National Pollutant Discharge Elimination System Permit
issued to

Permittee:
Plainfield Renewable Energy, LLC
12 Mill Brook Road
Plainfield, CT 06374

Location Address:
12 Mill Brook Road
Plainfield, CT 06374

Permit ID: CT0030473

Effective Date: [1st of the month following signing]

Receiving Waterbody: Quinebaug River

Issuance Date: [date of signature]

Receiving Waterbody ID: CT3700-00_02

Permit Expires: [5 yrs after effective date]

SECTION 1: GENERAL PROVISIONS

1.1 This permit is reissued in accordance with Section 22a-430 of Chapter 446k, Connecticut General Statutes ("Conn. Gen. Stat."), and Regulations of Connecticut State Agencies ("Regs. Conn. State Agencies") adopted thereunder, as amended, and Section 402(b) of the Clean Water Act ("CWA"), 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 a National Pollutant Discharge Elimination System ("NPDES") permit program.

1.2 **Plainfield Renewable Energy, LLC** ("Permittee") shall comply with all conditions of this permit including the following sections of the Regs. Conn. State Agencies which have been adopted pursuant to Section 22a-430 of the Conn. Gen. Stat. 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 to Comply
(f) Proper Operation and Maintenance
(g) Sludge Disposal
(h) Duty to Mitigate
(i) Facility Modifications; Notification
(j) Monitoring, Records and Reporting Requirements
(k) Bypass
(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
(s) Treatment Requirements

1.3 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 Conn. Gen. Stat. and Regs. Conn. State Agencies.

1.4 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 Conn. Gen. Stat. or in accordance with Section 22a-6, under Section 53a-157b of the Conn. Gen. Stat.

1.5 The authorization to discharge under this permit may not be transferred without prior written approval of the Commissioner of Energy and Environmental Protection ("Commissioner"). To request such approval, the Permittee and proposed transferee shall register such proposed transfer with the Commissioner, at least thirty (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 Conn. Gen. Stat. and Regs. Conn. State Agencies.

1.6 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.

1.7 Nothing in this permit shall relieve the Permittee of other obligations under applicable federal, state and local law.

1.8 An annual fee shall be paid for each year this permit is in effect as set forth in Section 22a-430-7 of the Regs. Conn. State Agencies.

1.9 The Permittee shall operate and maintain its collection and treatment system in accordance with its Operation and Maintenance Plan and with any approvals issued in accordance with Regs. Conn. State Agencies Section 22a-430-3(i)(3). The Permittee shall revise and maintain the Operation and Maintenance Plan upon the Commissioner's request or to address equipment or operational changes in accordance with Regs. Conn. State Agencies Section 22a-430-3(f)(2).

1.10 The Permittee shall implement its Spill Prevention and Control Plan in accordance with Regs. Conn. State Agencies Section 22a-430-3(p) and 22a-430-4(c)(10). The plan shall include practices, procedures and facilities designed to prevent, minimize and control spills, leaks or such other unplanned releases of all toxic or hazardous substances and any other substances to prevent pollution of the waters of the state. Such requirements shall, unless otherwise allowed by the Commissioner, apply to all facilities used for storing, handling, transferring, loading or unloading such substances, including manufacturing areas. The Permittee shall revise and maintain the Spill Prevention and Control Plan upon the Commissioner's request to address equipment or operational changes.

SECTION 2: DEFINITIONS

2.1 The definitions of the terms used in this permit shall be the same as the definitions contained in Section 22a-423 of the Conn. Gen. Stat. and Section 22a-430-3(a) and 22a-430-6 of the Regs. Conn. State Agencies.

2.2 In addition to the above, the following definitions shall apply to this permit:

"40 CFR" means Title 40 of the Code of Federal Regulations.

"Annually" when used as a sampling frequency in Table A of this permit, means that sampling is required in the month of March, and in Table C, means that sampling is required in the month of July, August or September.

"Average Monthly Limit" means the maximum allowable "Average Monthly Concentration" as defined in Section 22a-430-3(a) of the Regs. Conn. State Agencies 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 Regs. Conn. State Agencies .

"Cooling water intake structure" means the total physical structure and any associated constructed waterways used to withdraw cooling water from waters of the state. The cooling water intake structure extends from the point at which water is withdrawn from the surface water source up to, and including, the intake pumps.

Connecticut Water Quality Standards means the regulations adopted under Regs. Conn. State Agencies Sections 22a-426-1 through 22a-426-9, as amended.

"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.

"Dilution Factor" means the inverse of the "Instream Waste Concentration".

"DMR" means Discharge Monitoring Report.

"IC" means "Inhibition Concentration".

"IC_{25}" means a point estimate of the toxicant concentration that would cause a twenty-five (25) percent 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.

"In-stream Waste Concentration" ("IWC%") means the concentration (as a percent) of the effluent in the receiving water.

"LC" means Lethal Concentration

"LC_{50}" means the concentration lethal to fifty (50) percent of the test organisms during a specific period.

"Lowest Observed Effect Concentration" ("LOEC") means the lowest concentration of an effluent or toxicant to which organisms are exposed in a life cycle or partial life-cycle test, which causes 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 Regs. Conn. State Agencies.

"No Observed Effect Concentration" ("NOEC") means the highest concentration of an effluent or toxicant to which organisms are exposed in a life cycle or partial life-cycle test, that causes no observable adverse effects on the test organisms.

"Quarter" means the calendar quarter beginning at 12:00 AM on the first day of March, June, September, and December and ending at 12:00 AM on the first day of June, September, December, and March, respectively.

"Quarterly", when used as a sampling frequency in this permit, means that sampling is required in the months of March, June, September, and December.

"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.

"Reporting Frequency" means the frequency at which monitoring results must be provided.

SECTION 3: COMMISSIONER'S DECISION

3.1 The Commissioner has issued a final determination and found that 1) with respect to the discharge, DSN 101-1, continuance of the existing system to treat the discharge would protect the waters of the state from pollution; and 2) with respect to discharges, DSN 102-1, DSN 103-1 and DSN 104-1, continuance of the existing discharges would not cause pollution of the waters of the state. The Commissioner's decision is based on Application No. 201801971 for permit reissuance received on February 28, 2018, and the administrative record established in the processing of that application.

3.2 Upon the effective date of this permit and continuing until this permit expires or is modified or revoked, the Commissioner hereby authorizes the Permittee to discharge in accordance with the terms and conditions of this permit, the information provided in Application No. 201801971, received by the Commissioner on February 28, 2018, the administrative record established in the processing of that application, and all modifications and approvals issued by the Commissioner or the Commissioner's authorized agent, for the discharge and/or activities authorized by, or associated with this Permit.

3.3 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 Conn. Gen. Stat. 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 the Conn. Gen. Stat. or regulations adopted thereunder which are then applicable.

3.4 This permit includes an interim determination regarding Section 316(a) of the Federal Water Pollution Control Act 33 U.S.C. § 1326(a) regarding the thermal component of the discharge, and compliance with this permit is sufficient to assure the protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife in and on the receiving waters.

3.5 This permit also contains a determination under Section 316(b) of the Federal Water Pollution Control Act, 33 U.S.C. § 1326(b) regarding cooling water intake structures and Conn. Gen. Stat. § 22a-430(a), and compliance with this permit is sufficient to assure the protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife in and on the receiving waters. Based on the evaluation detailed in the fact sheet, DEEP has determined that the facility employs BTA pursuant to 40 CFR § 125.90(b).

3.6 Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.

SECTION 4: GENERAL EFFLUENT LIMITATIONS

4.1 The Permittee shall assure that the surface water affected by the subject discharge shall conform to the *Connecticut Water Quality Standards ("WQS")*.

4.2 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.

4.3 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.

4.4 The temperature of any discharge shall not increase the temperature of the receiving stream above 85 °F, or in any case, raise the temperature of the receiving stream by more than 4 °F.

4.5 The Permittee is prohibited from discharging polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

4.6 The Permittee is prohibited from using any chemical(s) that contain phosphorus in any process or activity that may result in a discharge to the waters of the state.

SECTION 5: SPECIFIC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

5.1 The discharge is restricted by and shall be monitored in accordance with the following tables in this section. The wastewater discharge shall not exceed the effluent limitations in these tables and shall otherwise conform to the specific terms and conditions listed in the tables. The Permittee shall comply with the "Remarks" and "Footnotes" noted in the tables that follow. Such remarks and footnotes are enforceable like any other term or condition of this permit.

5.2 The wastewaters authorized/approved by this permit shall be collected, treated, and discharged in accordance with this permit and with any approvals issued by the Commissioner or his/her authorized agent for the discharges and activities authorized by or associated with this permit. Any wastewater discharges not expressly identified in these tables or otherwise approved to be discharged by this permit shall not be authorized by this permit.

5.3 All samples shall be comprised of only the wastewater described in these tables. Samples shall be collected prior to combination with receiving waters or wastewater of any other type, and after all approved treatment units, if applicable. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Collection of permit-required effluent samples in any location other than the authorized location noted in this permit shall be a violation of this permit.

5.4 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 Energy and Environmental Protection ("DEEP") personnel, the Permittee, or other parties.

5.5 The Permittee shall operate and maintain the outdoor wood storage area in accordance with "Section A.4 Stormwater Management – Outdoor Wood Storage Area" of the response to comment report dated February 19, 2008.

TABLE A	
Discharge Serial Number: DSN 101-1	**Monitoring Location:** 1 (External outfall)
Wastewater Description: Treated cooling tower blowdown wastewater	**Outfall Location**: Latitude (41° 39' 35") and Longitude (71° 57' 49")
Monitoring Location Description: At the powerhouse prior to the discharge line exiting the facility	**Discharge is to:** Quinebaug River
Allocated Zone of Influence: 137,750 gallons per hour	**Instream Waste Concentration for acute criteria:** 5.4% **Instream Waste Concentration for chronic criteria:** 3.67%

PARAMETER	**NET DMR CODE**	**UNITS**	**FLOW/TIME BASED MONITORING**				**INSTANTANEOUS MONITORING**			**MINI-MUM LEVEL [2]** (µg/l)
			Average Monthly Limit	Maximum Daily Limit	Sample/ Reporting Frequency [1]	Sample Type or Measurement to be Reported	Instantaneous Limit or Required Range	Sample/ Reporting Frequency [1]	Sample Type or Measurement to be Reported	
Aluminum, Total	01105	mg/L	1.42	2.86	Weekly	Daily Composite	4.29	NR	Grab	10.0
Aluminum, Total	01105	kg/d	0.68	1.36	Weekly	Daily Composite	NA	NR	Grab	10.0
Ammonia (as N)	00610	mg/L	---	---	Weekly	Daily Composite	---	NR	NA	
Ammonia (as N)	00610	kg/d	---	---	Weekly	Daily Composite	NA	NR	NA	
Boron	01022	mg/l	---	---	Weekly	Daily Composite	NA	NR	NA	
Chlorine, Total Residual	50060	mg/L	0.14	0.33	Weekly	Grab Sample Average	0.497	NR	Grab	20.0
Chromium, Total	01034	mg/L	---	---	Weekly	Daily Composite	NA	NR	NR	5.0
Copper, Total	01042	mg/L	0.096	0.190	Weekly	Daily Composite	0.288	NR	Grab	3.0
Copper, Total	01042	kg/d	0.046	0.091	Weekly	Daily Composite	NA	NR	NA	3.0
Flow Rate (Average Daily)[3]	00056	gpd	126,103	NA	Weekly	Total Daily Flow	NA	NR	NA	
Flow, Maximum during 24-hr period[3]	50047	gpd	NA	173,571	Weekly	Total Daily Flow	NA	NR	NA	
Iron, Total	01045	mg/L	---	---	Weekly	Daily Composite	---	NR	NA	100.0
Kjeldahl Nitrogen, Total (as N)	00625	mg/L	---	---	Weekly	Daily Composite	NA	NR	NR	
Lead, Total	01051	mg/L	0.019	0.039	Weekly	Daily Composite	0.058	NR	Grab	1.0
Lead, Total	01051	kg/d	0.009	0.019	Weekly	Daily Composite	NA	NR	NR	1.0
Nitrate (as N)	00620	mg/L	---	---	Weekly	Daily Composite	NA	NR	NR	
Nitrite (as N)	00615	mg/L	---	---	Weekly	Daily Composite	NA	NR	NR	
Nitrogen, Total [See Remark e]	00600	lbs/day	---	---	Weekly	Calculated	NA	NR	NR	
pH, Minimum (Ends 12 months after permit's effective date)	61942	S.U.	NA	NA	NR	NA	6.0	Continuous	Continuous	
pH, Maximum (Ends 12 months after permit's effective date)	61941	S.U.	NA	NA	NR	NA	9.0	Continuous	Continuous	
Phosphorus, Total	00665	mg/l	---	---	Monthly	Daily Composite	NA	NR	NR	100.0
Temperature, Maximum	00011	ºF	NA	NA	NR	NA	90	Hourly	Instantaneous	
Temperature, intake/outlet differential	61576	ºF	NA	NA	NR	NA	---	Hourly	Instantaneous	
Total Suspended Solids	00530	mg/L	20	30	Weekly	Daily Composite	45	NR	Grab	
Zinc, Total	01092	mg/L	0.64	1.30	Weekly	Daily Composite	1.95	NR	Grab	10.0

TABLE A

Discharge Serial Number: DSN 101-1	**Monitoring Location:** 1 (External outfall)
Wastewater Description: Treated cooling tower blowdown wastewater	**Outfall Location**: Latitude (41° 39' 35") and Longitude (71° 57' 49")
Monitoring Location Description: At the powerhouse prior to the discharge line exiting the facility	**Discharge is to:** Quinebaug River
Allocated Zone of Influence: 137,750 gallons per hour	**Instream Waste Concentration for acute criteria:** 5.4% **Instream Waste Concentration for chronic criteria:** 3.67%

PARAMETER	**NET DMR CODE**	**UNITS**	**FLOW/TIME BASED MONITORING**				**INSTANTANEOUS MONITORING**			**MINI-MUM LEVEL [2]** (µg/l)
			Average Monthly Limit	Maximum Daily Limit	Sample/ Reporting Frequency [1]	Sample Type or Measurement to be Reported	Instantaneous Limit or Required Range	Sample/ Reporting Frequency [1]	Sample Type or Measurement to be Reported	
126 Priority Pollutants (resulting from chemical additives for cooling tower maintenance) except chromium and zinc	51168	mg/L	NA	NA	NR	NA	---	Once during permit term[4]	Grab	
APPLICABLE 12 MONTHS AFTER THE EFFECTIVE DATE OF PERMIT										
pH, Minimum	61942	S.U.	NA	NA	NR	NA	6.5	Continuous	Continuous	
pH, Maximum	61941	S.U.	NA	NA	NR	NA	8.0	Continuous	Continuous	

TABLE A FOOTNOTES AND REMARKS

Footnotes:

[1] 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'.

[2] Refer to Section 6.3 of this permit. The minimum levels ("MLs") identified in this table represent the highest acceptable MLs that shall be achieved by the Permittee's analytical methods. Actual MLs reported by the laboratory must be reported as a comment on the DMR. Detected concentrations less than the laboratory ML shall be reported on the DMR in accordance with Section 6.5.

[3] 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.

[4] This monitoring shall be conducted once during the permit term by December 31, 2027, and submitted as an attachment to the December 2027 DMR. 126 Priority Pollutants shall be reported as the sum of the concentrations of any analytes detected above the minimum level. The full lab report, including minimum levels of the analytes determined to be non-detect, and the concentration of the detected analytes, shall be attached to the DMR.

Remarks:

a. Abbreviations used for units are as follows: gpd means gallons per day; kg/day means kilograms per day; mg/L means milligrams per liter; µg/L means micrograms per liter; SU means Standard Units; °F means degrees Fahrenheit; % means percentage. Other abbreviations are as follows: NA means Not Applicable; NR means Not Reportable (unless sampling is conducted relative to Section 5.4 of this permit); RDS means Range During Sampling.

b. If "---" is noted in the limit's column in the table, this means that a limit is not specified but a value must be reported on the DMR.

c. pH shall be reported to 0.1 SU. All other values shall be reported to the level of precision/accuracy reported by the laboratory.

d. "Continuous", used in this table as a "Sample" or "Sample Type", means monitoring that produces one or more data points in fifteen minutes or less.

e. Total Nitrogen means the sum of the concentrations of: Total Kjeldahl Nitrogen (Ammonia Nitrogen + Organic Nitrogen) + Nitrate Nitrogen + Nitrite Nitrogen.

TABLE B – Acute Toxicity Monitoring	
Discharge Serial Number: DSN 101-AT	**Monitoring Locations:** T – Acute toxicity effluent results and chemical analyses
Wastewater Description: Treated cooling tower blowdown wastewater	**Outfall Location**: Latitude (41° 39' 35") and Longitude (71° 57' 49")
Monitoring Location Description: At the powerhouse prior to the discharge line exiting the facility	**Discharge is to:** Quinebaug River
Allocated zone of Influence: 137,750 gallons per hour	**Instream Waste Concentration for acute criteria:** 5.4% **Instream Waste Concentration for chronic criteria:** 3.67%

PARAMETER	NET DMR CODE	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			MINI-MUM LEVEL [5] (µg/l)
			Average Monthly Limit	Minimum Daily Limit or Maximum Daily Limit[1]	Sample/ Reporting Frequency [2, 3]	Sample Type or Measurement to be Reported [4]	Instantaneous Limit or Required Range	Sample/ Reporting Frequency	Sample Type or Measurement to be Reported	
Whole Effluent Toxicity (WET)										
Acute Aquatic Toxicity[6] *Daphnia pulex*, NOAEL = 100%	TDA3D	%	NA	≥ 90 %	Quarterly	Daily Composite	≥ 90 %	NR	Grab	
Acute Aquatic Toxicity[6] *Pimephales promelas*, *N*OAEL = 100%	TDA6C	%	NA	≥ 90 %	Quarterly	Daily Composite	≥ 90 %	NR	Grab	
Chemical Analyses Required with Acute Whole Effluent Toxicity Monitoring – See Section 7.1.6. for Acute Testing [7]										
Date of Acute WET Chemistry Sample Collection[8]	51883	YYYYMMDD	NA	---	Quarterly	Calculated	NA	NR	NA	
Alkalinity	00410	mg/L	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Aluminum, Dissolved	01106	mg/L	NA	---	Quarterly	Daily Composite	NA	NR	NA	10.0
Aluminum, Total	01105	mg/L	NA	---	Quarterly	Daily Composite	NA	NR	NA	10.0
Boron, Total	01022	mg/l	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Chlorine, Total Residual	50060	mg/L	NA	---	Quarterly	Daily Composite	NA	NR	NA	20.0
Chromium, Total	01034	mg/L	NA	---	Quarterly	Daily Composite	NA	NR	NA	5.0
Copper, Dissolved	01040	mg/L	NA	---	Quarterly	Daily Composite	NA	NR	NA	3.0
Copper, Total	01042	mg/L	NA	---	Quarterly	Daily Composite	NA	NR	NA	3.0
Dissolved Oxygen	00300	mg/L	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Hardness, Total	00900	mg/L	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Iron, Total	01045	mg/L	NA	---	Quarterly	Daily Composite	NA	NR	NA	100.0
Lead, Dissolved	01049	mg/L	NA	---	Quarterly	Daily Composite	NA	NR	NA	1.0
Lead, Total	01051	mg/L	NA	---	Quarterly	Daily Composite	NA	NR	NA	1.0
Nitrogen, Ammonia (total as N)	00610	mg/L	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Nitrogen, Kjeldahl (total as N)	00625	mg/L	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Nitrogen, Nitrate (total as N)	00620	mg/L	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Nitrogen, Nitrite (total as N)	00615	mg/L	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Nitrogen, Total (as N)[9]	00600	mg/L	NA	---	Quarterly	Calculation	NA	NR	NA	

TABLE B – Acute Toxicity Monitoring

Discharge Serial Number: DSN 101-AT	**Monitoring Locations:** T – Acute toxicity effluent results and chemical analyses
Wastewater Description: Treated cooling tower blowdown wastewater	**Outfall Location**: Latitude (41° 39' 35") and Longitude (71° 57' 49")
Monitoring Location Description: At the powerhouse prior to the discharge line exiting the facility	**Discharge is to:** Quinebaug River
Allocated zone of Influence: 137,750 gallons per hour	**Instream Waste Concentration for acute criteria:** 5.4% **Instream Waste Concentration for chronic criteria:** 3.67%

PARAMETER	NET DMR CODE	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			MINIMUM LEVEL [5] (µg/l)
			Average Monthly Limit	Minimum Daily Limit or Maximum Daily Limit[1]	Sample/ Reporting Frequency [2, 3]	Sample Type or Measurement to be Reported [4]	Instantaneous Limit or Required Range	Sample/ Reporting Frequency	Sample Type or Measurement to be Reported	
pH	00400	SU	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Phosphorus, Total	00665	mg/L	NA	---	Quarterly	Daily Composite	NA	NR	NA	100.0
Specific Conductance	51409	uMhos	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Temperature	00011	Deg. F.	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Total Suspended Solids	00530	mg/L	NA	30	Quarterly	Daily Composite	NA	NR	NA	
Zinc, Dissolved	01090	mg/L	NA	---	Quarterly	Daily Composite	NA	NR	NA	10.0
Zinc, Total	01092	mg/L	NA	1.30	Quarterly	Daily Composite	NA	NR	NA	10.0

TABLE B FOOTNOTES AND REMARKS

Footnotes:

[1] WET limits are expressed as a minimum daily limit, meaning the minimum allowable daily discharge over the course of the 24-hour sampling period. Chemical results analyzed in conjunction with WET tests shall be reported as the max value collected during the 24-hour sampling period.

[2] 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".

[3] If more than one toxicity sample is collected during a single month, report subsequent WET and chemistry results as an attachment to the DMR in accordance with Section 8.2 of this permit.

[4] Daily composite samples shall be collected for acute toxicity tests consistent with the methodology outlined in Section 7.1 of this permit.

[5] Refer to Section 6.3 of this permit. The minimum levels ("MLs") identified in this table represent the highest acceptable MLs that shall be achieved by the Permittee's analytical methods. Actual MLs reported by the laboratory must be reported as a comment on the DMR. Detected concentrations less than the laboratory ML shall be reported on the DMR in accordance with Section 6.5.

[6] Acute toxicity testing shall be conducted in accordance with Section 7.1 of this permit. The NOAEL results (in % survival) for the acute toxicity testing shall be reported on the DMR. The Aquatic Toxicity Monitoring Report ("ATMR") shall be completed for each toxicity testing event and submitted in accordance with Section 8.2 of this permit.

[7] Chemical analyses shall be conducted on samples used in the acute toxicity tests. These analyses shall be conducted on all samples used in the acute toxicity test and reported under Monitoring Location T. Results shall also be included on the ATMR and submitted in accordance with Section 8.2 of this permit.

[8] The Permittee shall report the date of sample collection for the acute toxicity test and associated chemistry data in the format: year month day (YYYYMMDD).

[9] Total Nitrogen means the sum of the concentrations of: Total Kjeldahl Nitrogen + Nitrate Nitrogen + Nitrite Nitrogen.

Remarks:

1. Abbreviations used for units are as follows: kg/day means kilograms per day; mg/L means milligrams per liter; mgd means millions of gallons per day; SU means Standard Units; mg/L means micrograms per liter. Other abbreviations are as follows: NA means Not Applicable; NR means Not Reportable (unless sampling is conducted relative to Section 5.4 of this permit); RDS means Range During Sampling; RDM means Range During Month.
2. If "---" is noted in the limits column in the table, this means that a limit is not specified but a value must be reported on the DMR.
3. Analyses that indicate that a parameter was not detected or that was detected less than the noted ML shall be reported in accordance with Section 6.6.

TABLE C – Chronic Toxicity Monitoring

Discharge Serial Number: DSN 101-CT

Monitoring Locations:
Y – Chronic toxicity effluent results
O – Day 1 chronic toxicity chemical analyses
P – Day 3 chronic toxicity chemical analyses
Q – Day 5 chronic toxicity chemical analyses
R – Day 1 upstream monitoring
S – Day 3 upstream monitoring
T – Day 5 upstream monitoring

Wastewater Description: Treated cooling tower blowdown wastewater

Outfall Location: Latitude (41° 39' 35") and Longitude (71° 57' 49")

Monitoring Location Description: At the powerhouse prior to the discharge line exiting the facility

Discharge is to: Quinebaug River

Allocated zone of Influence: 137,750 gallons per hour

Instream Waste Concentration for acute criteria: 5.4%
Instream Waste Concentration for chronic criteria: 3.67%

Monitoring Location Description: At the powerhouse prior to the discharge line exiting the facility

PARAMETER	NET DMR CODE	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			MINIMUM LEVEL[5] (µg/l)	MONITORING LOCATION
			Average Monthly Limit	Minimum Daily Limit or Maximum Daily Limit[1]	Sample/ Reporting Frequency [2, 3]	Sample Type or Measurement to be Reported [4]	Instantaneous Limit or Required Range	Sample/ Reporting Frequency	Sample Type or Measurement to be Reported		
Whole Effluent Toxicity (WET)											
Chronic Aquatic Toxicity (Survival)[6] *Ceriodaphnia dubia*, C-NOEC	TOP3B	%	NA	---	Annually	Daily Composite	NA	NR	NA		Y
Chronic Aquatic Toxicity (Reproduction)[6] *Ceriodaphnia dubia*, C-NOEC	TPP3B	%	NA	---	Annually	Daily Composite	NA	NR	NA		Y
Chronic Aquatic Toxicity (Survival)[6] *Pimephales promelas*, C-NOEC	TOP6C	%	NA	---	Annually	Daily Composite	NA	NR	NA		Y
Chronic Aquatic Toxicity (Growth)[6] *Pimephales promelas*, C-NOEC	TPP6C	%	NA	---	Annually	Daily Composite	NA	NR	NA		Y
Chemical Analyses Required with Chronic Whole Effluent Toxicity Monitoring – See Section 7.2.7. for Chronic Testing [7]											
Date of Chronic WET Chemistry Sample Collection[8]	51883	YYYYMMDD	NA	---	Annually	Calculated	NA	NR	NA		O, P, Q; R, S, T
Alkalinity	00410	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA		O, P, Q; R, S, T
Aluminum, Dissolved	01106	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA	10.0	O, P, Q; R, S, T

TABLE C – Chronic Toxicity Monitoring

Discharge Serial Number: DSN 101-CT

Monitoring Locations:
Y – Chronic toxicity effluent results
O – Day 1 chronic toxicity chemical analyses
P – Day 3 chronic toxicity chemical analyses
Q – Day 5 chronic toxicity chemical analyses
R – Day 1 upstream monitoring
S – Day 3 upstream monitoring
T – Day 5 upstream monitoring

Wastewater Description: Treated cooling tower blowdown wastewater

Outfall Location: Latitude (41° 39' 35") and Longitude (71° 57' 49")

Monitoring Location Description: At the powerhouse prior to the discharge line exiting the facility

Discharge is to: Quinebaug River

Allocated zone of Influence: 137,750 gallons per hour

Instream Waste Concentration for acute criteria: 5.4%
Instream Waste Concentration for chronic criteria: 3.67%

Monitoring Location Description: At the powerhouse prior to the discharge line exiting the facility

PARAMETER	NET DMR CODE	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			MINIMUM LEVEL[5] (µg/l)	MONITORING LOCATION
			Average Monthly Limit	Minimum Daily Limit or Maximum Daily Limit[1]	Sample/ Reporting Frequency [2, 3]	Sample Type or Measurement to be Reported [4]	Instantaneous Limit or Required Range	Sample/ Reporting Frequency	Sample Type or Measurement to be Reported		
Aluminum, Total	01105	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA	10.0	O, P, Q; R, S, T
Boron, Total	01022	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA		O, P, Q; R, S, T
Chlorine, Total Residual	50060	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA	20.0	O, P, Q; R, S, T
Copper, Dissolved	01040	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA	3.0	O, P, Q; R, S, T
Copper, Total	01042	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA	3.0	O, P, Q; R, S, T
Chromium, Total	01034	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA	5.0	O, P, Q; R, S, T
Dissolved Oxygen	00300	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA		O, P, Q; R, S, T
Hardness, Total	00900	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA		O, P, Q; R, S, T
Iron, Total	01045	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA		O, P, Q; R, S, T
Lead, Dissolved	01049	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA	1.0	O, P, Q; R, S, T
Lead, Total	01051	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA	1.0	O, P, Q; R, S, T

TABLE C – Chronic Toxicity Monitoring

Discharge Serial Number: DSN 101-CT

Monitoring Locations:
Y – Chronic toxicity effluent results
O – Day 1 chronic toxicity chemical analyses
P – Day 3 chronic toxicity chemical analyses
Q – Day 5 chronic toxicity chemical analyses
R – Day 1 upstream monitoring
S – Day 3 upstream monitoring
T – Day 5 upstream monitoring

Wastewater Description: Treated cooling tower blowdown wastewater

Outfall Location: Latitude (41° 39' 35") and Longitude (71° 57' 49")

Monitoring Location Description: At the powerhouse prior to the discharge line exiting the facility

Discharge is to: Quinebaug River

Allocated zone of Influence: 137,750 gallons per hour

Instream Waste Concentration for acute criteria: 5.4%
Instream Waste Concentration for chronic criteria: 3.67%

Monitoring Location Description: At the powerhouse prior to the discharge line exiting the facility

PARAMETER	NET DMR CODE	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			MINIMUM LEVEL[5] (µg/l)	MONITORING LOCATION
			Average Monthly Limit	Minimum Daily Limit or Maximum Daily Limit[1]	Sample/ Reporting Frequency [2, 3]	Sample Type or Measurement to be Reported [4]	Instantaneous Limit or Required Range	Sample/ Reporting Frequency	Sample Type or Measurement to be Reported		
Nitrogen, Ammonia (total as N)	00610	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA		O, P, Q; R, S, T
Nitrogen, Kjeldahl (total as N)	00625	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA		O, P, Q; R, S, T
Nitrogen, Nitrate (total as N)	00620	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA		O, P, Q; R, S, T
Nitrogen, Nitrite (total as N)	00615	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA		O, P, Q; R, S, T
Nitrogen, Total (as N)[9]	00600	mg/L	NA	---	Annually	Calculation	NA	NR	NA		O, P, Q; R, S, T
pH	00400	SU	NA	---	Annually	Daily Composite	NA	NR	NA		O, P, Q; R, S, T
Phosphorus, Total	00665	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA	100.0	O, P, Q; R, S, T
Specific Conductance	51409	uMhos	NA	---	Annually	Daily Composite	NA	NR	NA		O, P, Q; R, S, T
Temperature	00011	Deg. F.	NA	---	Annually	Daily Composite	NA	NR	NA		O, P, Q; R, S, T
Total Suspended Solids	00530	mg/L	NA	30	Annually	Daily Composite	NA	NR	NA		O, P, Q; R, S, T
Zinc, Dissolved	01090	mg/L	NA	---	Annually	Daily Composite	NA	NR	NA	10.0	O, P, Q; R, S, T

TABLE C – Chronic Toxicity Monitoring

Discharge Serial Number: DSN 101-CT	**Monitoring Locations:** Y – Chronic toxicity effluent results O – Day 1 chronic toxicity chemical analyses P – Day 3 chronic toxicity chemical analyses Q – Day 5 chronic toxicity chemical analyses R – Day 1 upstream monitoring S – Day 3 upstream monitoring T – Day 5 upstream monitoring
Wastewater Description: Treated cooling tower blowdown wastewater	**Outfall Location**: Latitude (41° 39' 35") and Longitude (71° 57' 49")
Monitoring Location Description: At the powerhouse prior to the discharge line exiting the facility	**Discharge is to:** Quinebaug River
Allocated zone of Influence: 137,750 gallons per hour	**Instream Waste Concentration for acute criteria:** 5.4% **Instream Waste Concentration for chronic criteria:** 3.67%
Monitoring Location Description: At the powerhouse prior to the discharge line exiting the facility	

PARAMETER	**NET DMR CODE**	**UNITS**	**FLOW/TIME BASED MONITORING**				**INSTANTANEOUS MONITORING**			**MINI-MUM LEVEL[5]** (µg/l)	**MONI-TORING LOCA-TION**
			Average Monthly Limit	Minimum Daily Limit or Maximum Daily Limit[1]	Sample/ Reporting Frequency [2, 3]	Sample Type or Measurement to be Reported [4]	Instantaneous Limit or Required Range	Sample/ Reporting Frequency	Sample Type or Measurement to be Reported		
Zinc, Total	01092	mg/L	NA	1.3	Annually	Daily Composite	NA	NR	NA	10.0	O, P, Q; R, S, T

TABLE C – Chronic Toxicity Monitoring

Discharge Serial Number: DSN 101-CT	**Monitoring Locations:** Y – Chronic toxicity effluent results O – Day 1 chronic toxicity chemical analyses P – Day 3 chronic toxicity chemical analyses Q – Day 5 chronic toxicity chemical analyses R – Day 1 upstream monitoring S – Day 3 upstream monitoring T – Day 5 upstream monitoring
Wastewater Description: Treated cooling tower blowdown wastewater	**Outfall Location**: Latitude (41° 39' 35") and Longitude (71° 57' 49")
Monitoring Location Description: At the powerhouse prior to the discharge line exiting the facility	**Discharge is to:** Quinebaug River
Allocated zone of Influence: 137,750 gallons per hour	**Instream Waste Concentration for acute criteria:** 5.4% **Instream Waste Concentration for chronic criteria:** 3.67%
Monitoring Location Description: At the powerhouse prior to the discharge line exiting the facility	

PARAMETER	NET DMR CODE	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			MINIMUM LEVEL[5] (µg/l)	MONITORING LOCATION
			Average Monthly Limit	Minimum Daily Limit or Maximum Daily Limit[1]	Sample/ Reporting Frequency [2, 3]	Sample Type or Measurement to be Reported [4]	Instantaneous Limit or Required Range	Sample/ Reporting Frequency	Sample Type or Measurement to be Reported		

TABLE C FOOTNOTES AND REMARKS

Footnotes:

[1] WET limits are expressed as a minimum daily limit, meaning the minimum allowable daily discharge over the course of the 24-hour sampling period. Chemical results analyzed in conjunction with WET tests shall be reported as the max value collected during the 24-hour sampling period.

[2] 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 monthly.

[3] If more than one toxicity sample is collected during a single month, report subsequent WET and chemistry results as an attachment to the DMR in accordance with Section 8.2 of this permit.

[4] Daily composite samples shall be collected for chronic toxicity tests consistent with the methodology outlined in Section 7.2 of this permit.

[5] "Minimum Level" refers to Section 6.4 of this permit.

[6] Chronic toxicity testing shall be conducted in accordance with Section 7.2 of this permit. The C-NOEC (Chronic-No Observed Effect Concentration) results (in %) for the conditions noted in this table shall be reported on the DMR. The ATMR shall be completed for each chronic toxicity testing event and submitted in accordance with Section 8.2 of this permit.

[7] Chemical analyses shall be conducted on all samples used in the chronic toxicity tests. These analyses shall be conducted on an undiluted aliquot of each effluent sample and each sample of upstream receiving water used in the chronic toxicity test. Results for effluent sampling from day 1, day 3, and day 5 of the chronic toxicity test shall be reported under Monitoring Location O, P, and Q, respectively. Receiving water (upstream) results from day 1, day 3, and day 5 of sampling shall be reported under reported under Monitoring Location R, S, and T, respectively. Results for salinity adjusted effluent sampling from day 1, day 3, and day 5 of the chronic toxicity test shall be reported under Monitoring Location U, V, and W, respectively. Results shall also be included on the ATMR and submitted in accordance with Section 8.2 of this permit.

[8] The Permittee shall report the dates of sample collection for each day of chronic toxicity test chemistry sampling (days 1, 3, and 5) in the format: year month day (YYYYMMDD).

[9] Total Nitrogen means the sum of the concentrations of: Total Kjeldahl Nitrogen + Nitrate Nitrogen + Nitrite Nitrogen.

Remarks:

1. Sampling shall be in July, August or September.
2. Abbreviations used for units are as follows: kg/day means kilograms per day; mg/L means milligrams per liter; mgd means millions of gallons per day; SU means Standard Units; mg/L means micrograms per liter. Other abbreviations are as follows: NA means Not Applicable; NR means Not Reportable (unless sampling is conducted relative to Section 5.4 of this permit); RDS means Range During Sampling; RDM means Range During Month.
3. If "---" is noted in the limits column in the table, this means that a limit is not specified but a value must be reported on the DMR.
4. Analyses that indicate that a parameter was not detected or that was detected less than the noted ML shall be reported in accordance with Section 6.6.

TABLE D

Discharge Serial Number: DSN 102-1	**Monitoring Location:** 1 (External outfall)
Wastewater Description: Fire pump test wastewater	**Outfall Location**: Latitude (41° 39' 42") and Longitude (71° 55' 28")
Monitoring Location Description: Prior to discharging into the in-ground stormwater infiltration system located at the south end the site	
Maximum Frequency of Discharge: Once per year	**Discharge is to:** Infiltration into the groundwater of the Mill Brook watershed

PARAMETER	NET DMR CODE	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			MINIMUM LEVEL [2] (µg/l)
			Average Monthly Limit	Maximum Daily Limit	Sample/ Reporting Frequency [1]	Sample Type or Measurement to be Reported	Instantaneous Limit or Required Range	Sample/ Reporting Frequency	Sample Type or Measurement to be Reported	
Aluminum, Total	01105	mg/L	NA	NA	NR	NA	---	Annually	Grab	10.0
Boron	01022	mg/L	NA	NA	NR	NA	---	Annually	Grab	
Copper, Total	01042	mg/L	NA	NA	NR	NA	---	Annual	Grab	3.0
Flow, Maximum during 24-hr period	50047	gpd	NA	225,000	Annually	Total Daily Flow	NA	NR	NA	
Iron, Total	01045	mg/L	NA	NA	NR	NA	---	Annually	Grab	
Lead, Total	01051	mg/L	NA	NA	NR	NA	---	Annually	Grab	1.0
pH	00400	S.U.	NA	NA	NR	NA	6.0 – 9.0	Annually	Grab	
Phosphorus, Total	00665	mg/L	NA	NA	NR	NA	---	Annually	Grab	100.0
Zinc, Total	01092	mg/L	NA	NA	NR	NA	---	Annually	Grab	10.0

TABLE D FOOTNOTES AND REMARKS

Footnotes:

[1] 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'.

[2] Refer to Section 6.3 of this permit. The minimum levels ("MLs") identified in this table represent the highest acceptable MLs that shall be achieved by the Permittee's analytical methods. Actual MLs reported by the laboratory must be reported as a comment on the DMR. Detected concentrations less than the laboratory ML shall be reported on the DMR in accordance with Section 6.5.

[3] For this parameter, the Permittee shall maintain at the facility a record of the Total Daily Flow and pH range for each operating day. The Permittee shall report on its DMR the "Average Daily Flow" and the "Maximum Daily Flow" and pH for each month and shall provide the record of the Total Daily Flow and pH range as an attachment to the DMR (Attachment D).

Remarks:

1. Abbreviations used for units are as follows: gpd means gallons per day; mg/L means milligrams per liter; SU means Standard Units; µg/l means micrograms per liter. Other abbreviations are as follows: NA means Not Applicable; NR means Not Reportable (unless sampling is conducted relative to Section 5.4 of this permit).
2. If "---" is noted in the limits column in the table, this means that a limit is not specified but a value must be reported on the DMR.

TABLE E

Discharge Serial Number: DSN 103-1	**Monitoring Location:** 1 (External outfall)
Wastewater Description: Fire hydrant test wastewater	**Outfall Location**: Latitude (41° 39' 42") and Longitude (71° 55' 28")
Monitoring Location Description: Prior to discharging into the in-ground stormwater infiltration system located at the south and north ends of the site (See the remark below)	
Maximum Frequency of Discharge: Once per year	**Discharge is to:** Infiltration into the groundwater of the Mill Brook watershed

PARAMETER	NET DMR CODE	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			MINIMUM LEVEL[2] (µg/l)
			Average Monthly Limit	Maximum Daily Limit	Sample/ Reporting Frequency [1]	Sample Type or Measurement to be Reported	Instantaneous Limit or Required Range	Sample/ Reporting Frequency	Sample Type or Measurement to be Reported	
Aluminum, Total	01105	mg/L	NA	NA	NR	NA	---	Annually	Grab	10.0
Boron	01022	mg/L	NA	NA	NR	NA	---	Annually	Grab	
Copper, Total	01042	mg/L	NA	NA	NR	NA	---	Annual	Grab	3.0
Flow, Maximum during 24-hr period	50047	gpd	NA	225,000	Annually	Total Daily Flow	NA	NR	NA	
Iron, Total	01045	mg/L	NA	NA	NR	NA	---	Annually	Grab	100.0
Lead, Total	01051	mg/L	NA	NA	NR	NA	---	Annually	Grab	1.0
pH	00400	S.U.	NA	NA	NR	NA	6.0 – 9.0	Annually	Grab	
Phosphorus, Total	00665	mg/L	NA	NA	NR	NA	---	Annually	Grab	100.0
Zinc, Total	01092	mg/L	NA	NA	NR	NA	---	Annually	Grab	10.0

TABLE E FOOTNOTES AND REMARKS

Footnotes: [1] 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'.

[2] Refer to Section 6.3 of this permit. The minimum levels ("MLs") identified in this table represent the highest acceptable MLs that shall be achieved by the Permittee's analytical methods. Actual MLs reported by the laboratory must be reported as a comment on the DMR. Detected concentrations less than the laboratory ML shall be reported on the DMR in accordance with Section 6.5.

[3] For this parameter, the Permittee shall maintain at the facility a record of the Total Daily Flow and pH range for each operating day. The Permittee shall report on its DMR the "Average Daily Flow" and the "Maximum Daily Flow" and pH for each month and shall provide the record of the Total Daily Flow and pH range as an attachment to the DMR (Attachment D).

Remarks:

1. Abbreviations used for units are as follows: gpd means gallons per day; mg/L means milligrams per liter; SU means Standard Units; µg/l means micrograms per liter. Other abbreviations are as follows: NA means Not Applicable; NR means Not Reportable (unless sampling is conducted relative to Section 5.4 of this permit).
2. If "---" is noted in the limits column in the table, this means that a limit is not specified but a value must be reported on the DMR.

TABLE F

Discharge Serial Number: DSN 104-1	**Monitoring Location:** 1 (External outfall)
Wastewater Description: Make-up supply tank drain and overflow wastewaters	**Outfall Location**: Latitude (41° 39' 56") and Longitude (71° 55' 26")
Monitoring Location Description: Prior to discharging into the in-ground stormwater infiltration system located at the north end of the site	
Maximum Frequency of Discharge: Once per year	**Discharge is to:** Infiltration into the groundwater of the Mill Brook watershed

PARAMETER	NET DMR CODE	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			
			Average Monthly Limit	Maximum Daily Limit	Sample/ Reporting Frequency [1]	Sample Type or Measurement to be Reported	Instantaneous Limit or Required Range	Sample/ Reporting Frequency	Sample Type or Measurement to be Reported	MINIMUM LEVEL[2] (µg/l)
Aluminum, Total	01105	mg/L	NA	NA	NR	NA	---	Annually	Grab	10.0
Boron	01022	mg/L	NA	NA	NR	NA	---	Annually	Grab	
Copper, Total	01042	mg/L	NA	NA	NR	NA	---	Annual	Grab	3.0
Flow, Maximum during 24-hr period	50047	gpd	NA	250,000	Annually	Total Daily Flow	NA	NR	NA	
Iron, Total	01045	mg/L	NA	NA	NR	NA	---	Annually	Grab	
Lead, Total	01051	mg/L	NA	NA	NR	NA	---	Annually	Grab	1.0
pH	00400	S.U.	NA	NA	NR	NA	6.0 – 9.0	Annually	Grab	
Phosphorus, Total	00665	mg/L	NA	NA	NR	NA	---	Annually	Grab	100.0
Zinc, Total	01092	mg/L	NA	NA	NR	NA	---	Annually	Grab	10.0

TABLE F FOOTNOTES AND REMARKS

Footnotes: [1] 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'.

[2] Refer to Section 6.3 of this permit. The minimum levels ("MLs") identified in this table represent the highest acceptable MLs that shall be achieved by the Permittee's analytical methods. Actual MLs reported by the laboratory must be reported as a comment on the DMR. Detected concentrations less than the laboratory ML shall be reported on the DMR in accordance with Section 6.5.

[3] For this parameter, the Permittee shall maintain at the facility a record of the Total Daily Flow and pH range for each operating day. The Permittee shall report on its DMR the "Average Daily Flow" and the "Maximum Daily Flow" and pH for each month and shall provide the record of the Total Daily Flow and pH range as an attachment to the DMR (Attachment D).

Remarks:

1. Abbreviations used for units are as follows: gpd means gallons per day; mg/L means milligrams per liter; SU means Standard Units; µg/l means micrograms per liter. Other abbreviations are as follows: NA means Not Applicable; NR means Not Reportable (unless sampling is conducted relative to Section 5.4 of this permit).
2. If "---" is noted in the limits column in the table, this means that a limit is not specified but a value must be reported on the DMR.

TABLE G

Intake Serial Number: DSN 101-H	**Monitoring Location:** 0 (Intake for Cooling Water Intake Structure)
Wastewater Description: Intake cooling water	**Intake Location**: Latitude (41° 39' 40") and Longitude (71° 57' 41")
Monitoring Location Description: Prior to the intake cooling water treatment at the pH/temperature/turbidity monitoring location	**Intake is from:** Quinebaug River

BTA Determination on Cooling Water Intake Structure in accordance with 40 CFR 125.90(b): Cylindrical wedgewire screen through screen design velocity of 0.25fps, and operation of a cooling tower, a closed cycle recirculating system as defined in 40 CFR 125.83.

PARAMETER	NET DMR CODE	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			MINI-MUM LEVEL [2] (µg/l)
			Average Monthly Limit	Maximum Daily Limit	Sample/ Reporting Frequency [1]	Sample Type or Measurement to be reported	Instantaneous Limit or Required Range	Sample/ Reporting Frequency	Sample Type or Measurement to be Reported	
Aluminum, Total	01105	mg/L	NA	NA	NR	NA	---	Monthly	Grab	10.0
Boron	01022	mg/L	NA	NA	NR	NA	---	Monthly	Grab	
Chromium, Total	01034	mg/L	NA	NA	NR	NA	---	Monthly	Grab	5.0
Copper, Total	01042	mg/L	NA	NA	NR	NA	---	Monthly	Grab	3.0
Flow rate (Average daily flow)	00056	gpd	---	NA	Monthly	Total Daily Flow	NA	NR	NA	
Flow, Maximum during 24-hr period	50047	gpd	NA	893,000	Monthly	Total Daily Flow	NA	NR	NA	
Iron, Total	01045	mg/L	NA	NA	NR	NA	---	Monthly	Grab	100.0
Lead, Total	01051	mg/L	NA	NA	NR	NA	---	Monthly	Grab	1.0
pH, Minimum	61942	SU	NA	NA	NR	NA	---	Monthly	Grab	
pH, Maximum	61941	SU	NA	NA	NR	NA	---	Monthly	Grab	
Phosphorus, Total	00665	mg/L	NA	NA	NR	NA	---	Monthly	Grab	100.0
Temperature	00011	°F	NA	NA	NR	NA	---	Monthly	Instantaneous	
Zinc, Total	01092	mg/L	NA	NA	NR	NA	---	Monthly	Grab	10.0

TABLE G FOOTNOTES AND REMARKS

Footnotes:

[1] 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'.

[2] Refer to Section 6.3 of this permit. The minimum levels ("MLs") identified in this table represent the highest acceptable MLs that shall be achieved by the Permittee's analytical methods. Actual MLs reported by the laboratory must be reported as a comment on the DMR. Detected concentrations less than the laboratory ML shall be reported on the DMR in accordance with Section 6.5.

[3] For this parameter, the Permittee shall maintain at the facility a record of the Total Daily Flow and pH range for each operating day. The Permittee shall report on its DMR the "Average Daily Flow" and the "Maximum Daily Flow" and pH for each month and shall provide the record of the Total Daily Flow and pH range as an attachment to the DMR (Attachment D).

Remarks:

1. Abbreviations used for units are as follows: gpd means gallons per day; mg/L means milligrams per liter; SU means Standard Units; °F means degrees Fahrenheit; µg/l means micrograms per liter. Other abbreviations are as follows: NA means Not Applicable; NR means Not Reportable (unless sampling is conducted relative to Section 5.4 of this permit).
2. If "---" is noted in the limits column in the table, this means that a limit is not specified but a value must be reported on the DMR.

SECTION 6: SAMPLE COLLECTION, HANDLING AND ANALYTICAL TECHNIQUES

6.1 All samples shall be collected, handled, and analyzed in accordance with the methods approved under 40 CFR 136, unless another method is required under 40 CFR subchapter N or unless an alternative method has been approved in writing pursuant to 40 CFR 136.5. To determine compliance with limits and conditions established in this permit, monitoring must be performed using sufficiently-sensitive methods approved pursuant to 40 CFR 136 for the analysis of pollutants having approved methods under that part, unless a method is required under 40 CFR subchapter N or unless an alternative method has been approved in writing pursuant to 40 CFR 136.5.

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

6.3 The term Minimum Level ("ML") refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit ("MDL"). MLs may be obtained in several ways: They may be published in a method; they may be sample concentrations equivalent to the lowest acceptable calibration point used by the laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a lab, by a factor of 3. The MLs specified in Section 5 Tables A - G represent the minimum concentrations at which quantification must be achieved and verified during the chemical analyses for the parameters identified in Section 5 Tables A – G. Analyses for these parameters must include check standards within ten percent of the specified ML or calibration points equal to or less than the specified ML.

6.4 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.

6.5 Analyses for which quantification was verified to be below a ML, including non-detect, shall be reported as zero on the DMR for purposes of determining compliance with effluent limitations or conditions specified in this permit. The Permittee shall attach documentation demonstrating the ML of the analysis as an attachment to the DMR and identify the ML as a comment on the DMR.

6.6 It is a violation of this permit for a Permittee or his/her designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed.

6.7 Analyses required under this permit shall be performed in accordance with Conn. Gen. Stat. Section 19a-29a. An "environmental laboratory", as that term is defined in the referenced section, that is performing analyses required by this permit, shall be registered and have certification acceptable to the Commissioner, as such registration and certification is necessary.

SECTION 7: AQUATIC TOXICITY TESTING

7.1 **ACUTE TESTING REQUIREMENTS.** The Permittee shall conduct acute aquatic toxicity testing for DSN 101-1 as follows:

7.1.1 **TEST METHOD**: Acute aquatic toxicity shall be performed as prescribed in the reference document *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, with any exceptions or clarifications noted below.

7.1.2 **SAMPLE COLLECTION AND HANDLING:**

7.1.2.1 Composite samples shall be chilled as they are collected. Grab samples shall be chilled immediately following collection. Samples shall be held at 0-6 °C until aquatic toxicity testing is initiated.

7.1.2.2 Effluent samples shall not be dechlorinated, filtered, or modified in any way prior to testing for acute aquatic toxicity unless specifically approved in writing by the Commissioner for monitoring at this facility.

7.1.2.3 Tests for acute aquatic toxicity shall be initiated within 36 hours of sample collection.

7.1.3 **TEST SPECIES AND TEST DURATION:** Monitoring for aquatic toxicity to determine compliance with the acute toxicity limits in this permit shall be conducted as follows:

7.1.3.1 For 48-hours utilizing neonatal *Daphnia pulex* (less than 24-hours old).

7.1.3.2 For 48-hours utilizing larval *Pimephales promelas* (1-14 days old with no more than 24-hours range in age).

7.1.4 **ACUTE ENDPOINT:** Survival at 48-hours measured by NOAEL.

7.1.5 **TEST CONDITIONS:**

7.1.5.1 Tests for acute aquatic toxicity shall be conducted as prescribed for static non-renewal tests.

7.1.5.2 Pass/fail and single concentration tests shall be conducted at a specified Critical Test Concentration (CTC) equal to the acute toxicity effluent limit, or 100% in the case of monitoring only conditions, as prescribed in Section 22a-430-3(j)(7)(A)(i) of the RSCA. Five replicates of undiluted effluent and five replicates of effluent diluted to the CTC shall be employed in the test. Three replicate control test chambers containing dilution water only shall also be employed in the test.

7.1.5.3 Synthetic freshwater prepared with deionized water adjusted to a hardness of 50 mg/L (±5 mg/L) as $CaCO_3$ shall be used as dilution water.

7.1.5.4 Organisms shall not be fed during the tests.

7.1.5.5 Copper nitrate shall be used as the reference toxicant.

7.1.5.6 Dissolved oxygen, pH, and temperature shall be measured in the control and in all test concentrations at the beginning of the test, daily thereafter, and at test termination.

7.1.5.7 Specific conductance, pH, alkalinity, hardness, and total residual chlorine shall be measured in the undiluted effluent sample 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.

7.1.6 **CHEMICAL ANALYSIS:** All effluent samples used in the acute toxicity test shall, at a minimum, be analyzed and results reported in accordance with the provisions listed in Section 5 Table B and Section 6.1 of this permit for the following parameters identified on Section 5 Table B of the permit.

7.1.7 **TEST ACCEPTABILITY CRITERIA:** For the test results to be acceptable, control survival must equal or exceed 90%. If the laboratory control fails to meet test acceptability criteria for either of the test organisms at the end of the respective test period, then the test is considered invalid and the test must be repeated with a newly collected sample in accordance with Section 9.4.

7.1.8 **TEST COMPLIANCE:** Compliance with limits on Acute Toxicity shall be determined as follows:

7.1.8.1 For limits expressed as ~~an~~a NOAEL value, compliance shall be demonstrated when the results of a valid single concentration or pass/fail acute aquatic toxicity test indicates there is greater than 50% survival in the undiluted effluent and 90% or greater survival in the effluent at the specified CTC.

7.1.9 **REPORTING:** Results of acute toxicity monitoring shall be documented on an Aquatic Toxicity Monitoring Report ("ATMR") and reported to the Commissioner by the last day of the month following the month in which samples are collected in accordance with Section 8.2 of this permit. The report shall include the items identified in Section 8.2 of this permit. Endpoints to be reported are: 48-hour LC50 and NOAEL.

7.2 **CHRONIC TESTING REQUIREMENTS**. The Permittee shall conduct chronic toxicity testing for DSN 001-1 as follows:

7.2.1 **TEST METHOD**: Chronic aquatic toxicity testing shall be performed as prescribed in the reference document *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms*, EPA-821-R-02-013, or the most current version, with the following exceptions or clarifications noted below.

7.2.2 **SAMPLE COLLECTION AND HANDLING:**

7.2.2.1 Composite samples shall be chilled as they are being collected. Samples shall be held at 0-6 °C until chronic aquatic toxicity testing is initiated.

7.2.2.2 Effluent samples shall not be dechlorinated, filtered, or modified in any way prior to testing for chronic aquatic toxicity unless specifically approved in writing by the Commissioner for monitoring at this facility.

7.2.2.3 Tests for chronic aquatic toxicity shall be initiated within 36 hours of sample collection.

7.2.3 **TEST SPECIES AND TEST DURATION:** Monitoring for chronic aquatic toxicity to determine compliance with the chronic toxicity limits/conditions in the permit shall be conducted as follows:

7.2.3.1 For seven days utilizing neonatal *Ceriodaphnia dubia* (less 24-hours old)

7.2.3.2 For seven days utilizing newly-hatched *Pimephales promelas* (less 24-hours old).

7.2.4 **CHRONIC ENDPOINTS:**

7.2.4.1 *Ceriodaphnia dubia:* Survival and Reproduction

7.2.4.2 *Pimephales promelas:* Survival and Growth

7.2.5 **DILUTION WATER:** Quinebaug River water shall be collected upstream of the area influenced by the discharge shall be used as site control water (0% effluent) and dilution water in the toxicity tests. The Permittee shall document the dilution water sampling location by providing coordinates and/or a map of the location.

7.2.6 **TEST CONDITIONS:**

7.2.6.1 Testing for chronic aquatic toxicity shall be conducted as prescribed in the reference document for static daily renewal tests.

7.2.6.2 Daily composite samples of the discharge and grab samples of the Quinebaug River for use as site water and dilution water shall be collected on: Day 1 of the test (for test initiation and renewal on Day 2 of the test); Day 3 of the test (for test solution renewal on Day 3 and Day 4 of the test); and on Day 5 of the test, (for test solution renewal on Day 5, Day 6, and Day 7 of the test). Samples shall not be dechlorinated, pH or hardness adjusted, or chemically altered in any way.

7.2.6.3 Test concentrations shall be comprised of a minimum of five dilutions (100%, 64%, 32%, 16%, 8%, and 4% effluent), laboratory control water, and site dilution water.

7.2.6.4 Dissolved oxygen, pH, and temperature shall be measured in each sample of effluent and the Quinebaug River water sample prior to and immediately following renewal of the test solutions.

7.2.6.5 Synthetic freshwater prepared with deionized water adjusted to a hardness of 50 mg/l (±5 mg/l) as $CaCO_3$ prepared as described in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA-821-R-02-013) shall be used as laboratory control water.

7.2.7 **CHEMICAL ANALYSIS:** Chemical analysis for the parameters identified in Section 5 Table C and Section 6.1 of the permit shall be conducted on an undiluted aliquot of each effluent sample and each sample of Quinebaug River used in the test. The chemical analysis shall be analyzed, and results reported in accordance with the provisions listed in Section 5 Table C and Section 6.1 of the permit.

7.2.8 **TEST ACCEPTABILITY CRITERIA:** If the laboratory control fails to meet test acceptability criteria specified in the reference document for either of the test organisms at the end of the respective test period, then the test is considered invalid and the test must be repeated.

7.2.9 **REPORTING:** A report detailing the results of the chronic toxicity monitoring shall be documented on an ATMR and submitted to the Commissioner by the last day of the month following the month in which samples are collected in accordance with Section 8.2 of this permit. The report shall include the items identified in Section 8.2 of this permit. Endpoints to be reported are: 48-hour LC50 (survival), 7-day LC50 (survival), 7-day C-NOEC (survival), 7-day C-LOEC (survival), 7-day C-NOEC (growth), 7-day C-LOEC (growth), 7-

day C-NOEC (reproduction), 7-day C-LOEC (reproduction), 7-day IC25 (growth and reproduction).

SECTION 8: REPORTING REQUIREMENTS

8.1 The results of chemical analyses and any aquatic toxicity test required by this permit shall be submitted electronically using NetDMR. Monitoring results shall be reported at the monitoring frequency specified in this permit. Any monitoring required more frequently than monthly shall be reported on an attachment to the DMR, and any additional monitoring conducted in accordance with 40 CFR 136, or another method required for an industry-specific waste stream under 40 CFR subchapter N, or other methods approved by the Commissioner, shall also be included on the DMR, or as an attachment, if necessary, and the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Commissioner in the permit. All aquatic toxicity reports shall also be included as an attachment to the DMR. A report shall also be included with the DMR which includes a detailed explanation of any violations of the limitations specified. DMRs, attachments, and reports, shall continue to be submitted electronically in accordance with Section 8.5 below. However, if the DMRs, attachments, and reports are required to be submitted in hard copy form, they 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 Energy and Environmental Protection
79 Elm Street,
Hartford, CT 06106-5127

8.2 The ATMR associated with aquatic toxicity monitoring shall include all applicable items identified in Section 12 of EPA-821-R-02-012 and in Section 10 of EPA-821-R-02-013 (Freshwater), including complete and accurate aquatic toxicity test data, including percent survival of test organisms in each replicate test chamber, LC_{50} 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. The ATMR shall be submitted electronically as an attachment to the DMR and via email to: DEEP.IndustrialWETReports@ct.gov, by the last day of the month following the month in which the samples are collected.

8.3 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.

8.4 **NetDMR Reporting Requirements:**

The Permittee shall report electronically using NetDMR, a web-based tool that allows permittees to electronically submit DMRs and other required reports through a secure internet connection. The Permittee and/or the signatory authority shall electronically submit DMRs required under this permit to the Commissioner using NetDMR in satisfaction of the DMR submission requirements of Sections 5, 6, and 9 of this permit. All sampling and monitoring records required under the permit, including any monitoring conducted more frequently than monthly or any additional monitoring conducted in

accordance with 40 CFR 136, shall be submitted to the Commissioner as an electronic attachment to the DMR in NetDMR. The Permittee shall also electronically file any written report of noncompliance described in Section 9 of this permit as an attachment in NetDMR. DMRs shall be submitted electronically to the Commissioner no later than the last day of the month following the completed reporting period. NetDMR is accessed from: http://www.epa.gov/netdmr.

SECTION 9: RECORDING AND REPORTING OF VIOLATIONS, ADDITIONAL TESTING REQUIREMENTS

9.1 Noncompliance Notifications:

9.1.1 In accordance with Section 22a-430-3(j)(8), 22a-430-3(j)(11)(D), 22a-430-3(k)(4), and 22a-430-3(i)(3) of the RSCA, the Permittee shall notify the Commissioner of the following actual or anticipated noncompliance with the terms or conditions of this permit within two hours of becoming aware of the circumstances. All other actual or anticipated violations of the permit shall be reported to the Commissioner within 24 hours of becoming aware of the circumstances:

9.1.1.1 A noncompliance that is greater than two times an effluent limitation;

9.1.1.2 A noncompliance of any minimum or maximum daily limitation or excursion beyond a minimum or maximum daily range;

9.1.1.3 Any condition that may endanger human health or the environment, including but not limited to noncompliance with whole effluent toxicity WET limitations;

9.1.1.4 Any condition that may endanger the operation of a POTW, including sludge handling and disposal;

9.1.1.5 A failure or malfunction of monitoring equipment used to comply with the monitoring requirements of this permit;

9.1.1.6 Any actual or potential bypass of the Permittee's collection system or treatment facilities; or

9.1.1.7 Expansions or significant alterations of any wastewater collection, treatment facility, or its method of operation for the purpose of correcting or avoiding a permit violation.

9.1.2 Notifications shall be submitted via the Commissioner's online Noncompliance Notification Form:
https://portal.ct.gov/deep/water-regulating-and-discharges/industrial-wastewater/compliance-assistance/notification-requirements.

9.1.3 Within five days of any notification of noncompliance in accordance with Sections 9.1.1.1 through 9.1.1.6 of this permit, the Permittee shall submit a follow-up report using the Commissioner's online Noncompliance Follow-up Report Form:
https://portal.ct.gov/deep/water-regulating-and-discharges/industrial-wastewater/compliance-assistance/notification-requirements.

The follow-up report shall contain, at a minimum, the following information: (i) A description of the noncompliance and its cause; (ii) the period of noncompliance, including

exact dates and times; (iii) if the noncompliance has not been corrected, the anticipated time it is expected to continue; and (iv) steps taken or planned to correct the noncompliance and reduce, eliminate and prevent recurrence of the noncompliance.

9.1.4 Within 30 days of any notification of facility modifications reported in accordance with Section 9.1.1.7 of this permit, the Permittee shall submit a written follow-up report by submitting a "Facility and Wastewater Treatment System Modification Request for Determination" for the review and approval of the Commissioner. The report shall fully describe the changes made to the facility and reasons therefor.

9.1.5 Notification of an actual or anticipated noncompliance or facility modification does not stay any term or condition of this permit.

9.2 In accordance with Section 22a-430-3(j)(11)(E) of the RSCA, the Permittee shall notify the Commissioner within 72 hours and in writing within 30 days when he or she knows or has reason to believe that the concentration in the discharge of any substance listed in the application, or any toxic substance as listed in Appendix B or D of RSCA Section 22a-430-4, has exceeded or will exceed the highest of the following levels: (1) One hundred micrograms per liter; (2) Two hundred micrograms per liter for acrolein and acrylonitrile, five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter for antimony; (3) An alternative level specified by the Commissioner, provided such level shall not exceed the level which can be achieved by the Permittee's treatment system; or (4) A level two times the level specified in the Permittee's application.

72 hour initial notifications shall be submitted via the Commissioner's online Noncompliance Notification Form. 30 day follow-up reports shall be submitted via the Commissioner's online Noncompliance Follow-up Report Form. The Forms are available at the Commissioner's website, here: https://portal.ct.gov/deep/water-regulating-and-discharges/industrial-wastewater/compliance-assistance/notification-requirements.

9.3 In addition to any other written reporting requirements, the Permittee shall report any instances of noncompliance with this permit with its DMR. Such reporting shall be due no later than the last day of the month following the reporting period in which the noncompliant event occurred. The information provided in the DMR shall include, at a minimum: the type of violation, the duration of the violation, the cause of the violation, and any corrective action(s) or preventative measure(s) taken to address the violation.

9.4 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 Sections 5 and 7. The exceedance or invalid test shall be reported to Commissioner in accordance with Section 9.1. The results shall be submitted to the Commissioner within 30 days of the exceedance or invalid test. The results and the associated ATMR shall be reported in accordance with Sections 5 and 8.2 of the permit. Results of all tests, whether valid or invalid, shall be reported. If more than one toxicity sample is collected during a single month, report subsequent WET and chemistry results as an attachment to the month's DMR.

9.5 If any two consecutive test results or any three test results in a twelve-month period indicate that an aquatic toxicity limit has been exceeded, the Permittee shall immediately take all reasonable steps to eliminate toxicity wherever possible and shall also submit a report, for the review and written approval of the Commissioner, which describes in detail the steps taken or that shall be taken to eliminate the toxic impacts of the discharge on the receiving water and it shall also include a

proposed schedule for implementation. Such report shall be submitted in accordance with the timeframe set forth in Section 22a-430-3(j)(10)(C) of the Regs. Conn. State Agencies. The Permittee shall implement all actions in accordance with the approved report and schedule.

SECTION 10: COMPLIANCE SCHEDULE

10.1 **pH EFFLUENT LIMITATIONS COMPLIANCE.** The Permittee shall achieve compliance with the pH effluent limitations and in Table A of Section 5 of this permit, as soon as possible, but in no event later than 12 months after the effective date of this permit in accordance with the following:

10.1.1 **SCOPE OF STUDY.** On or before 90 days after the date of issuance of this permit, the Permittee shall submit for the Commissioner's review and written approval a comprehensive plan and thorough report which describes and evaluates alternative actions which may be taken by the Permittee to achieve compliance with the pH limitations in Section 5 of this permit. Such report shall:

10.1.1.1 Evaluate alternative actions to achieve compliance with Section 5 limits including, but not limited to, pollutant source reduction, process changes/innovations, chemical substitutions, recycle and zero discharge systems, water conservation measures, and other internal and/or end-of-pipe treatment technologies; upstream and downstream sampling locations;

10.1.1.2 State in detail the most expeditious schedule for performing each alternative;

10.1.1.3 List all permits and approvals required for each alternative, including but not limited to any permits required under Sections 22a-32, 22a-42a, 22a-342, 22a-361, 22a-368 or 22a-430 of the CGS;

10.1.1.4 Propose a preferred alternative or combination of alternatives with supporting justification; and

10.1.1.5 Propose a preferred alternative or combination of alternatives with supporting justification; and

10.1.1.6 Propose a detailed program and schedule, including the start and anticipated end dates, to perform all actions required by the preferred alternative including but not limited to a schedule for submission of engineering plans and specifications on any internal and/or end of pipe treatment facilities, start and completion of any construction activities related to any treatment facilities, and applying for and obtaining all permits and approvals required for such actions.

10.2 **THERMAL VERIFICATION STUDY.** Pursuant to Section 316(a) of the Federal Water Pollution Control Act, 33 U.S.C. § 1326(a) regarding the thermal component of the discharge, the Permittee shall comply with the following to verify that the thermal discharge from DSN 101-1 will not cause or contribute to an instream water quality violation of the ambient daily maximum and maximum allowable increase in temperature of 4ºF:

10.2.1 **SCOPE OF STUDY.** On or before six (6) months after the effective date of the permit, the Permittee shall submit for the Commissioner's review, a scope of study for the thermal verification required in Section 10.2 of this permit. The scope of study shall provide all necessary details on how the study will be performed and shall include a schedule that identifies study commencement and completion dates. The scope of study shall include at a

minimum:

10.2.1.1 In situ sampling during summer (July – September) and winter (January – March) with vertical plume monitoring, and summer mapping occurring at or near 7Q10 conditions;

10.2.1.2 Upstream and downstream sampling locations;

10.2.1.3 Hydrographic and real time temperature surveys; and

10.2.1.4 Thermal plume mappings.

10.2.1.5 Record of both the rate of discharge (gph) during the study, and total daily flow for each mapping;

10.2.1.6 Record of the river flow during the mapping obtained from the USGS Streamgage No. 0112700 in Jewett City, including the hydrographs; and.

10.2.1.7 Identification of representative important species ("RIS"). RIS are species which are representative, in terms of their biological needs, of a balanced, indigenous community of shellfish, fish, and wildlife in the body of water into which the thermal discharge is made. Below is a list of recommended criteria for identifying RIS:

1. Species listed in the WQS as requiring protection.
2. Species listed as threatened and endangered.
3. Thermally sensitive species in the local area, including those species near the northern or southern boundaries of their natural ranges.
4. Species that are valuable for commercial or recreational activities.
5. Species that are critical to the structure and function of the ecological system, i.e., those that are necessary in the food chain or as habitat formers for the species included in the criteria above.
6. Species that are potentially capable of becoming nuisance species
7. Species that are representative of the thermal requirements of important species but which themselves are not important.

10.2.2 **FIELD VERIFICATION.** On or before two (2) years after the Department's concurrence of the scope of study, the Permittee shall conduct a field verification study of the thermal discharge impact to the Quinebaug River.

10.2.3 **REPRESENTATIVE IMPORTANT SPECIES.** On or before two (2) years after the Department's concurrence of the scope of study, the Permittee shall determine the thermal thresholds such as the acute and chronic lethal thermal sensitivity limits, and the optimal temperature ranges, for the different life stages of the selected RIS.

10.2.4 **REPORT SUBMITTAL.** On or before four (4) months from completing the field verification study, the Permittee shall submit a Thermal Verification Report describing the results of this study for the Commissioner's review. The study shall include but not be limited to all in situ data collected and analyzed in an electronic and editable format, thermal plume mapping reflecting the current outfall release cross-sectional area, identification of RIS and the applicable thermal thresholds, and potential aquatic impacts within wetlands and watercourse in the thermal plume. The thermal plume mapping shall include, at a minimum:

10.2.4.1 Map of the nearfield area, circumscribed by a radial distance extending outward from the location of the discharge (DSN001-1) into the receiving water body, at a scale of no greater than 750 feet per inch. Such map shall also delineate the location of any watercourses, discharges, designated tidal wetlands, and structural features such as bridges and culverts. The cross-sectional bathymetry of the Quinebaug River shall be plotted, including bathymetry for any areas where the thermal data is different than expected;

10.2.4.2 Thermal isotherms delineating the areal extent of the plume equivalent to a ΔT of 4ºF and a maximum temperature of 85°F or ambient temperature, if ambient temperature is above 85°F in increments of 1ºF. Isotherms shall be labeled for both maximum temperature and maximum temperature increase beginning at the outfall and at ΔT of 1.5 °F and 4ºF intervals. Isotherms should be labeled from point of discharge until the thermal component of that plume has been reduced to ambient temperatures. Nearfield temperature increases should be well documented to determine the localized effect of high temperature discharges; and

10.2.4.3 Measurements will be taken during the summer months (July – September) and winter months (January - March), during a normal operating day;

10.2.4.4 The report should compare conditions on the days of the study to 7Q10 and extrapolate the plume contours expected under 7Q10 conditions; and

10.2.4.5 Sampling and water quality data should be provided as a excel spreadsheet, and contour lines, monitoring locations, and bathymetry should be provided as an Arc GIS Pro geospatial project using the State Plane Connecticut FIPS coordinate system.

10.3 **STATUS REPORTS.** The Permittee shall submit to the Commissioner semi-annual status reports on June 30th and December 31st of each year, beginning sixty days after the date of concurrence of the reports referenced in Sections 10.1.1 and 10.2.1 above. Status reports shall include the following:

10.3.1 A description of the work performed by the Permittee during the past six (6) months towards compliance with Sections 10.1, 10.2.2 and 10.2.3 above;

10.3.2 An assessment of whether the Permittee is on schedule to comply with the compliance deadline;

10.3.3 If the Permittee is not on-track to comply with the compliance deadline, the steps the Permittee will take to comply; and

10.3.4 Status reports of Sections 10.1, 10.2.2 and 10.2.3 shall include the start and anticipated end dates of the studies fieldwork and anticipated report submission date.

10.4 **PROJECT COMPLETION CERTIFICATION.** The Permittee shall perform the approved actions in accordance with the approved schedule. Within fourteen (14) days after completing such actions, the Permittee shall certify to the Commissioner in writing that the actions have been completed as reviewed/approved.

10.5 **COMMISSIONER APPROVAL.** 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 notifies 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.

10.6 **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 legal Connecticut or federal holiday, shall be submitted or performed on or before the next day which is not a Saturday, Sunday, or legal Connecticut or federal holiday.

10.7 **NOTIFICATION OF NONCOMPLIANCE.** Except as otherwise provided in this permit, 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.

10.8 **NOTICE TO COMMISSIONER OF CHANGES.** Within fifteen (15) 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.

10.9 **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:

DEEP.IndustrialNPDESCompliance@ct.gov with the subject line "Plainfield Renewable Energy, LLC. – CT0030473 and SP0002464"

This permit is hereby issued on

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JENNIFER PERRY, P.E.
Bureau Chief

JP/OF