

# NPDES PERMIT

issued to

FirstLight Hydro Generating Company  
c/o FirstLight Power Resources, Inc.  
20 Church Street, 16<sup>th</sup> Floor  
Hartford, Connecticut 06103

**Facility ID:** 130-042

**Receiving Water Body:** Lake Zoar

**Receiving Water Body ID:** CT6000-00-5+L2\_02

**Location Address:**

FirstLight Hydro Generating Company  
Shepaug Station  
2225 River Road  
Southbury, Connecticut 06488

**Permit ID:** CT0030228

**Permit Expires:** August 03, 2015

## 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 NPDES permit program.
- (B) FirstLight Hydro Generating Company, ("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 subsections (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 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 of Environmental Protection (“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.

“40 CFR” means Title 40 of the Code of Federal Regulations.

“Annual” means sampling is required in the month of July.

“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 Quantity” means the quantity of waste discharged during an operating day.

“EC” means “Effect Concentration”.

“EC<sub>50</sub>” means the point estimate of the toxicant concentration that would cause an observable adverse effect (e.g., death, immobilization or serious incapacitation) in 50% of the test organisms.

“IC” means “Inhibition Concentration”.

“IC<sub>25</sub>” means a point estimate of the toxicant concentration that would cause a 25% reduction in a non-lethal biological measurement of the test organism, such as reproduction or growth.

“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.

“Lowest Observed Effect Concentration” (“LOEC”) means the lowest concentration of an effluent or toxicant that results in adverse effects on the test organisms.

“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 90% or greater survival of test organisms at the CTC.

“No Observed Effect Concentration” (“NOEC”) means the highest tested concentration of an effluent or toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation.

“Quarterly”, in the context of a sampling frequency, means sampling is required in the months of

January, April, July, and October.

“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.

“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.

“Semi-Annual” means sampling is required in the months of January and July.

### **SECTION 3: COMMISSIONER'S DECISION**

- (A) The Commissioner has issued a final determination and found that with respect to DSN 101, the discharge will not cause pollution to any of the waters of the state; and, with respect to DSN 104, continuance of the existing system will not cause pollution of the waters of the state. The Commissioner’s decision is based on Application 200400049 for permit issuance received on January 12, 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 the Commissioner’s 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.

### **SECTION 4: GENERAL EFFLUENT LIMITATIONS**

- (A) No discharge shall contain, or cause in the receiving stream, a visible oil sheen or floating solids, or cause visible discoloration or foaming in the receiving stream.
- (B) 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.
- (C) The temperature of any discharge shall not increase the temperature of the receiving stream above 85 °F, or, in any case, raise the normal temperature of the receiving stream more than 4 °F.

### **SECTION 5: SPECIFIC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

- (A) The discharges are restricted by, and shall be monitored in accordance with, the table(s) below. Additionally, the discharges shall not exceed, and shall otherwise conform to the specific terms and conditions listed below:
  - (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 limit(s) will be considered non-compliance.
- (4) 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.

**Table A**

Discharge Serial Number: <b>DSN 101</b>						Monitoring Location: <b>1</b>				
Wastewater Description: <b>Non-contact cooling water associated with the generator's air coolers</b>										
Monitoring Location Description: <b>Sample port in the non-contact cooling water discharge piping</b>						Zone of Influence: <b>Not Applicable</b>				
PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level <sup>3</sup>	Monitoring Required with Toxicity Testing
		Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency <sup>1</sup>	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/Reporting Frequency	Sample Type or measurement to be reported		
Acute Toxicity, <i>Daphnia pulex</i> @ CTC = 100% NOAEL [See Remark 1]	%	NA	NA	NR	NA	NOAEL ≥90%	Semi-annual	Grab		
Acute Toxicity, <i>Pimephales promelas</i> @ CTC = 100% NOAEL [See Remark 1]	%	NA	NA	NR	NA	NOAEL ≥90%	Semi-annual	Grab		
Chronic Toxicity, <i>Ceriodaphnia dubia</i> C-NOEC [See Remark 2]	%	NA	NA	NR	NA	---	Annual	Grab		
Chronic Toxicity, <i>Pimephales promelas</i> C-NOEC [See Remark 2]	%	NA	NA	NR	NA	---	Annual	Grab		
Copper, Total	mg/L	NA	NA	NR	NA	---	Quarterly	Grab	0.004	✓
Duration of Discharge	hr/day	---	---	Daily/Monthly	Daily Flow	NA	NR	NA		
Flow, Average & Maximum <sup>2</sup>	gpd	---	2,016,000	Daily/Monthly	Daily Flow <sup>2</sup>	NA	NR	NA		
Flow, Day of Sampling	gpd	NA	2,016,000	Daily/Monthly	Daily Flow <sup>2</sup>	NA	NR	NA		
Lead, Total	mg/L	NA	NA	NR	NA	---	Quarterly	Grab	0.001	✓
pH, Day of Sampling	SU	NA	NA	NR	NA	6.0-9.0	Quarterly	Grab		
Temperature, Day of Sampling	° F	NA	NA	NR	NA	---	Quarterly	Grab		
Zinc, Total	mg/L	NA	NA	NR	NA	---	Quarterly	Grab	0.005	✓

**Table A Footnotes and Remarks:**

**Footnotes:**

<sup>1</sup> The first entry in this column is the 'Sample Frequency'. If a 'Reporting Frequency' does not follow this entry 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'.

<sup>2</sup> For this parameter, the Permittee shall maintain at the facility a record of the total flow for each day and shall submit the record of the total flow for each day and shall record the Average Daily Flow and the Maximum Daily Flow for each month. The Daily Flow shall be estimated using good engineering practices.

<sup>3</sup> Minimum Level refers to Section 6(A)(3) of this permit.

**Remarks:**

1. The duration of the acute testing is 48 hours. Results for acute aquatic toxicity shall be reported on the DMR as % survival consistent with Paragraph 6(B)(5).

2. The duration of the chronic testing is 7 days. Results for chronic aquatic toxicity shall be reported on the DMR as the C-NOEC (Chronic-No Observed Effect Concentration). The C-NOEC is defined as the highest concentration of effluent to which organisms are exposed in a life cycle or partial life cycle test which causes no adverse effect on growth, survival, or reproduction at a specific time of observation as determined from hypothesis testing where the results exhibit a linear dose-response relationship. However, where the test results do not exhibit a linear dose-response relationship, the Permittee must report the lowest concentration where there is no observable effect.

**Table B**

Discharge Serial Number: **DSN 104** Monitoring Location: **1**  
 Wastewater Description: **Generator air cooler leakage; Condensate associated with the air receivers; Stilling well water; Dam leakage; Headcover underleakage; Condensate associated with the actuator; Headcover leakage; Draft tube dewatering wastewater**  
 Monitoring Location Description: **Sampling port on the discharge pipe at the pumps** Zone of Influence: **Not Applicable**

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level <sup>3</sup>	Monitoring Required with Toxicity Testing
		Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency <sup>1</sup>	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/Reporting Frequency	Sample Type or measurement to be reported		
Acute Toxicity, <i>Daphnia pulex</i> @ CTC = 100% NOAEL [See Remark 1]	%	NA	NA	NR	NA	NOAEL ≥90%	Semi-annual	Grab		
Acute Toxicity, <i>Pimephales promelas</i> @ CTC = 100% NOAEL [See Remark 1]	%	NA	NA	NR	NA	NOAEL ≥90%	Semi-annual	Grab		
Chronic Toxicity, <i>Ceriodaphnia dubia</i> C-NOEC [See Remark 2]	%	NA	NA	NR	NA	---	Annual	Grab		
Chronic Toxicity, <i>Pimephales promelas</i> C-NOEC [See Remark 2]	%	NA	NA	NR	NA	---	Annual	Grab		
Copper, Total	mg/L	NA	NA	NR	NA	---	Quarterly	Grab	0.004	✓
Duration of Discharge	hr/day	---	---	Daily/Monthly	Daily Flow	NA	NR	NA		
Flow, Average & Maximum <sup>2</sup>	gpd	---	4,500,000	Daily/Monthly	Daily Flow <sup>2</sup>	NA	NR	NA		
Flow, Day of Sampling	gpd	NA	4,500,000	Daily/Monthly	Daily Flow <sup>2</sup>	NA	NR	NA		
Lead, Total	mg/L	NA	NA	NR	NA	---	Quarterly	Grab	0.001	✓
Oil and Grease, Total	mg/L	NA	NA	NR	NA	10	Monthly	Grab		✓
pH, Day of Sampling	SU	NA	NA	NR	NA	6.0-9.0	Quarterly	Grab		
Temperature, Day of Sampling	° F	NA	NA	NR	NA	---	Quarterly	Grab		
Zinc, Total	mg/L	NA	NA	NR	NA	---	Quarterly	Grab	0.005	✓



**Table B Footnotes and Remarks:**

**Footnotes:**

<sup>1</sup> The first entry in this column is the 'Sample Frequency'. If a 'Reporting Frequency' does not follow this entry 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'.

<sup>2</sup> For this parameter, the Permittee shall maintain at the facility a record of the total flow for each day and shall submit the record of the total flow for each day and shall record the Average Daily Flow and the Maximum Daily Flow for each month. The Daily Flow shall be estimated using good engineering practices. This record shall also note each day that the generating unit is operating.

<sup>3</sup> Minimum Level refers to Section 6(A)(3) of this permit.

**Remarks:**

1. The duration of the acute testing is 48 hours. Results for acute aquatic toxicity shall be reported on the DMR as % survival consistent with Paragraph 6(B)(5).

2. The duration of the chronic testing is 7 days. Results for chronic aquatic toxicity shall be reported on the DMR as the C-NOEC (Chronic-No Observed Effect Concentration). The C-NOEC is defined as the highest concentration of effluent to which organisms are exposed in a life cycle or partial life cycle test which causes no adverse effect on growth, survival, or reproduction at a specific time of observation as determined from hypothesis testing where the results exhibit a linear dose-response relationship. However, where the test results do not exhibit a linear dose-response relationship, the Permittee must report the lowest concentration where there is no observable effect.

3. Oil and grease samples must be taken during the worst-case scenario operating conditions. Based on information provided by the Permittee, the worst-case scenario condition is when the generating unit is operating. Therefore, the Permittee shall make best efforts to take the samples when the generating unit is operating, unless that option is unavailable. The Permittee shall state on a DMR attachment whether the oil and grease sample reported on that DMR represents a sample taken when the generating unit is operating or not.

## 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 40 CFR 136 for the analysis of pollutants having approved methods under that part 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 approved methods of analysis defined in 40 CFR 136 shall be analyzed in accordance with methods specified in this permit, unless an alternative method has been specifically approved in writing by the Commissioner.
- (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 in Tables A & B represent the concentrations at which quantification must be achieved and verified during the chemical analyses for those noted parameters. 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.
- (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 Testing

- (1) 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), or the most current version.
  - (a) Grab samples shall be chilled immediately following collection. Samples shall be held at 4 °C 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 A & B, 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 total residual chlorine is not detected at test initiation, it does not need to be measured at test termination. 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 36 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 accordance with *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 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 CaCO<sub>3</sub> 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 indicate 90% or greater survival in the effluent at the specified CTC.

#### (C) Chronic Aquatic Toxicity Testing

- (1) Chronic toxicity testing shall be conducted on the discharge as prescribed for static renewal tests 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) for *Ceriodaphnia dubia* survival and reproduction and *Pimephales promelas* larval survival and growth.
- (2) Chronic toxicity tests shall utilize a minimum of five effluent dilutions prepared using a dilution factor of 0.5 (100% effluent, 50% effluent, 25% effluent, 12.5% effluent, 6.25% effluent, 0% effluent).
- (3) Housatonic River water collected immediately upstream of the area influenced by the discharge shall be used as site water control (0% effluent) and dilution water in the toxicity tests.
- (4) A laboratory water control consisting of synthetic freshwater prepared at a hardness of 50 mg/L ( $\pm 5$  mg/l) as CaCO<sub>3</sub> shall be included in the test protocol in addition to the site water control.
- (5) Grab samples of the Housatonic River water for use as site water control and dilution water shall be collected on: day 0, for test solution renewal on day 1 and day 2 of the test; day 2, for test solution renewal on day 3 and day 4 of the test; and day 4, for test solution renewal on day 5, 6, and 7 of the test. Samples shall not be dechlorinated, pH or hardness adjusted, or chemically altered in any way.
- (6) All samples of the discharge and the Housatonic 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	Nickel (Total recoverable and dissolved)
Alkalinity	Nitrogen, Ammonia (total as N)
Conductivity	Nitrogen, Nitrate (Total as N)
Chlorine, Total Residual	Solids, Total Suspended
	Zinc (Total recoverable and dissolved)

- (7) If the laboratory control fails to meet test acceptability criteria for either of the test organisms at the end of the 7-day chronic test, then the test is considered invalid and the test must be repeated.
- (8) Within 60 days of the conclusion of the chronic aquatic toxicity testing, the Permittee shall submit a summary of the test results which includes, at a minimum, percent survival in each replicate test chamber and all supporting chemical/physical measurements performed in association with the toxicity test. Endpoints to be reported are 48-hour LC<sub>50</sub> (acute endpoint), 7-day LC<sub>50</sub> (survival), 7-day EC<sub>50</sub> (growth), LOEC (growth), NOEC (growth) and IC<sub>25</sub>.

**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 Materials Management and Compliance Assurance (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 Materials Management and Compliance Assurance  
 Water Permitting and Enforcement Division (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, LC<sub>50</sub> values and 95% confidence intervals for definitive test protocols, and all supporting chemical/physical measurements performed in association with any aquatic toxicity test, including measured daily flow and hours of operation for the 30 consecutive operating days prior to sample collection, shall be entered on the Aquatic Toxicity Monitoring Report form (ATMR) and sent to the Bureau of Water Protection and Land Reuse at the following address. 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 Protection and Land Reuse (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 Materials Management and Compliance Assurance (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 Materials Management and Compliance Assurance (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 Materials Management and Compliance Assurance, Water Permitting 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.

This permit is hereby issued on August 04, 2010

/s/ AMEY W. MARRELLA  
AMEY W. MARRELLA  
Commissioner

AWM:CMG