AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act as amended, (33 U.S.C. §§1251 et seq.; the "CWA"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

Consolidated Edison Energy Massachusetts, Inc. (CEEMI)

is authorized to discharge from the facility located at:

West Springfield Station
15 Agawam Avenue
West Springfield, Massachusetts 01089

to receiving waters named the **Connecticut River**

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

This permit shall become effective 60 days from the date of issuance.

This permit and the authorization to discharge expire at midnight, five (5) years from the effective date.

This permit supersedes the permit issued on September 26, 1988.

This permit consists of: 20 pages of Part I including Sections A-C with Effluent Limitations, Monitoring Requirements, and State Permit Conditions and Part II Requirements containing General Conditions and Definitions.

Signed this 4th day of November, 2004

/s/ SIGNATURE ON FILE

Linda M. Murphy, Director
Office of Ecosystem Protection
Environmental Protection Agency (EPA)
Boston, MA

Glenn Haas, Director
Division of Watershed Management
Massachusetts Department of Environmental Protection (MA DEP)
Boston, MA

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through expiration, the permittee is authorized to discharge from **outfall serial number: 001**: once through cooling water for the two combustion turbine generator (CTG) unit's lube oil cooling systems combined with the CTG's sandfilter backwash water. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Flow Rate (million gallons per day)	Report	1.1	Continuous	Record: Pump capacity curve and operational hours
pH (standard units)	≥6.5 and ≤8.3[1]		2X/month	Grab; report monthly range
Temperature (°F)	---	91[2]	Continuous	Recorder
Temperature Rise (Discharge °F minus Inlet °F)	---	20[2]	Continuous	Recorder

[1] pH shall not change more than 0.5 units outside the background value.
[2] This limit is an instantaneous maximum (not to be exceeded at any time).

a. Effluent samples shall be taken at the spigot on the discharge line of the lube oil cooling system prior to mixing with other streams discharging to the Connecticut River.

b. Chlorination is not conducted for these cooling units. No discharge of chlorine or any other biocide may take place without prior approval by the EPA Regional Administrator or the MA DEP Commissioner.

c. The permittee shall continuously monitor temperature and temperature rise (ΔT) and report the highest daily instantaneous maximum values that occur for the month to the EPA.

d. There shall be no discharge of floating solids, oil sheens or visible foam attributable to station operation in other than trace amounts.

2. During the period beginning on the effective date and lasting through expiration, the permittee is authorized to discharge from **outfall serial number: 002A**: once through condenser cooling water for Unit 3 steam turbine generator combined with Unit 3's sandfilter backwash water and the hydrogen booster pumps cooling water from **April 15 to October 31** (defined as summer period). Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Flow Rate (million gallons per day)	Report	69	Continuous	Record: Pump capacity curve and operational hours
Total Residual Chlorine[1] (mg/l)	0.13	0.2[2]	Continuous when in use	Recorder: during chlorination event
pH (standard units)	≥6.5 and ≤8.3[3]		2X/week	Grab; report monthly range
Temperature (°F)	---	112[2]	Continuous	Recorder
Temperature Rise (Discharge °F minus Inlet °F)	---	37[2]	Continuous	Recorder

[1] Chlorination may be conducted for no more than two hours per day for this condenser unit.
[2] This limit is an instantaneous maximum (not to be exceeded at any time).
[3] pH shall not change more than 0.5 units outside the background range.

a. Effluent samples shall be taken from the spigot on the discharge line of the Unit 3 condenser system prior to mixing with other streams discharging to the Connecticut River.

b. The permittee shall continuously monitor temperature, temperature rise (ΔT) and total residual chlorine (TRC) and report the highest daily instantaneous maximum values that occur for the month to the EPA.

c. There shall be no discharge of floating solids, oil sheens or visible foam attributable to station operation in other than trace amounts.

3. During the period beginning on the effective date and lasting through expiration, the permittee is authorized to discharge from **outfall serial number: 002B**: once through condenser cooling water for Unit 3 steam turbine generator combined with Unit 3's sandfilter backwash water and the hydrogen booster pumps cooling water from **November 1 to April 14** (defined as the winter period). Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Flow Rate (million gallons per day)	Report	69	Continuous	Record: Pump capacity curve and operational hours
Total Residual Chlorine[1] (mg/l)	0.13	0.2[2]	Continuous when in use	Recorder: during chlorination event
pH (standard units)	≥6.5 and ≤8.3[3]		2X/week	Grab; report monthly range
Temperature (°F)	---	100[2]	Continuous	Recorder
Temperature Rise (Discharge °F minus Inlet °F)	---	48[2]	Continuous	Recorder

[1] Chlorination may be conducted for no more than two hours per day for this condenser unit.
[2] This limit is an instantaneous maximum (not to be exceeded at any time).
[3] pH shall not change more than 0.5 units outside the background range.

a. Effluent samples shall be taken from the spigot on the discharge line of the Unit 3 condenser system prior to mixing with other streams discharging to the Connecticut River.

b. The permittee shall continuously monitor temperature, ΔT and TRC and report the highest daily instantaneous maximum values that occur for the month to the EPA.

c. There shall be no discharge of floating solids, oil sheens or visible foam attributable to station operation in other than trace amounts.

4. During the period beginning on the effective date and lasting through expiration, the permittee is authorized to discharge from **outfall serial number: 005**: intake screen wash. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Flow Rate (gallons per day)	Report	Report	Continuous	Record: Pump capacity curve and operational hours

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

5. During the period beginning on the effective date of the permit and lasting through expiration, the permittee is authorized to discharge from **outfall serial number 006:** stormwater from electrical control room roof drains and yard areas (includes parking lot). Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
pH	≥6.5 and ≤8.3 And not more than 0.5 s.u. outside the background range		2X/Year[1]	3 Grabs Report minimum and maximum values
Oil and Grease (mg/l)	---	15.0	2X/Year[1]	2 Grabs

[1] Sampling shall be conducted once within each 6 month period per year.

a. Samples of storm water shall be taken from the catch basin nearest to the No.2 fuel unloading area, and must be collected within the first hour of a rain event and consistent with USEPA's MSGP for storm water discharges associated industrial activities. If possible, one of the yearly samples shall either include snowmelt or consist solely of snowmelt from any stockpiled snow within the drainage area.

6. During the period beginning on the effective date of the permit and lasting through expiration, the permittee is authorized to discharge from internal **outfall serial number**

010: the CTG's sandfilter backwash water. Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Flow Rate (gallons per day)	Report	Report	Continuous	Record: Pump capacity curve and operational hours
Total Suspended Solids (mg/l)	30.0	100.0	1/Week	Composite[1]
Oil and Grease (mg/l)	15.0	20.0	1/Week	Grab

[1] The composite shall consist of equally spaced samples (i.e. every five minutes or smaller increment) to be collected for one backwash cycle during each week

a. Samples of the CTG's sandfilter backwash water shall be collected from the spigot of the discharge line prior to mixing with any other streams.

7. During the period beginning on the effective date of the permit and lasting through expiration, the permittee is authorized to discharge from internal **outfall serial number 020:** Unit 3's sandfilter backwash water. Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Flow Rate (gallons per day)	Report	Report	Continuous	Record: Pump capacity curve and operational hours
Total Suspended Solids (mg/l)	30.0	100.0	1/Week	Composite[1]
Oil and Grease (mg/l)	15.0	20.0	1/Week	Grab

[1] The composite shall consist of equally spaced samples (i.e. every five minutes or smaller increment) to be collected for one backwash cycle during each week

a. Samples of Unit 3's sandfilter backwash water shall be collected from the spigot of the discharge line prior to mixing with any other streams.

8. During the period beginning on the effective date and for at least three years, the permittee shall submit an annual report providing the following information for CTG Units 1 and 2 and Unit 3:

   a. Hourly average intake and discharge temperatures over the past year (January to December).

   b. Net heat load (in BTUs) each hour over the past year (January to December). Net heat load means the total actual waste heat to the river and shall be calculated as follows: $Q = C_p m(\Delta T)$

      Where Q = Heat Load, BTU/Hour
      C_p = Heat Capacity (Specific Heat) of pure water
      = 1.0 BTU/pound°F
      m = mass of water (discharged)
      = flow rate x specific gravity of pure water
      = flow rate, gallons per hour (gph) x 8.344 pounds/gallon
      ΔT = discharge - intake temperature, °F

   c. Amount of water discharged each hour over the past year (January to December).

   d. This data shall be presented in electronic form, able to be read by a spreadsheet program such as Excel or Lotus 123, in tabular form for each Unit as demonstrated below:

Unit Number:

Date (MM/DD/YY HH:MM)[1]	Intake Temperature (°F)	Discharge Temperature (°F)	Hourly Heat Load (BTU)	Total Discharge Flow (gph)
10/22/01 0:00				
10/22/01 1:00				
10/22/01 2:00				
⇓				
10/22/01 23:00				

[1] Use of military format is recommended for documenting hours (0:00-23:00).

   e. The annual report shall be submitted by February 28th and shall contain all data outlined above from January through December of the previous year.

9. The term "Regional Administrator" means the Regional Administrator of Region I of the U.S. Environmental Protection Agency (EPA) and the term "Commissioner" means the Commissioner of the Massachusetts Department of Environmental Protection (DEP) or their designees.

10. Biological and Thermal Monitoring - General and Reporting Requirements

a. During operation of West Springfield Station, the permittee shall conduct thermal and biological/environmental studies as contained in Part I.A.11 of this permit. The purpose of such studies shall be to evaluate the effects of West Springfield Station's discharge on the balanced, indigenous population of shellfish, fish and wildlife in and on the Connecticut River and the effectiveness of location, design, construction, and capacity of the cooling water intake structure to minimize adverse environmental effects.

b. These studies shall be conducted for the duration of this permit unless authorization to discontinue or modify portions of the sampling program is granted by the Regional Administrator and the Commissioner.

c. A biological study report shall be submitted annually by February 28th . Each annual report shall provide and summarize the previous year's information and conclusions graphically, where appropriate, and in text.

i. The annual report conclusions will indicate the trends of the various parameters analyzed and identify any anomalies that appear in the annual historical data comparison. These differences will be explained, if possible. The permittee will make recommendations for any remediation considered necessary or for any programs to better understand the anomaly. The permittee shall assess the effectiveness of data gathering efforts undertaken to date with respect to the objectives of the biological/environmental studies outlined in this part.

ii. The annual report will provide the status of the present monitoring programs, the expected effort in the ensuing six months, and an alert to EPA and the State of any anomalies or patterns that may be evident in the data collection.

d. After two years of studies have been completed and reported to the EPA/DEP, the permittee may request that the scope of the sampling program be discontinued or reduced based on the results of data collected. Such changes will become effective upon receipt of EPA notification.

e. After two years from permit issuance and prior to permit expiration, the permittee shall complete and submit a report to EPA/DEP that includes the evaluation of

cost, feasibility, and effectiveness of various technologies that reduce impingement and entrainment for the Station's intake structure in accordance with CWA §316(b). Such options may include barrier nets, wedge-wire screens, full depth filter curtains and other fish diversion, physical and behavioral barriers. Should the Station demonstrate that the intake flow is equal to or less than 5% of the annual mean flow of the Connecticut River at the Station, the permittee may request that they no longer evaluate of technologies for the reduction of entrainment at the Station. Such change, based on the results of monitoring data collected will become effective upon receipt of EPA notification.

11. Biological/Thermal Sampling Program

a. Ichthyoplankton (fish eggs and larvae): Occurrence and Abundance of Species Entrained

i. Entrainment monitoring shall be conducted weekly from April through September and every other week from October through March.

ii. Two entrainment samples shall be collected each sampling week (one during daylight hours and one during night hours). At least one of the cooling water pumps for Unit 3 will be operated continuously during the sample period. For entrainment monitoring, Unit 3 pumps may be operated independent of the Station's power generation or other operational needs.

iii. Entrainment samples shall be collected from a representative location near the intake structure.

iv. Entrainment sampling in the discharge shall be completed on the same day as impingement monitoring.

v. Sampling shall be conducted using 0.333 mm mesh, 60 cm plankton nets. Volume shall equal approximately 100-200 m^3. The volume of river water sampled shall be measured and shall be in excess of 100 m^3.

vi. Sampling shall also be conducted in the Connecticut River on the same day as entrainment monitoring, at three evenly spaced locations along a representative transect, perpendicular to the flow of the river and just upstream of the Station (ie. left bank, center of river, and right bank). Paired 0.333 mm mesh, 60 cm plankton nets will be set at mid-depth, at each location, until a volume of at least 100 m^3 of river water is sampled.

vii. In the laboratory, all taxa shall be identified to the lowest practical taxa. Specimens of the resident indigenous species (RIS) shall be classified as to

lifestage and the larvae shall be measured for total length to the nearest 0.1 mm. Subsampling with a plankton splitter shall be used if the count of eggs and larvae in a sample is greater than 400 organisms so that a minimum of 200 eggs and larvae will be present in any subsample.

viii. Annual larval entrainment estimates shall be presented in the annual report. These entrainment losses also shall be converted to adult equivalents for species in which regionally specific larval survival rates are available.

ix. River sampling will be used to calculate ichthyoplankton densities in the river, for comparison with entrainment densities.

b. Finfish: Occurrence and Abundance of Species Impinged

i. Collections shall be made separately from each intake screen three times per week by collecting fish during at least an eight hour time period following an initial cleansing screenwash. Collections shall be made weekly for a period no less than three years. **At least one of the cooling water pumps for Unit 3 will be operated continuously during the sample period. For impingement monitoring, Unit 3 pumps may be operated independent of the Station's power generation or other operational needs**.

ii. Collections shall be made throughout the week at reasonably spaced intervals, to capture natural variability, and at various times of day (e.g. Monday morning, Wednesday night and Friday afternoon).

iii. Each collection shall cover a period of at least eight hours and the exact time period shall be recorded.

iv. All fish shall be identified, counted, and measured (Total Length) and the data shall be presented in the annual report. When more than 40 fish are impinged within an eight hour period, the permittee shall follow all requirements in Part I.A.13.b.

c. Characterize the Impact of the Thermal Discharge on Benthos

i. An in-river survey of macroinvertebrates shall occur at three sampling locations above the Station's discharge and three within the thermal plume generated from the Station's discharge as specified in the permittee's proposal for a demonstration document study plan dated May 24, 2002 (West Springfield 316(a) and (b) Demonstration Document Study Plan).

ii. Five sampling replicates shall be taken at each location for a total of 30 samples.

iii. Sampling shall take place once each year for three years, during late summer, no later than August 30th.

iv. Sampling shall be collected with a shallow water bottom dredge, which has an effective sampling area of 36 square inches (0.02 m^2).

v. Sample grabs shall be sieved through 0.5 mm mesh, fixed in a 10 percent formaldehyde solution, stained, and examined through a microscope.

vi. Individual organisms shall be identified to species/taxa, classified and evaluated for each sampling location according to the EPA's Ecological Assessment Branch's Standard Operating Procedures for sampling benthic macroinvertebrates.

vii. All samples shall be preserved in 70 percent ethanol and stored for 3 years.

viii. Community analysis shall be used to determine if there are differences in the benthic community between the upstream and downstream stations. Numerical classification and multi-dimensional scaling shall be used to compare communities among stations.

ix. In addition to shallow water bottom dredge sampling, the permittee shall deploy artificial substrate samplers in accordance with a sampling protocol to be prepared by the permittee in consultation with the Massachusetts DEP. The protocol shall incorporate relevant portions of the DEP/DWM's Protocols for Conducting Macroinvertebrate Community Evaluation of Point Discharges to Lotic Surface Waters in Massachusetts and/or other guidance documents identified by the DEP.

x. Once during benthic sampling at each station, an extra dredge sample will be taken for grain size analysis. Parameters measured shall include percentage of gravel, sand, silt, clay, and moisture content.

d. Water Quality and Temperature Monitoring

i. Water quality monitoring shall be conducted in the vicinity of the intake, discharge, and river, concurrent with each impingement, entrainment, river ichthyoplankton and benthos-sampling event. The permittee shall report the sampling locations and show them on a map.

ii. This water quality monitoring shall be conducted for the following parameters: temperature, pH, dissolved oxygen, and conductivity.

e. Thermal Plume Evaluation

i. To determine the extent of the thermal plume within the Connecticut River that is generated by the discharge of cooling water from the Unit 3 condenser during maximum temperature rise and maximum circulation water use (when practicable and keeping within permit limits) and under low river flow conditions, the necessary field data shall be collected, as described in the May 24, 2002 West Springfield Station 316(a) and (b) Demonstration Document Study Plan, to model the plume using the Cornell Mixing Zone Expert System (CORMIX), FLOW-3D software, or a simulation model with equivalent or better capabilities.

ii. Field data gathering activities associated with the Thermal Plume Evaluation, as described above, shall be conducted once in the first year of the permit cycle, during either an extremely low flow event or the seasonal low flow period (August/September) for the Connecticut River, whichever occurs first. If during field data collection, river conditions were noticably above expected low flow conditions (approximately 1660 cfs or lower as measured just downstream of the Holyoke Dam Project), EPA may require an additional data collection event the following year.

12. Discharge Related Mortality

a. The permittee shall visually inspect the shoreline discharge locations and areas adjacent to these locations for any sign of environmental stress and/or fish mortality. These inspections shall be conducted periodically, when not in conflict with safety concerns or other company policies and procedures. A fish shall be considered dead if it exhibits a loss of equilibrium. Those fish identified as being washed off the traveling screens or dead fish floating from upstream shall be identified as such and placed in a separate category, along with the justification for making the determination.

b. If the permittee observes 25 or more dead fish within any 24 hour period, the permittee shall:

i. Report to the Regional Administrator and the Commissioner within 24 hours by telephone as required by Part II of this permit. A written confirmation report is to be provided within five business days. These oral and written reports shall include the following information:

(1) Characterization of fish killed: All dead fish shall be enumerated

and recorded by species. Report the species, size ranges, and approximate number of organisms involved in the incident. In addition, from a representative sample of 25% of each fish species killed, up to a maximum of 25 total fish specimens from each species, shall be sampled as follows:

(a) Length: The dead fish shall be measured to the nearest centimeter total length.

(b) Scale samples: These shall be collected for the Massachusetts Division of Fisheries and Wildlife (DFW). The scale samples shall be collected from the acceptable body locations for each individual species (as directed by the DFW). Sampled fish shall be appropriately preserved for future pathological examination as may be directed by the DFW.

(2) The time and date of the occurrence.

(3) The operational mode of the specific facility system that was in operation that may have caused the occurrence.

(4) The opinion of the permittee as to the reason the incident occurred.

(5) The remedial action that the permittee recommends to reduce or eliminate this type of incident.

ii. Immediately collect a water sample of the discharge to be analyzed for Total Residual Chlorine (TRC). In addition, the permittee shall immediately initiate a separate hourly record showing: (1) the point of discharge temperature; (2) the dissolved oxygen levels at the intake structures and at the discharge; (3) the number of dead fish observed by species; and (4) the Total Residual Chlorine (TRC) level of the discharge. The record shall also contain as much of this data that is available from up to 24 hours prior to the event, in order to provide information as to the possible causes of the fish mortality event.

iii. Suspend all unit chlorination operations immediately after collection of water samples for TRC. If the discharge temperature is greater than 83ºF, the permittee will reduce the discharge temperature to 83ºF within two hours.

iv. If at the end of the 24 hour period from the initial observation, fish

mortalities do not exceed 25 or more dead fish within any 24 hour period from the areas near the shoreline discharge locations, the permittee will cease special monitoring and return to normal station operation (including unit chlorination).

13. Unusual Impingement Event

a. At a minimum, the permittee shall rotate and visually inspect the intake screens of the cooling water intake structure every eight hours for dead and live fish when circulating pumps are in operation.

b. If the permittee observes on the cooling water intake screens, or estimates, based on temporally-limited observations: 40 or more dead fish within any 8 hour period, the permittee shall:

i. Initiate continuous screen washes.

ii. Report to the Regional Administrator and the Commissioner within 24 hours by telephone as required by Part II of this permit. A written confirmation report is to be provided within five business days. These oral and written reports shall include the following information:

(1) All dead fish shall be enumerated and recorded by species. Report the species, size ranges (maximum and minimum length), and approximate number of organisms involved in the incident. In addition, from a representative sample of 25% of each fish species killed, up to a maximum of 25 total fish specimens from each species, shall be measured to the nearest centimeter total length.

(2) The time and date of the occurrence.

(3) The operational mode of the specific system that may have caused the occurrence.

(4) The opinion of the permittee as to the reason the incident occurred.

(5) The remedial action that the permittee recommends to reduce or eliminate this type of incident.

14. Except as specified in Parts I.A.1 through I.A.7 herein the permittee shall not discharge to the Connecticut River a final effluent to which it has added any pollutants.

a. Discharges shall not impair any Class B use of the Connecticut River and shall not violate any applicable narrative criteria from the state water quality standards,

although discharges may exceed numeric temperature criteria included in state water quality standards to the extent that such discharges comply with temperature and flow limits specified herein pursuant to section 316(a) and 316(b) of the Clean Water Act.

b. The thermal plumes from the station shall: (a) not block zones of fish passage, (b) not interfere with spawning of indigenous populations, (c) not change the balanced indigenous population of the receiving water, and (d) have minimum contact with surrounding shorelines.

c. There shall be no discharge of polychlorinated biphenyl (PCB) compounds such as those commonly used for transformer fluid. The permittee shall dispose of all known PCB equipment, articles, and wastes in accordance with 40 CFR 761. The permittee shall certify that this disposal has been accomplished.

d. Pollutants which are not limited by the permit, but have been specifically disclosed in the last permit application, may be discharged at the frequency and level disclosed in the application, provided that such discharge does not violate sections 307 and 311 of the Act or applicable water quality standards.

e. Any discharge shall not cause visible discoloration or turbidity in the receiving waters which would impair the uses designated by the classification of the receiving waters.

f. The effluent shall not contain metals and/or materials in concentrations or in combinations which are hazardous or toxic to aquatic life or which would impair the uses designated by the classification of the receiving waters.

g. Chlorine may be used as a biocide for Unit 3. No other biocide shall be used without explicit approval from EPA and the Commissioner. Total residual chlorine may not be discharged from Unit 3 for more than two hours per day. The quantity of total residual chlorine (TRC) discharged in the once-through cooling water from Unit 3 shall not at any time exceed a maximum concentration of 0.2 mg/l. The "Maximum Daily" TRC limit shall always mean the "value that shall not be exceeded" for both the guideline value (40 CFR 423) of 0.2 mg/l. The term "instantaneous maximum" is used in the limitations tables of this permit to emphasize this requirement. Bromine may be used as a chlorine adjunct only upon approval of EPA and MA DEP.

h. The permittee may propose to conduct feasibility studies involving new chemicals not currently approved for water discharge. The permittee shall gain approval from the Regional Administrator and the Commissioner before any such studies take place. A report summarizing the results of any such studies shall be submitted to the Regional Administrator and the Commissioner regarding

discharge frequency, concentration, and the impact, if any, on the indigenous populations of the receiving water. The Regional Administrator or the Commissioner may require Whole Effluent Toxicity testing as part of feasibility studies.

i. In the event of fish mortalities in the discharge or in the thermal plume, the permittee will begin removing all dead fish from the receiving waters, or from the shoreline within four hours after the fish mortalities have been observed, while also complying with all the monitoring and reporting requirements in this permit.

j. All live fish, shellfish, and other aquatic organisms collected or trapped on the intake screens shall be returned to their natural habitat with minimal stress. All other material, except natural debris (e.g. leaves and twigs), shall be removed from the intake screens and disposed of in accordance with all existing Federal, State, and/or Local laws and regulations that apply to waste disposal. Such material shall not be returned to the receiving waters.

   i. The permittee shall ensure that a low pressure (<30 psi) screen spray wash is in operation as part of the screenwash system. The low pressure spray shall be engineered to deliver aquatic organisms to the return trough, with minimal stress. The installation shall be completed within three years of permit issuance.

   ii. The current return trough shall be extended and modified to always provide the return of aquatic organisms to the Connecticut River at sufficient depth for fish locomotion, with minimal stress, including during periods of low river flow. This work shall be completed within three years of permit issuance.

   iii. The construction of these modifications shall be done in accordance with appropriate federal, state, and local regulation governing construction of waterways and banks.

   iv. Should the permittee propose to install alternative technologies and/or operational measures to reduce impingement mortality, the permittee may submit their proposal and upon notification by EPA, the installation of the alternative(s) chosen shall be completed with in (3) three years of permit issuance. The alternative technologies chosen may remove the necessity for the requirements specified in Parts I.A.14.j.i. and I.A.j.ii.

k. The intake screen for Units 1, 2 and 3 shall be operated at least one full revolution for every eight hours that the Unit 3's circulation pumps are operated, unless the fish impingement rate equals or exceeds five fish per hour. Should the fish impingement rate equal or exceed five fish per hour, the traveling screens must be

run continuously until the impingement rate decreases to less than five fish per hour. A log shall be maintained that documents the times and duration of operation of the traveling screens. Logs shall be kept on the property of the Station for at least five (5) years and shall be made available upon request.

l. Any change in the location, design or capacity of the present structures shall be approved by the Regional Administrator and the Commissioner.

m. Discharges to the Connecticut River shall be adequately treated to insure that the surface water remains free from pollutants in concentrations or combinations that settle to form harmful deposits, float as foam, debris, scum or other visible pollutants. They shall be adequately treated to insure that the surface waters remain free from pollutants which produce odor, color, taste, or turbidity in the receiving water which is not naturally occurring and would render it unsuitable for its designated uses.

n. This permit shall be modified, revoked or 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 (CWA), if the effluent standard or limitation so issued or approved:

(1) contains different conditions or is otherwise more stringent than any effluent limitation in this permit; or

(2) controls any pollutant not limited by this permit.

o. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Commissioner as soon as they know or have reason to believe (40 CFR §122.42):

i. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

(1) One hundred micrograms per liter (100 ug/l);

(2) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or

(3) Any other notification level established by the Commissioner in accordance with 40 CFR §122.44(f) and Massachusetts regulations.

ii. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

(1) Five hundred micrograms per liter (500 ug/l);

(2) One milligram per liter (1 mg/l) for antimony;

(3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or

(4) Any other notification level established by the Commissioner in accordance with 40 CFR §122.44(f) and Massachusetts regulations.

p. All storm water related to industrial activity shall not be discharged to the Connecticut River without prior approval of the EPA/DEP. The only sources of storm water allowed to discharge to the Connecticut River are the electrical control room roof and front yard (includes parking lot) storm drains. Stormwater collected from these sources shall be discharged from outfall serial number 006 only.

q. The circulating water pumps of Unit 3 shall be operated only when Unit 3 is either producing electricity, during unit warm up or cool down, during brief periods of no longer than a few hours between unit operation, cool down and warm up, or as specified in Part I.A11(a)(ii) and Part I.A11(b)(i) of this permit.

r. The Unit 3 pumps can be used during freezing conditions at the intake structure and for emergency conditions within the Station. EPA shall be notified within 24 hours of these conditions.

B. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate discharge monitoring report (DMR) forms postmarked no later than the 15th day of the month following the effective date of the permit.

CEEMI may assert a business confidentiality claim with respect to part or all of the information submitted to EPA in the manner described at 40 CFR Part 2.203(b). Information covered by such a claim will be disclosed by EPA only to the extent, and by means, of the procedures set forth in 40 CFR Part 2, Subpart B. If no such claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA without further notice to

CEEMI. Effluent information shall not be regarded as confidential.

Signed and dated originals of the DMRs, and all other reports required herein, shall be submitted to the Commissioner and the State at the following addresses:

U.S. Environmental Protection Agency
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114

The State Agency is:

Massachusetts Department of Environmental Protection
Western Regional Office - Bureau of Waste Prevention
436 Dwight Street
Springfield, Massachusetts 01103

In addition, copies of all Discharge Monitoring Reports and all other notifications and reports required by this permit shall be submitted to the following address:

Massachusetts Department of Environmental Protection
Division Of Watershed Management
Surface Water Discharge Permit Program
627 Main Street, 2nd Floor
Worcester, Massachusetts 01608

In addition, all annual Biological/Thermal Monitoring Reports and all Discharge Related Mortality and Unusual Impingement Event notifications and reports required by this permit shall also be submitted to:

John H. Nagle (Phone Number: 617-918-1054)
U.S. Environmental Protection Agency
One Congress Street, Suite 1100 (CMA)
Boston, MA 02114-2023

C. STATE PERMIT CONDITIONS

1. This Discharge Permit is issued jointly by the U. S. Environmental Protection Agency and the Massachusetts Department of Environmental Protection under Federal and State law, respectively. As such, all the terms and conditions of this permit modification are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the Massachusetts Department of Environmental Protection pursuant to M.G.L. Chap. 21, §43.

2. Each Agency shall have the independent right to enforce the terms and conditions of this permit. Any modification, suspension or revocation of this permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as an NPDES Permit issued by the U.S. Environmental Protection Agency. In the event this permit is declared invalid, illegal or otherwise issued in violation of Federal law, this permit shall remain in full force and effect under State law as a permit issued by the Commonwealth of Massachusetts.

D. REOPENER CLAUSE

1. This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable standard or limitation promulgated 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:

   (a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

   (b) Controls any pollutants not limited in the permit.