	NA	NR	NA	-----	Hourly	Instantaneous	
Flow, Average [1]	gpd	-----	NA	Daily//Monthly	Daily Flow	NA	NR	NA	
Flow, Maximum [1]	gpd	NA	-----	Daily//Monthly	Daily Flow	NA	NR	NA	
Lead, Total*	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	*
Nickel, Total*	mg/l	NA	-----	Quarterly	Daily Composite	NA	NA	NA	*
Number of Pumps in Operation	#	NA	NA	NR	NA	-----	Hourly	Instantaneous	
Oil & Grease, Total*	mg/l	NA	NA	NR	NA	------	Quarterly	Grab	
pH*	S.U.	NA	NA	NR	NA	-----	Monthly	Grab	
Temperature*	°F	NA	NA	NR	NA	----	Hourly	Instantaneous	
Total Suspended Solids*	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	
Total Residual Oxidant*	mg/l	NA	NA	NR	NA	-----	Quarterly	Grab	*
Zinc, Total*	mg/l	NA	------	Quarterly	Daily Composite	NA	NR	NA	*

Table G Footnotes and Remarks:

Footnotes:

[1] For this parameter the permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report the Average Daily Flow and the Maximum Daily Flow for each sampling month.

[2] The first entry in this column is the 'Sample Frequency'. If this entry is not followed by a 'Reporting Frequency' and the 'Sample Frequency' is more frequent than monthly then the 'Reporting Frequency' is monthly. If the 'Sample frequency' is specified as monthly, or less frequent, then the 'Reporting Frequency' is the same as the 'Sample Frequency'

[3] Minimum Level Test refers to Section 6 Paragraph A of this permit.

Remarks:

*Sampling for these parameters above shall be conducted concurrently at both the influent monitoring location 01H and effluent at the frequency stated above.

(1) All samples shall be comprised of only the wastewater described in this table. Samples shall be collected prior to combination with receiving waters or wastewater of any other type, and after all approved treatment units, if applicable. All samples collected shall be representative of the discharge during standard operating conditions.

(2) In cases where limits and sample type are specified but sampling is not required by this permit, the limits specified shall apply to all samples which may be collected and analyzed by the Department of Environmental Protection personnel, the permittee, or other parties.

(3) The limits imposed on the discharges listed in this permit take effect on the issuance date of this permit, hence any sample taken after this date which, upon analysis, shows an exceedance of permit limits will be considered non-compliance.

The monitoring requirements begin on the date of issuance of this permit if the issuance date is on or before the 12th day of a month. For permits issued on or after the 13th day of a month, monitoring requirements begin the 1st day of the following month.

SECTION 6: SAMPLE COLLECTION, HANDLING and ANALYTICAL TECHNIQUES

(A) Chemical Analysis

(1) Chemical analyses to determine compliance with effluent limits and conditions established in this permit shall be performed using the methods approved pursuant to the Code of Federal Regulations, Part 136 of title 40 (40 CFR 136) unless an alternative method has been approved in writing pursuant to 40 CFR 136.4 or as provided in section 22a-430-3(j)(7) of the RCSA. Chemicals which do not have methods of analysis defined in 40 CFR 136 shall be analyzed in accordance with methods specified in this permit.

(2) All metals analyses identified in this permit shall refer to analyses for Total Recoverable Metal as defined in 40 CFR 136 unless otherwise specified.

(3) The Minimum Levels specified below represent the concentrations at which quantification must be achieved and verified during the chemical analyses for the parameters identified in Section 5 Tables B, C, D, E, F and G. Analyses for these parameters must include check standards within ten percent of the specified Minimum Level or calibration points equal to or less than the specified Minimum Level.

Parameter	Minimum Level
Total Residual Oxidant	20.0 ug/L
Copper	5.0 ug/L
Lead	5.0 ug/L
Nickel	5.0 ug/L
Zinc	10.0 ug/L

(4) The value of each parameter for which monitoring is required under this permit shall be reported to the maximum level of accuracy and precision possible consistent with the requirements of this section of the permit.

(5) Effluent analyses for which quantification was verified during the analysis at or below the minimum levels specified in this section and which indicate that a parameter was not detected shall be reported as "less than x" where 'x' is the numerical value equivalent to the analytical method detection limit for that analysis.

(6) Results of effluent analyses which indicate that a parameter was not present at a concentration greater than or equal to the Minimum Level specified for that analysis shall be considered equivalent to zero (0.0) for purposes of determining compliance with effluent limitations or conditions specified in this permit.

(B) Acute Aquatic Toxicity Test For Grab Sample

(1) Grab samples for monitoring of Aquatic Toxicity shall be collected and handled as prescribed in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (EPA-821-R-02-012).

(a) Grab samples shall be chilled as they are collected. Samples shall be held at (0 - 6) degrees Centigrade until Aquatic Toxicity testing is initiated.

(b) Effluent samples shall not be dechlorinated, filtered, or, modified in any way, prior to testing for Aquatic Toxicity unless specifically approved in writing by the Commissioner for monitoring at this facility.

(c) Chemical analyses of the parameters identified in Section 5 Tables B, C, D, E and F shall be conducted on an aliquot of the same sample tested for Aquatic Toxicity.

(i) At a minimum, pH, specific conductance, total alkalinity, total hardness, and total residual chlorine shall be measured in the effluent sample and, during Aquatic Toxicity tests, in the highest concentration of test solution and in the dilution (control) water at the beginning of the test and at test termination. If chlorine, total residual is not detected in the effluent sample at test initiation, it does not need to be analyzed at 48 hours. Dissolved oxygen, pH, and temperature shall be measured in the control and all test concentrations at the beginning of the test, daily thereafter, and at test termination.

(d) Tests for Aquatic Toxicity shall be initiated within 24 hours of sample collection.

(2) Monitoring for Aquatic Toxicity to determine compliance with the permit limit on Aquatic Toxicity (invertebrate) above shall be conducted for 48-hours utilizing neonatal Daphnia pulex (less than 24-hours old)

(3) Monitoring for Aquatic Toxicity to determine compliance with the permit limit on Aquatic Toxicity (vertebrate) above shall be conducted for 48-hours utilizing larval Pimephales promelas (1-14 days old with no more than 24-hours range in age).

(4) Tests for Aquatic Toxicity shall be conducted as prescribed for static non-renewal acute tests in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (EPA-821-R-02-012), except as specified below.

(a) For Aquatic Toxicity Limits expressed as an NOAEL value, Pass/Fail (single-concentration) tests shall be conducted at a specified Critical Test Concentration (CTC) equal to the Aquatic Toxicity Limit, or 100% as prescribed in section 22A-430-3(j)(7)(A)(I) of the Regulations of Connecticut State Agencies.

(b) Organisms shall not be fed during the tests.

(c) Copper nitrate shall be used as the reference toxicant in tests with freshwater organisms.

(d) Synthetic freshwater prepared with deionized water adjusted to a hardness of 50 mg/L (plus or minus 5 mg/L) as CaCO3 shall be used as dilution water in tests with freshwater organisms.

(5) Compliance with limits on Aquatic Toxicity shall be determined as follows:

(a) For limits expressed as an NOAEL value, compliance shall be demonstrated when the results of a valid pass/fail Aquatic Toxicity test indicates there is 90% or greater survival in the undiluted effluent.

(C) Chronic Toxicity Test For Daily Composite Sample

(1) The permittee shall monitor the chronic toxicity of DSN 001-A, DSN 001-B and DSN 001-C in accordance with the following specifications.

(2) Chronic toxicity testing of the discharge shall be conducted two times per year during April and October for DSN 001-A, DSN 001-B and DSN 001-C.

(3) Single concentration, static renewal chronic toxicity tests shall be performed on the discharge in accordance with the test methodology established in "Short term Methods For Estimating The Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms" (EPA-821-R-02-013) as referenced in 40CFR 136 for Ceriodaphnia survival and reproduction and Fathead Minnow larval survival and growth.

(4) Permittee shall conduct sampling for DSNs 001-A, 001-B and 001-C when oxidant is being added. If no oxidant is added during these months sampling is still required.

(5) In the event that power generation is discontinued prior to the completion of the test, circulating pumps for the respective condenser unit(s) shall continue to be operated so that samples may be collected for use as renewal test solutions.

(6) Daily composite samples of the discharges DSN 001-A, DSN 001-B and DSN 001-C and grab samples of the Connecticut River water collected outside the influence of DSNs 001-A, 001-B and 001-C and docking activities for use as control water shall be collected on day 0, day 2, and day 4 of the test. Chronic toxicity shall also be performed on a laboratory water control sample. Samples shall not be dechlorinated, filtered, pH or hardness adjusted, or chemically altered in any way.

(7) Test solutions shall be renewed daily. Sample 1 shall be used for days 1 and 2 of the test, sample 2 shall be used for days 3 and 4, and sample 3 shall be used for the remainder of the test. In no case shall samples of DSNs 001-A, 001-B, 001-C or control water be held longer than 24 hours prior to their use for first renewal of test solutions.

(8) All samples of the discharge and the Connecticut River water used in the Chronic toxicity test shall, at a minimum, be analyzed and results reported in accordance with the provisions listed in section 6(A) of this permit for the following parameters:

pH	Copper (Total recoverable and dissolved)
Hardness	Lead, (Total recoverable and dissolved)
Alkalinity	Nickel (Total recoverable and dissolved)
Conductivity	Nitrogen, Ammonia (total as N)
Chlorine, (Total residual)	Nitrogen, Nitrite (Total as N)
Manganese, Total	Nitrogen, Nitrate (Total as N)
	Solids, Total Suspended
	Zinc, (Total recoverable and dissolved)
	Iron, (Total recoverable)

(9) The results of all reference toxicity tests performed by the laboratory performing the chronic toxicity test (pursuant to Section 4 of EPA-821-R-02-013) during the 30-day period immediately proceeding the chronic toxicity test shall be reported.

(10) Compliance with the aquatic toxicity limit specified in Section 5 Tables B, C and D shall be demonstrated when the 48 hour results of a valid chronic toxicity test in which control test organism survival exceeds 80% for all replicates combined and the discharge(s) demonstrate(s) no significant increase in mortality of the test organisms exposed to the discharge in comparison to those exposed to the control water as indicated by a one tailed test at an alpha level of 0.05.

(11) If any chronic toxicity result indicates a significant increase in mortality of test organisms between samples of DSNs 001-A, 001-B and 001-C and the control at the completion of the test, the permittee shall notify the Department. The permittee shall submit to the Department within 30 days of conclusion of the test a brief summary of test results which includes at a minimum, percent survival in each replicate test chamber and all supporting chemical and physical measurements performed in association with the toxicity test.

SECTION 7: REPORTING REQUIREMENTS

(A) The results of chemical analyses and any aquatic toxicity test required above shall be entered on the Discharge Monitoring Report (DMR), provided by this office, and reported to the Bureau of Water Management (Attn: DMR Processing) at the following address. The report shall also include a detailed explanation of any violations of the limitations specified. The DMR shall be received at this address by the last day of the month following the month in which samples are collected.

Bureau of Water Management (Attn: DMR Processing)
Connecticut Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

(B) Complete and accurate aquatic toxicity test data, including percent survival of test organisms in each replicate test chamber, LC50 values and 95% confidence intervals for definitive test protocols, and all supporting chemical/physical measurements performed in association with any aquatic toxicity test, shall be entered on the Aquatic Toxicity Monitoring Report form (ATMR) and sent to the Bureau of Water Management at the address below. The ATMR shall be received at this address by the last day of the month following the month in which samples are collected.

Bureau of Water Management (Attn: Aquatic Toxicity)
Connecticut Department of Environmental Protection
79 Elm St.
Hartford, Ct 06106-5127

(C) If this permit requires monitoring of a discharge on a calendar basis (e.g. Monthly, quarterly, etc.), but a discharge has not occurred within the frequency of sampling specified in the permit, the Permittee must submit the DMR and ATMR, as scheduled, indicating "NO DISCHARGE". For those permittees whose required monitoring is discharge dependent (e.g. per batch), the minimum reporting frequency is monthly. Therefore, if there is no discharge during a calendar month for a batch discharge, a DMR must be submitted indicating such by the end of the following month.

SECTION 8: RECORDING AND REPORTING OF VIOLATIONS, ADDITIONAL TESTING REQUIREMENTS

(A) If any sample analysis indicates that an Aquatic Toxicity effluent limitation in Section 5 of this permit has been exceeded, or that the test was invalid, another sample of the effluent shall be collected and tested for Aquatic Toxicity and associated chemical parameters, as described above in Section 5 and Section 6, and the results reported to the Bureau of Water Management (Attn: DMR Processing), at the address listed above, within 30 days of the exceedance or invalid test. Results of all tests, whether valid or invalid, shall be reported.

(B) If any two consecutive test results or any three test results in a twelve month period indicates that an Aquatic Toxicity Limit has been exceeded, the permittee shall immediately take all reasonable steps to eliminate toxicity wherever possible and shall submit a report to Bureau of Water Management (Attn: Aquatic Toxicity) for the review and approval of the Commissioner in accordance with section 22a-430-3(j)(10)(c) of the RCSA describing proposed steps to eliminate the toxic impact of the discharge on the receiving water body. Such a report shall include a proposed time schedule to accomplish toxicity reduction and the permittee shall comply with any schedule approved by the Commissioner.

(C) The permittee shall notify the Bureau of Water Management, Permits and Enforcement Division, within 72 hours and in writing within thirty days of the discharge of any substance listed in the application but not listed in the permit if the concentration or quantity of that substance exceeds two times the level listed in the application.

SECTION 9: COMPLIANCE SCHEDULE

(A) On or before 30 days after permit issuance and annually (i.e. within 30 days of the permit anniversary date) thereafter, the permittee shall conduct a complete piping survey and examination of the non-contact cooling water systems DSNs 001A, 001B, and 001C to determine compliance with the conditions set forth in paragraph (B) below and shall submit for the review and written approval of the Commissioner a report describing the results of this survey and examination and a written certification that DSNs 001A, 001B and 001C conform to the requirements stated in paragraph (B) below. Such survey shall at a minimum consist of a visual inspection (walk-through) of the piping system and a review of maintenance records to verify that the system has not had any modifications, such as cross-connections to other piping systems, which could result in contamination of the non-contact cooling water discharges.

(B) The discharges shall conform to the following conditions:

1. The discharges through DSN 001 shall be comprised solely of non-contact cooling water and the only source of water shall be the Connecticut River except during periods of emergency operation of the service water system during which time, in addition to river water, a maximum flow of 3,500 gallons per minute of potable water from the Metropolitan District Commission may be discharged through DSN 001.

2. No chemicals of any type with the exception of chlorine and a suitable dechlorination agent such as sodium bisulfite and/or sodium thiosulfate may be added to the discharge.

3. Except for seven documented cross-connections to the non-contact cooling water systems (four are connected to the flue-gas desulfurization system and are isolated with backflow preventers, and three are connected to city water for use only as needed during emergency operations), the non-contact cooling water system shall be completely segregated from any possible contaminant sources. Unless otherwise approved by the Commissioner in writing, connections to any contaminant sources or water streams other than non-contact cooling water as specified in paragraph (B)(1) above, are prohibited.

(C) A complete and thorough report of the results of the chronic toxicity monitoring specified in Section 6 (C) shall be prepared as outlined in section 10 of EPA's manual entitled "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" (EPA-821-R-02-013) and submitted to the Department for review within 60 days after each test is completed to the address specified in Section 7(B) of this permit.

(D) On or before 180 days after the date of permit issuance, the permittee shall submit for the Commissioner's review and written approval a comprehensive and thorough scope of study for performing a one year impingement study and a two year entrainment monitoring and evaluation of the intake structure. The scope of study shall provide all of the necessary details associated with the experimental design and include a schedule that identifies the study initiation and completion dates. A scheduled generating unit shut down shall not occur during entrainment monitoring and evaluation of the intake structure.

(E) The permittee shall perform the actions in the approved scope of study described in paragraph 9(D) in accordance with the approved schedule(s), but in no event shall the actions be completed by later than thirty three (33) months after the date of approval of such scope of study.

(F) Within three years after approval of the scope of study described in paragraph 9(D) above, the permittee shall submit for the Commissioner's review and written approval a comprehensive and thorough report on the findings of the impingement study and entrainment monitoring and evaluation conducted. The report shall include recommendations to modify current intake practices and design, including but not limited to modification of the fish return system, if warranted based on the results of the impingement study and entrainment monitoring and evaluation. The report shall also include a detailed schedule identifying when all appropriate recommendations will be implemented at the facility.

(G) After completing one year of entrainment monitoring, the permittee may submit in writing to the Commissioner a request to consider the entrainment study complete. In making such request, the required report and data associated with the first year of entrainment sampling must also be submitted for the review and approval of the Commissioner, as well as a detailed narrative describing the rational for such request. The Commissioner may either approve or deny such request.

(H) On or before 180 days after the issuance of this permit, the permittee shall submit to the Commissioner for review and written approval a Proposal For Information Collection required by 40 CFR 125.95(b) (1) needed to support the preparation of a Comprehensive Demonstration Study (or CDS) done in accordance with 40 CFR 125.95(b) - Subpart J – Requirements Applicable to Cooling Water Intake Structures at Large Power Plants Phase II Existing Facilities Under Section 316(b) of the Act dated July 9, 2004. The Proposal For Information shall also include a preliminary description of the compliance alternative selected by the permittee in accordance with 40 CFR 125.94 and all information required under 40 CFR 122.21(r)(2), (3), and (5) on Source Water Physical Data, Cooling Water Intake Structure Data, and Cooling Water System Data.

(I) On or before 3 years after the approval of the Proposal for Information Collection referenced in paragraph (H) above, the permittee shall submit to the Commissioner for review and written approval a Comprehensive Demonstration Study (CDS) that includes a final description of the compliance alternative selected pursuant to 40 CFR 125.94 and all applicable information specified in 40 CFR 125.95(b) including but not limited to the following: 1) Source Waterbody Flow Information; 2) Impingement Mortality and/or Entrainment Characterization Study; 3) Design And Construction Technology Plan; 4) Technology Installation and Operation Plan; 5) Restoration Plan; 6) Comprehensive Cost Evaluation Study; 7) Benefits Valuation Study; 8) Site Specific Technology Plan; and 9) Verification Monitoring Plan. The CDS shall confirm that the technologies, operational measures, and/or restoration measures installed and/or implemented or that will be installed and/or implemented at CRRA will meet all applicable requirements for the compliance alternative selected under 40 CFR 125.94 – Subpart J – Requirements Applicable to Cooling Water Intake Structures for Phase II Existing Facilities Under Section 316(b) of the Act dated July 9, 2004.

(J) The permittee shall use best efforts to submit to the Commissioner all documents required by this section of the permit in a complete and approvable form. If the Commissioner notified the permittee that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and the permittee shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within thirty days of the Commissioner's notice of deficiencies. In approving any document or other action under this Compliance Schedule, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this section of the permit. Nothing in this paragraph shall excuse noncompliance or delay.

(K) Dates. The date of submission to the Commissioner of any document required by this section of the permit shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this section of the permit, including but not limited to notice of approval or disapproval of any document

or other action, shall be the date such notice is personally delivered or the date three days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" as used in this section of the permit means calendar day. Any document or action which is required by this section only of the permit, to be submitted, or performed, by a date which falls on, Saturday, Sunday, or, a Connecticut or federal holiday, shall be submitted or performed on or before the next day which is not a Saturday, Sunday, or Connecticut or federal holiday.

(L) Notification of noncompliance. In the event that the permittee becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this section of the permit or of any document required hereunder, the permittee shall immediately notify the Commissioner and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. In so notifying the Commissioner, the permittee shall state in writing the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and the permittee shall comply with any dates that may be approved in writing by the Commissioner. Notification by the permittee shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.

(M) Notice to Commissioner of changes. Within fifteen days of the date the permittee becomes aware of a change in any information submitted to the Commissioner under this section of the permit, or that any such information was inaccurate or misleading or that any relevant information was omitted, the permittee shall submit the correct or omitted information to the Commissioner.

(N) Submission of documents. Any document, other than a discharge monitoring report, required to be submitted to the Commissioner under this section of the permit shall, unless otherwise specified in writing by the Commissioner, be directed to:

Charles Nezianya
Department of Environmental Protection
Bureau of Water Management
79 Elm Street
Hartford, CT 06106-5127

This permit is hereby issued on the 17th of November 2004

Jane K. Stahl
Acting Commissioner

AJR/CN

CERTIFIED TO BE A TRUE COPY
Connecticut Department of Environmental Protection

NAME: Pamela D Burney

TITLE: Processing Technician