

**DRAFT AUTHORIZATION TO DISCHARGE UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)**

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §1251 et seq.; the "CWA"),

**IPR-GDF SUEZ**

is authorized to discharge from a facility located at

**Pinetree Power, Inc.  
1241 Whitefield Road  
Bethlehem, NH 03574**

to receiving water named

**Ammonoosuc River (Hydrologic Basin Code 01070001)**

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

This permit shall become effective on the first day of the calendar month following sixty (60) days after the date of signature.\*

This permit supersedes the permit issued on September 22, 2006.

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

This permit consists of 10 pages in Part I which includes effluent limitations, monitoring and reporting requirements, and state permit conditions; Attachment A - Freshwater Acute Toxicity Test Procedure and Protocol (February 2011) (8 pages); Attachment B includes instructions for preparing Stormwater Pollution Prevention Plans (6 pages); as well as 25 pages in Part II which includes general conditions and definitions.

Signed this        day of

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Stephen S. Perkins, Director  
Office of Ecosystem Protection  
U.S. Environmental Protection Agency  
Region I - New England  
Boston, Massachusetts

\* If no comments requesting a change to the draft permit are received, the permit will become effective upon the date of signature.

**PART I**

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

1. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from **outfall serial number 001**(process): boiler blowdown, sandfilter backwash, demineralizer regeneration, mechanical equipment cooling, cooling tower treatment filtrate (blowdown), artesian well flushing, condenser cleaning, laboratory wastewater and other miscellaneous floor drain wastes to the Ammonoosuc River only during emergencies. Such discharges shall be limited and monitored as specified below.

Effluent Characteristic	Maximum Daily Discharge Limitations	Monitoring Requirements <sup>1</sup>	
		Measurement Frequency	Sample Type
Flow Rate (million gallons per day)	0.20	Continuous	Recorder
Total Suspended Solids (mg/l)	100	Each Discharge Event	Composite <sup>8</sup>
Temperature (°F)	85 <sup>2</sup>	Continuous	Recorder
Temperature Rise, (ΔT), (°F) <sup>3</sup>	20 <sup>2</sup>	Continuous	Recorder
Oil and Grease (mg/l)	20	Each Discharge Event	Grab
The 126 priority pollutants contained in chemicals added for cooling tower maintenance (except Cr and Zn)	No detectable amount	Each Discharge Event	Composite <sup>8</sup>
Total Recoverable Chromium (mg/L)	0.2	Each Discharge Event	Composite <sup>8</sup>
Total Recoverable Zinc (mg/L)	1.0	Each Discharge Event	Composite <sup>8</sup>
Total Recoverable Copper (mg/l)	0.31	Each Discharge Event	Composite <sup>8</sup>
Total Recoverable Iron (mg/l)	0.30	Each Discharge Event	Composite <sup>8</sup>
Total Residual Oxidants (mg/l)	0.2	Each Discharge Event	Grab
pH (standard units)	≥6.5 and ≤8.0 <sup>4</sup>	Continuous	Recorder <sup>5</sup>
Whole Effluent Toxicity <sup>6</sup> LC50 (%)	≥100	Each Discharge Event <sup>7</sup>	Composite <sup>8</sup>
NOAEL (%)	Report	“	“
Ammonia (mg/l)	Report	“	“
Hardness (mg/l)	Report	“	“
Total Solids (mg/L)	Report	“	“
Total Organic Carbon (mg/L)	Report	“	“
Aluminum (mg/l)	Report	“	“
Cadmium (mg/l)	Report	“	“
Lead (mg/l)	Report	“	“
Nickel (mg/l)	Report	“	“

- 1 Effluent samples shall be representative of the discharge and shall be taken from the discharge pipe within the manhole located approximately 10 feet from the river, prior to discharging into the Ammonoosuc River and without mixing with storm water. At no time shall the discharge flow rate exceed 150 gallons per minute. The permittee shall notify EPA and NHDES-WD within 24 hours by telephone after initiating discharge from this location.
- 2 These temperature limits shall not to be exceeded at any time (instantaneous maximum).
- 3 Temperature Rise is the temperature difference between the intake water and the discharge. To evaluate compliance with  $\Delta T$  limit, the permittee shall monitor the river water temperature in the vicinity of the plant but upstream of the discharge location.
- 4 pH limits shall not to be exceeded at any time (instantaneous maximum). Also see State Permit Conditions, Part I.C.
- 5 Report minimum and maximum values.
- 6 The Whole Effluent Toxicity (WET) test required by this permit is a 48-Hour Static Acute test on effluent samples using two species, Daphnid (Ceriodaphnia dubia) and Fathead Minnow (Pimephales promelas) following the protocol in Attachment A (Freshwater Acute Toxicity Test Procedure and Protocol dated February 2011).
  - i. LC50 (Lethal Concentration 50 Percent) is the concentration of wastewater (effluent) causing mortality to 50 percent (%) of the test organisms. The "100 % or greater limit" is defined as a sample which is composed of 100 % effluent.
  - ii. NOAEL (-No Observed Acute Effect Level) is defined as the highest concentration of toxicant or effluent to which organisms are exposed in a life-cycle or partial life-cycle test which causes no adverse effects (in this case, death) at a specific time of observation as determined from hypothesis testing where the test results (again, death) exhibit a linear dose-response relationship. However, where the test results do not exhibit a linear dose-response relationship, report the lowest concentration where there is no observable effect. See Attachment A, page A-8 for additional information.
  - ii. All pollutant parameters shall be determined to at least the Minimum Quantification Level (MLs) shown in Attachment A, page A-7, or as amended.
- 7 Whole Effluent Toxicity (WET) test results are to be submitted by the 15th day of the month following the month the discharge event occurred.
- 8 Composite samples shall be taken over the 24 hour period of one calendar day. If the discharge period is less than 24 hours, composite samples shall be taken during all periods of discharge occurring that day.

2. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from **outfall serial number 002**: storm water runoff to the Ammonoosuc River. Such discharges shall be limited and monitored by the permittee as specified below.

Effluent Characteristic	Maximum Daily Discharge Limitations	Monitoring Requirements <sup>1</sup>	
		Measurement Frequency	Sample Type
Flow	Report	1/Quarter	Estimate
Oil and Grease (mg/l)	15	1/Quarter	Grab <sup>2</sup>
Total Suspended Solids (mg/l)	100	1/Quarter	Grab <sup>2</sup>
Total Recoverable Iron (mg/l)	1.0	1/Quarter	Grab <sup>2</sup>
pH (standard units)	≥6.5 and ≤8.0 <sup>3</sup>	1/Quarter	Grab <sup>2</sup>

<sup>1</sup> Effluent samples shall be representative of the discharge and shall be taken from storm water collection system prior to discharging to the wetland area and eventually to the Ammonoosuc River.

<sup>2</sup> Grab samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The grab samples shall be taken during the first thirty minutes of the discharge. If collection of the grab sample(s) during the first thirty minutes is impracticable, grab sample(s) can be taken as soon after that as possible, and the permittee shall submit with the monitoring report a description of why the collection of the grab sample(s) during the first thirty minutes was impracticable. When a permittee is unable to collect grab sample(s) due to adverse climatic conditions, the permittee must submit, in lieu of sampling data, a description of why the grab sample(s) could not be collected, including available documentation of the event. The permittee must submit this information either in the comments section of the DMR(s) or in an attached letter. Adverse weather conditions which may prohibit the collection of sample(s) include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of sample(s) impracticable (drought, extended frozen conditions, specified storm event did not occur during sampling period, event occurred during nights or weekends when there is limited personnel at the plant). A "no discharge" report shall be submitted for those quarters in which there is no discharge.

<sup>3</sup> The pH shall not be less than 6.5 S.U. or greater than 8.0 S.U. unless due to naturally occurring conditions in the rainfall.

**3. Water Treatment Chemicals**

- a. Every two years, beginning July 2013, the permittee must collect a representative sample of water from the drain/tempering tank during July and perform on that sample a: 48-Hour static acute WET test following the protocol shown in Attachment A (Freshwater Acute Toxicity Test Procedure and Protocol dated February 2011). Results of all required testing shall be submitted on Discharge Monitoring Reports (DMR) to EPA and the NHDES-WD by September 15<sup>th</sup> of each year tested. If an emergency happens to cause Pinetree Power to discharge prior to July 31 of any given year, then the analysis of discharge samples for outfall 001 may be used as a substitute for that calendar year's WET test on the drain/tempering tank contents.
- b. The Regional Administrator or the Director shall be notified in advance of any addition and/or change of chemicals containing pollutants not approved for water discharge (See Part I.A.5.c). The notification shall include the following information: discharge frequency, concentration, and the impact, if any, on the indigenous populations of the receiving water. If deemed appropriate, the Regional Administrator or the Director may require, among other parameters, Whole Effluent Toxicity testing as part of a feasibility study. The term "Regional Administrator" means the Regional Administrator of Region I of the U.S. Environmental Protection Agency and the term "Director" means the Director of the New Hampshire Department of Environmental Services, Water Division (NHDES-WD) or their respective designees.

**4. Storm Water Pollution Prevention Plan (SWPPP)**

- a. The permittee shall continue to implement its SWPPP. Review and updating the SWPPP shall be done at least annually. Except as provided elsewhere in this permit, the SWPPP for this facility shall provide for compliance with the terms of the permit and the plan. The SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from this facility. In addition, the SWPPP shall describe and ensure the implementation of practices to reduce the pollutants in storm water discharges associated with industrial activity and to assure compliance with the terms and conditions of this permit. Attachment B provides the minimum requirements that must be addressed in the SWPPP for this facility.
- b. Within sixty (60) days of the effective date of this permit, the permittee shall submit to EPA and NHDES-WD a copy of its updated SWPPP.

**5. Water Quality Requirements**

- a. Discharges and water withdrawals shall not either cause a violation of the water quality standards or jeopardize any Class B use of the Ammonoosuc River.
- b. The thermal plumes from the station shall: (a) not block zones of fish passage, (b) not interfere with spawning of indigenous populations, (c) not change the balanced indigenous population of the receiving water, and (d) have minimal contact with surrounding

shorelines.

- c. Pollutants which are not limited by the permit, but have been specifically disclosed in the last permit application, may be discharged at the frequency and level disclosed in the application, provided that such discharge does not violate sections 307 and 311 of the Act or applicable water quality standards.
- d. Discharges to the Ammonoosuc River shall be adequately treated to insure that the surface water remains free from pollutants in concentrations or combinations that settle to form harmful deposits, float as foam, debris, scum or other visible pollutants. They shall be adequately treated to insure that the surface waters remain free from pollutants which produce odor, color, taste, or turbidity in the receiving water which is not naturally occurring and would render it unsuitable for its designated uses.
- e. The effluent shall not contain metals and/or materials in concentrations or in combinations which are hazardous or toxic to aquatic life or which would impair the uses designated by the classification of the receiving waters.

## **6. Cooling Water Intake Structure Requirements**

It has been determined that the cooling water intake structure presently designed employs the best technology available for minimizing adverse environmental impact. No change in the location, design or capacity of the present structure can be made without prior approval of the Regional Administrator and the Director. The present design shall be reviewed for conformity to regulations pursuant to CWA § 316(b) at each permit renewal.

## **7. Other Requirements**

- a. There shall be no discharge of polychlorinated biphenyl (PCB) compounds such as those commonly used for transformer fluid. The permittee shall dispose of all known PCB equipment, articles, and wastes in accordance with 40 CFR 761. The permittee shall submit to EPA and NHDES-WD a certification that this disposal has been accomplished within thirty (30) days of such disposal.
- b. The ChemTreat materials identified by the permittee only may be used as biocides. No other biocide shall be used without explicit approval from EPA and the Director.
- c. There will be no discharge as a result of metal cleaning wastes, including washing of air precipitators, preheaters, boilers, or other types of process equipment.
- d. Wood chips, sawdust, waste ash, and other wood related debris shall not enter the Ammonoosuc River from any runoff area. These materials shall be prevented from entering the storm water collection system. All solids collection areas shall be inspected at least quarterly for compliance with this provision and, if necessary, cleaned. All debris removed from collection areas shall be disposed of according to applicable State and Federal regulations.
- e. The permittee shall comply with all existing federal, state, and local laws and regulations

that apply to the reuse or disposal of solids, such as those which may be removed from the cooling towers, water and waste treatment operations and equipment cleaning. At no time shall these solids be discharged to the Ammonoosuc River.

- f. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Regional Administrator as soon as they know or have reason to believe (40 CFR §122.42):
  - i. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
    - (1) One hundred micrograms per liter (100 ug/l);
    - (2) Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
    - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or
    - (4) Any other notification level established by the Regional Administrator in accordance with 40 CFR §122.44(f).
  - ii. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
    - (1) Five hundred micrograms per liter (500 ug/l);
    - (2) One milligram per liter (1 mg/l) for antimony;
    - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or
    - (4) Any other notification level established by the Regional Administrator in accordance with 40 CFR §122.44(f).

## 8. Possible Permit Requirement Changes

- a. Storm Water Monitoring Frequency Adjustment

If four consecutive storm water (Part I.A.2) monitoring values show compliance with the permit limits, the permittee may request to reduce monitoring for that pollutant to no less than once per year for the duration of the permit. The permittee shall submit the requests, with copies of the monitoring data, to the EPA. Until written notice is received by certified mail from the EPA indicating that the storm water monitoring requirements have been changed, the permittee is required to continue testing at the frequency specified in this permit.

b. pH Limit Adjustment

The permittee may submit a written request to the EPA requesting a change in the permitted pH limit range to be not less restrictive than 6.0 to 9.0 S.U. The permittee's written request must include the State's letter containing an original signature (no copies). The State's letter shall state that the permittee has demonstrated to the State's satisfaction that as long as discharges to the receiving water from a specific outfall are within a specific numeric pH range, the naturally occurring receiving water pH will be unaltered. That letter must specify for each outfall the associated numeric pH limit range. Until written notice is received by certified mail from the EPA indicating the pH limit range has been changed, the permittee is required to meet the permitted pH limit range in the respective permit.

c. This permit shall be modified, or alternatively, revoked and reissued to comply with any applicable standard or limitation promulgated or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:

- (1) contains different conditions or is otherwise more stringent than any effluent limitation in this permit; or
- (2) controls any pollutant not limited by this permit.

d. This permit may be modified, or alternatively, revoked and reissued to incorporate additional testing requirements, including chemical specific limits, for Outfalls 001 and 002 and the water in the drain/tempering tank, if any testing result indicates that the discharge causes or has reasonable potential to cause or contribute to an exceedance of any State water quality criterion. Results of the analyses required by this Permit are considered "New Information" and the Permit may be modified as provided in 40 CFR Section 122.62(a)(2).

**B. MONITORING AND REPORTING**

**For a period of one year from the effective date of the permit**, the permittee may either submit monitoring data and other reports to EPA in hard copy form or report electronically using NetDMR, a web-based tool that allows permittees to electronically submit discharge monitoring reports (DMRs) and other required reports via a secure internet connection. **Beginning no later than one year after the effective date of the permit**, the permittee shall begin reporting using NetDMR, unless the facility is able to demonstrate a reasonable basis that precludes the use of NetDMR for submitting DMRs and reports. Specific requirements regarding submittal of data and reports in hard copy form and for submittal using NetDMR are described below:

1. Submittal of Reports Using NetDMR

NetDMR is accessed from: <http://www.epa.gov/netdmr>. **Within one year of the effective date of this permit**, the permittee shall begin submitting DMRs and reports required under this permit electronically to EPA using NetDMR, unless the facility is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for submitting DMRs and reports (“opt-out request”).

DMRs shall be submitted electronically to EPA no later than the 15th day of the month following the completed reporting period. All reports required under the permit shall be submitted to EPA

as an electronic attachment to the DMR. Once a permittee begins submitting reports using NetDMR, it will no longer be required to submit hard copies of DMRs or other reports to EPA or to NH DES.

2. Submittal of NetDMR Opt-Out Requests

Opt-out requests must be submitted in writing to EPA for written approval at least sixty (60) days prior to the date a facility would be required under this permit to begin using NetDMR. This demonstration shall be valid for twelve (12) months from the date of EPA approval and shall thereupon expire. At such time, DMRs and reports shall be submitted electronically to EPA unless the permittee submits a renewed opt-out request and such request is approved by EPA. All opt-out requests should be sent to the following addresses:

**Attn: NetDMR Coordinator**  
**U.S. Environmental Protection Agency**  
**Water Technical Unit (OES04-SMR)**  
**5 Post Office Square - Suite 100**  
**Boston, MA 02109-3912**

And

**Attn: Compliance Supervisor**  
**New Hampshire Department of Environmental Services (NH DES)**  
**Water Division**  
**Wastewater Engineering Bureau**  
**P.O. Box 95**  
**Concord, New Hampshire 03302-0095**

3. Submittal of Reports in Hard Copy Form

Monitoring results shall be summarized for each calendar month and reported on separate hard copy Discharge Monitoring Report Form(s) (DMRs) postmarked no later than the 15<sup>th</sup> day of the month following the completed reporting period. All reports required under the permit shall be submitted as an attachment to the DMRs. Signed and dated original DMRs and all other reports or notifications required herein or in Part II shall be submitted to the Regional Administrator at the following address:

**U.S. Environmental Protection Agency**  
**Water Technical Unit (OES04-SMR)**  
**5 Post Office Square - Suite 100**  
**Boston, MA 02109-3912**

Duplicate signed copies of all reports or notifications required above shall be submitted to the State at the following address:

**New Hampshire Department of Environmental Services**  
**Water Division**  
**Wastewater Engineering Bureau**  
**P.O. Box 95**  
**Concord, New Hampshire 03302-0095**

Any verbal reports, if required in **Parts I** and/or **II** of this permit, shall be made to both EPA-New England and to NH DES-WD.

**C. STATE PERMIT CONDITIONS**

The permittee shall comply with the following conditions which are included as State Certification requirements.

The pH range of 6.5-8.0 S.U. must be achieved in the final effluent unless the permittee can demonstrate to NHDES-WD: (1) that the range should be widened due to naturally occurring conditions in the receiving water, or (2) that the naturally occurring source water pH is unaltered by the permittee's operations. The scope of any demonstration project must receive prior approval from NHDES-WD. In no case, shall the above procedure result in pH limits less restrictive than applicable federal effluent limitation guideline(s) published in the CFRs.

This NPDES Discharge Permit is issued by the U.S. Environmental Protection Agency under Federal and State law. Upon final issuance by the EPA, the NHDES-WD may adopt this permit, including all terms and conditions, as a State permit pursuant to RSA 485-A:13.

Each Agency shall have the independent right to enforce the terms and conditions of this Permit. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of the Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation.

## **Stormwater Pollution Prevention Plan (SWPPP)**

The SWPPP does not contain effluent limitations; the limitations are contained in Part I.A of this permit. The SWPPP is intended to document the selection, design, and installation of control measures. As distinct from the SWPPP, the additional documentation requirements are intended to document the implementation (including inspection, maintenance, monitoring, and corrective action) of the permit requirements.

The Stormwater Pollution Prevention Plan shall be prepared in accordance with good engineering practices and in accordance with the factors outlined in 40 Code of Federal Register (CFR) Section 125.3(d)(2) or (3) as appropriate. The plan shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. In addition, the plan shall describe and ensure the implementation of practices which are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit. The permittee must implement the provisions of the Storm Water Pollution Prevention Plan required under this part as a condition of this permit.

### **1.0 Contents of Your SWPPP**

Your SWPPP must contain all of the following elements:

- Stormwater pollution prevention team;
- Site description;
- Summary of potential pollutant sources;
- Description of control measures;
- Schedules and procedures; and
- Signature requirements.

Where your SWPPP refers to procedures in other facility documents, such as a Spill Prevention, Control and Countermeasure (SPCC) Plan or an Environmental Management System (EMS) developed for a National Environmental Performance Track facility, copies of the relevant portions of those documents must be kept with your SWPPP.

### **1.1 Stormwater Pollution Prevention Team**

You must identify the staff members (by name or title) that comprise the facility's stormwater pollution prevention team as well as their individual responsibilities. Your stormwater pollution prevention team is responsible for assisting the facility manager in developing and revising the facility's SWPPP as well as maintaining control measures and taking corrective actions where required. Each member of the stormwater pollution prevention team must have ready access to either an electronic or paper copy of applicable portions of this permit and your SWPPP.

### **1.2 Site Description**

Your SWPPP must include the following:

- **Activities at the Facility-** Provide a description of the nature of the industrial activities at your facility;
- **General location map-** Provide a general location map (e.g., U.S. Geological Survey (USGS) quadrangle map) with enough detail to identify the location of your facility and all receiving waters for your stormwater discharges; and
- **Site map-** Provide a map showing:
  - The size of the property in acres;
  - The location and extent of significant structures and impervious surfaces;
  - Directions of stormwater flow (use arrows);
  - Locations of all existing structural control measures;
  - Locations of all receiving waters in the immediate vicinity of your facility, indicating if any of the waters are impaired and, if so, whether the waters have TMDLs established for them;
  - Locations of all stormwater conveyances including ditches, pipes, and swales;
  - Locations of potential pollutant sources;
  - Locations where significant spills or leaks have occurred;
  - Locations of all stormwater monitoring points;
  - Locations of stormwater inlets and outfalls, and an approximate outline of the areas draining to each outfall;
  - Municipal separate storm sewer systems, where your stormwater discharges to them;
  - Locations and descriptions of all non-stormwater discharges;
  - Locations of the following activities where such activities are exposed to precipitation:
    - fueling stations;
    - vehicle and equipment maintenance and/or cleaning areas;
    - loading/unloading areas;
    - locations used for the treatment, storage, or disposal of wastes;
    - liquid storage tanks;
    - processing and storage areas;
    - immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility;
    - transfer areas for substances in bulk; and
    - machinery; and
  - Locations and sources of run-on to your site from adjacent property that contains significant quantities of pollutants.

### 1.3 Summary of Potential Pollutant Sources

You must document areas at your facility where industrial materials or activities are exposed to stormwater and from which allowable non-stormwater discharges are released. *Industrial materials or activities* include, but are not limited to: material handling equipment or activities; industrial machinery; raw materials; industrial production and processes; and intermediate products, by-products, final products, and

waste products. *Material handling activities* include, but are not limited to: the storage, loading and unloading, transportation, disposal, or conveyance of any raw material, intermediate product, final product or waste product. For each area identified, the description must include:

- 1.3.1 *Activities in the area-*** A list of the industrial activities exposed to stormwater (e.g., material storage; equipment fueling, maintenance, and cleaning; cutting steel beams).
- 1.3.2 *Pollutants-*** A list of the pollutant(s) or pollutant constituents (e.g., crankcase oil, zinc, sulfuric acid, and cleaning solvents) associated with each identified activity. The pollutant list must include all significant materials that have been handled, treated, stored, or disposed, and that have been exposed to stormwater in the 3 years prior to the date you prepare or amend your SWPPP.
- 1.3.3 *Spills and Leaks-*** Documentation of where potential spills and leaks could occur that could contribute pollutants to stormwater discharges, and the corresponding outfall(s) that would be affected by such spills and leaks. You must document all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a stormwater conveyance, in the 3 years prior to the date you prepare or amend your SWPPP.

Note: Significant spills and leaks include, but are not limited to, releases of oil or hazardous substances in excess of quantities that are reportable under CWA Section 311 (see 40 CFR 110.6 and 40 CFR 117.21) or Section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC §9602. This permit does not relieve you of the reporting requirements of 40 CFR 110, 40 CFR 117, and 40 CFR 302 relating to spills or other releases of oils or hazardous substances.

- 1.3.4 *Non-Stormwater Discharges-*** Documentation that you have evaluated for the presence of non-stormwater discharges and that all unauthorized discharges have been eliminated. Documentation of your evaluation must include:
- The date of any evaluation;
  - A description of the evaluation criteria used;
  - A list of the outfalls or onsite drainage points that were directly observed during the evaluation;
  - The different types of non-stormwater discharge(s) and source locations; and
  - The action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), if any were identified. For example, a floor drain was sealed, a sink drain was re-routed to sanitary, or an NPDES permit application was submitted for an unauthorized cooling water discharge.
- 1.3.5 *Salt Storage-*** The location of any storage piles containing salt used for deicing or other commercial or industrial purposes.
- 1.3.6 *Sampling Data-*** A summary of all stormwater discharge sampling data collected at your facility during the previous permit term.

## 1.4 Schedules and Procedures

**1.4.1 Best Management Practices-** The following must be documented in your SWPPP:

- **Good Housekeeping-**
  - A schedule for regular pickup and disposal of waste materials, along with routine inspections for leaks and conditions of drums, tanks and containers;
  - A description of measures that prevent or minimize fugitive dust emissions from waste ash piles and wood chip storage areas. The permittee shall consider establishing procedures to minimize offsite tracking of waste ash, wood chips and sawdust. To prevent offsite tracking the facility may consider specially designed tires, or washing vehicles in a designated area before they leave the site, and controlling the wash water;
  - Inspections of all residue hauling vehicles for proper covering over the load, adequate gate sealing and overall integrity of the body or container. Vehicles without load coverings or adequate gate sealing, or with leaking containers or beds must be repaired as soon as practicable;
  - Plant procedures established to reduce and/or control the tracking of waste ash or residue from ash loading areas including, where practicable, requirements to clear the ash storage pad/floor and immediately adjacent roadways of spillage, debris and excess water before each loaded vehicle departs; and
- **Maintenance-** Preventative maintenance procedures, including regular inspections, testing, maintenance, and repair of all industrial equipment and systems, and control measures, to avoid situations that may result in leaks, spills, and other releases, and any back-up practices in place should a runoff event occur while a control measure is off-line;
- **Spill Prevention and Response Procedures-** Procedures for preventing and responding to spills and leaks. You may reference the existence of other plans for Spill Prevention Control and Countermeasure (SPCC) developed for the facility under Section 311 of the CWA or programs otherwise required by for the facility, provided that you keep a copy of that other plan onsite and make it available for review; and
- **Employee Training-** A schedule for all types of necessary training.

### 1.4.2 Monitoring and Inspection

Your SWPPP must document:

- Locations where samples are collected;
- Parameters for sampling and the frequency of sampling for each parameter;
- Schedules for monitoring at your facility, including schedule for alternate monitoring periods for climates with irregular stormwater runoff; and

- Procedures (e.g., responsible staff, logistics, laboratory to be used, etc.) for gathering storm event data.

You must document in your SWPPP your procedures for performing, as appropriate, the three types of inspections, including:

- Routine facility inspections;
- Quarterly visual assessment of stormwater discharges; and
- Comprehensive site inspections.

For each type of inspection performed, your SWPPP must identify:

- Person(s) or positions of person(s) responsible for inspection;
- Schedules for conducting inspections, including tentative schedule for facilities in climates with irregular stormwater runoff; and
- Specific items to be covered by the inspection, including schedules for specific outfalls.

### **1.5 SWPPP Signature and Availability**

You must sign and date your SWPPP and retain a copy of the current SWPPP required by this permit at the facility. The current SWPPP must be immediately available to EPA; a State, Tribal, or local agency approving stormwater management plans; the operator of a municipal storm water system receiving discharges from the site; and representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) at the time of an onsite inspection or upon request. EPA may provide access to portions of your SWPPP to a member of the public upon request. Confidential Business Information (CBI) may be withheld from the public, but may not be withheld from those staff cleared for CBI review within EPA, USFWS, or NMFS.

### **2.0 Required SWPPP Modifications**

You must modify your SWPPP whenever necessary to address any changes at the facility including those changes implemented when a review indicates that changes to your control measures are necessary to meet the effluent limits in this permit. Changes to your SWPPP document must be signed and dated accordingly.

### **3.0 Additional Documentation Requirements**

You are required to keep the following inspection, monitoring, and certification records with your SWPPP that together keep your records complete and up-to-date, and demonstrate your full compliance with the conditions of this permit:

- A copy of this permit (an electronic copy easily available to SWPPP personnel is also acceptable);
- Descriptions and dates of any incidences of significant spills, leaks, or other releases that resulted in discharges of pollutants to waters of the U.S., through stormwater or otherwise; the circumstances leading to the release and actions taken in response to the release; and measures taken to prevent the recurrence of such releases;
- Records of employee training, including date training received;

- Documentation of maintenance and repairs of control measures, including the date(s) of regular maintenance, date(s) of discovery of areas in need of repair/replacement, and for repairs, date(s) that the control measure(s) returned to full function, and the justification for any extended maintenance/repair schedules;
- All inspection reports, including the routine facility inspection reports, quarterly visual assessment reports, and comprehensive site inspection reports;
- Description of any deviations from the schedule for visual assessments and/or monitoring, and the reason for the deviations (e.g., adverse weather or it was impracticable to collect samples within the first 30 minutes of a measurable storm event);
- Description of any corrective action taken at your site, including dates when problems were discovered and modifications occurred;
- Documentation of any permit limit exceedances and how they were responded to, including either (1) corrective action taken, (2) a finding that the exceedance was due to natural background pollutant levels, or (3) a finding that no further pollutant reductions were technologically available and economically practicable and achievable in light of best industry practice; and
- Documentation to support any determination that pollutants of concern are not expected to be present above natural background levels if you discharge directly to impaired waters, and that such pollutants were not detected in your discharge or were solely attributable to natural background sources.

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**NEW ENGLAND - REGION I  
5 POST OFFICE SQUARE, SUITE 100  
BOSTON, MASSACHUSETTS 02109-3912**

**FACT SHEET**

**DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES**

NPDES PERMIT NO.: **NH0021423**

PUBLIC COMMENT PERIOD: **September 26, 2012 – October 25, 2012**

PUBLIC NOTICE NO.: **NH-016-12**

NAME AND ADDRESS OF APPLICANT:

**IPR-GDF SUEZ  
1241 Whitefield Road  
Bethlehem, NH 03574**

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**Pinetree Power, Inc.  
1241 Whitefield Road  
Bethlehem, NH 03574**

SIC CODE: **4911** NAICS Code(s): **221112**

RECEIVING WATER: **Ammonoosuc River (Hydrologic Basin Code: 01040001)**

CLASSIFICATION: **Class B**

CURRENT PERMIT ISSUED: **9-22-2006**  
EXPIRED: **10-31-2011**  
APPLICATION REC: **5-10-2011**

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Attachments A-1 and A-2 Effluent Concentrations Tables

Attachments B Site Location Map

Attachment C Water-balance Line Diagram

## 1.0 Type of Facility, Discharge Location and Proposed Action

Pinetree Power, Inc. located in Bethlehem, New Hampshire, is a 17 gross-megawatt (MW) woodchip-fired electrical generation facility (referred to hereafter as either Pinetree Power, station, permittee or facility). The station is a “base-load” facility, having an average yearly capacity utilization rate of 92% for the past five years. August 3, 2012 email from Mark Driscoll, Plant Manager to Sharon DeMeo, EPA. Electricity is generated by means of one 15 MW<sub>net</sub> wood- fired steam turbine unit, which began commercial operation on December 18, 1986.

Pinetree Power’s current National Pollutant Discharge Elimination System (NPDES) Permit allows the discharge of pollutants to the adjacent Ammonoosuc River. Mechanical draft cooling towers are used to recycle non-contact condenser cooling water. Pinetree Power is permitted to discharge cooling tower wastewater mixed with other process wastes and storm water.<sup>1</sup> Storm water runoff is from the land adjacent to the facility, roadways, and vehicle parking areas. Although Pinetree Power has not needed to discharge any cooling/process water since it began operating in 1986<sup>2</sup>, the station requests that it continue to have the option of discharging during emergencies.

Under the Clean Water Act (CWA) §§ 301(a), 316 and 402, Pinetree Power’s pollutant discharges must receive authorization from a NPDES permit issued by the U.S. Environmental Protection Agency (EPA). EPA may not issue a permit for Pinetree Power unless the New Hampshire Department of Environmental Services (NH DES) either certifies that the effluent limitations and/or conditions contained in the permit are stringent enough to assure, among other things, that the discharge will not cause the receiving water to violate the New Hampshire Surface Water Quality Regulations (NH-Standards) or waives its right to certify as set forth in 40 CFR §124.53. Pinetree Power has in the past obtained the necessary federal permits and state certifications. EPA last reissued the station’s federal permit number NH0021423 on September 22, 2006. This permit expired on October 31, 2011. The permit was administratively continued, however, because the station timely applied for permit reissuance. As a result, Pinetree Power remains subject to the existing permit until EPA issues it a new one.

EPA received Pinetree Power’s application for reissuance of the facility’s NPDES permit on May 10, 2011. EPA currently intends to reissue the facility’s NPDES permit. This Draft Permit proposes to continue to authorize the discharge of storm and cooling/process water.

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<sup>1</sup> Although the permit issued in 1986 indicated there were two storm water discharge locations, Pinetree Power discharges storm water through one outfall location. During the last permit reissuance, storm water outfall 003 was removed from the permit. Facility site maps show outfalls 003 and 004 but these locations represent storm water flow to swales and infiltration to the ground (i.e., no discharge to the river). Outfall 001 is for process wastewater and outfall 002 is storm water.

<sup>2</sup> The only process discharge from this facility since operations began was in June, 1991, to perform a thermal plume study and benthic macrovertebrate study. Effluent was discharged at a rate of 30 gpm for two hours.

## **2.0 Description of Discharge**

Refer to Section 6.2 of this Fact Sheet for a description of the discharges associated with each outfall location. A schematic drawing of the flow of water at the facility and the various discharges from the facility is presented in Attachment C. A site location plan is presented in Attachment B.

## **3.0 Receiving Water Description**

Pinetree Power withdraws water from and is permitted to discharge treated effluent to the Ammonoosuc River, which is classified as a Class B water body pursuant to the State of New Hampshire Surface Water Quality Regulations (N.H. Code of Administrative Rules, PART Env-Wq 1703.01) and N.H. RSA 485-A:8. Class B waters are “considered as being acceptable for fishing, swimming and other recreational purposes and, after adequate treatment, for use as water supplies.” RSA 485-A:8, II.

Section 303(d) of the Federal Clean Water Act (CWA) requires states to identify those water-bodies that are not expected to meet surface water quality standards after the implementation of technology-based controls and, as such require the development of total maximum daily loads (TMDL). The 4.253 mile segment of the Ammonoosuc River in which Pinetree Power is permitted to discharge (NHRIV801030403-07) is on the 2010, CWA 303(d) list for pH. Pinetree Power is permitted to discharge during emergencies, wastewater with neutral pH (i.e.,  $\geq 6.5$  and  $\leq 8.0$  standard units).

## **4.0 Limitations and Conditions**

The Draft Permit’s proposed effluent discharge and cooling water intake limits, monitoring requirements, and implementation schedules may be found in Part I (Effluent Limitations and Monitoring Requirements) of the Draft Permit.

The facility has not needed to discharge process water in 24 years of operation, they will only discharge during emergency situations, and the sampling frequency for all parameters in the permit (outfall 001- process) is “each discharge event.” Furthermore, the facility has never had an emergency where a discharge was necessary. Since it is unlikely that two or more emergencies would occur within one months’ time, EPA removed the average monthly limits for outfall 001 during the last permit reissuance. The change was considered more representative of actual conditions at the plant. If two emergency discharges did somehow occur within one month, the permittee is required to sample each discharge event and meet maximum daily limits.

## **5.0 Permit Basis: Statutory and Regulatory Authority**

The CWA prohibits the discharge of pollutants from point sources to waters of the United States without authorization from a NPDES permit, unless the CWA specifically exempts a particular

type of point source discharge from requiring a permit. The NPDES permit is the mechanism used to apply the CWA's pollution control standards and monitoring and reporting requirements directly to particular facilities. This draft NPDES permit was developed in accordance with the CWA, EPA regulations promulgated thereunder, and any other applicable federal and state legal requirements. The regulations governing the EPA NPDES permit program are generally found at 40 C.F.R. Parts 122, 124, 125, and 136.

When developing permit limits, EPA must apply both technology-based and water quality-based requirements. To the extent that both may apply, whichever is more stringent governs the permit limits. Criteria and standards for the imposition of technology-based treatment requirements in permits under Section 301(b) of the CWA, including the application of EPA-promulgated effluent limitations and case-by-case determinations of effluent limitations under Section 402(a)(1) of the CWA, are set out in 40 C.F.R. Part 125, Subpart A. Development of water quality-based permit limits is addressed in, among other provisions, CWA §§ 301(b)(1)(C) and 401, as well as 40 C.F.R. §§ 122.4, 122.44, 124.53 and 124.55.

Technology-based treatment requirements represent the minimum level of control that must be imposed under Sections 301(b) and 402 of the CWA (see 40 C.F.R. §125 Subpart A) to meet best practicable control technology currently available (BPT) for certain conventional pollutants, best conventional control technology (BCT) for conventional pollutants, and best available technology economically achievable (BAT) for toxic and non-conventional pollutants. The technology-based guidelines (ELGs) for industrial dischargers can be found at 40 CFR Parts 400 - 471 and represent the minimum level of control that must be imposed under section 301(b) and 402 of the CWA. *See* 40 CFR Part 125, Subpart A.

In the absence of published technology-based ELGs, the permit writer is authorized under Section 402(a)(1)(B) of the CWA to establish appropriate technology-based effluent limitations (*e.g.*, BAT limits) on a case-by-case basis using best professional judgement (BPJ). *See* also 40 C.F.R. § 125.3.

The effluent guidelines for steam electric power plants are specific for fossil fuel or nuclear fuel facilities but do not include wood fuel units such as Pinetree Power. Therefore, the effluent guidelines which represent BPT and BAT as set forth in 40 CFR Part 423 are not applicable to these types of units. However, since the discharges from wood fuel units are similar to fossil fuel units, the Steam Electric Power Generating Guidelines may serve as guidance for establishing effluent limitations for those types of discharges. Therefore, limitations for wood fuel units such as Pinetree Power may be based on BPT and BAT requirements established in the Federal Guidelines for the Steam Electric Power Generating Point Source Category (40 CFR Part 423) using EPA's BPJ authority.

Water-quality based limitations are required in NPDES permits when EPA and the State determine that effluent limits more stringent than technology-based limits are necessary to maintain or achieve state or federal water-quality standards. *See* CWA §§ 301(b)(1)(C) and 401. State Water Quality Standards provide a classification for all the water bodies in the state and

specify the “designated uses” and numeric and narrative water quality criteria that water bodies in each classification should be able to achieve. The New Hampshire Surface Water Quality Regulations (NH-Standards) include a narrative statement that prohibits the discharge of any pollutant or combination of pollutants in quantities that would be toxic or injurious to human health or aquatic life. In addition, the State has adopted EPA’s numerical criteria for specific toxic pollutants and toxicity criteria. State Water Quality Standards also contain antidegradation requirements to ensure that once a use is attained it will not be degraded. Permit limits must then be devised so that discharges and cooling water withdrawals do not cause violations of these Water Quality Standards.

The permit must limit any pollutant or pollutant parameter (conventional, non-conventional, toxic and whole effluent toxicity) that is or may be discharged at a level that causes, or has the "reasonable potential" to cause or contribute to, an excursion above any water-quality criterion. See C.F.R. § 122.44(d)(1). An excursion would occur if the projected or actual in-stream concentration exceeds the applicable criterion. In determining “reasonable potential,” EPA considers: (1) existing controls on point and non-point sources of pollution; (2) pollutant concentrations and variability in the effluent and receiving water as determined from the permit application, the permittee’s monthly Discharge Monitoring Reports (DMRs), and State and Federal Water Quality Reports; (3) the sensitivity of the species to toxicity testing; (4) the known water quality impacts of processes on wastewater; and, where appropriate, (5) the dilution of the effluent that would be provided by the receiving water.

In accordance with State regulations (N.H. Code of Administrative Rules, PART Env-Wq 1705.02), the flow used to calculate permit limits for facilities on rivers or streams is based on a known or estimated value of the annual seven (7) consecutive-day mean low flow at the 10-year recurrence interval (7Q10) for aquatic life and human health (non-carcinogens only) in the receiving water at a point just upstream of the outfall. Furthermore, 10 percent (%) of the receiving water's assimilative capacity is held in reserve for future needs in accordance with New Hampshire's Surface Water Quality Regulations Env-Wq 1705.01. The current set of New Hampshire Surface Water Quality Regulations became effective on May 21, 2008.

When using chemical-specific numeric criteria to develop permit limits, both the acute and chronic aquatic-life criteria, expressed in terms of maximum allowable in-stream pollutant concentrations, are used. Acute aquatic-life criteria are considered applicable to daily time periods (maximum daily or instantaneous maximum limits) and chronic aquatic-life criteria are considered applicable to monthly time periods (average monthly limit). Chemical-specific limits are allowed under 40 C.F.R. § 122.44(d)(1) and are implemented under 40 C.F.R. § 122.45(d). In the Draft Permit for Pinetree Power, the Region has established, pursuant to 40 C.F.R. § 122.45(d)(1), maximum daily and instantaneous maximum discharge limits for specific chemical pollutants to satisfy Water Quality Standards.

Narrative criteria from the State’s Water Quality Standards often provide a basis for limiting toxicity in discharges where: (1) a specific pollutant can be identified as causing or contributing to the toxicity but the state has no numeric standard; or (2) toxicity cannot be traced to a specific

pollutant. *See* 40 C.F.R. § 122.44(d)(1)).

Under CWA § 401, EPA may not issue a NPDES permit unless it first obtains a certification from the state confirming that all water-quality standards will be satisfied or the state waives its certification rights. If the state issues a certification with conditions, then the permit must conform to the conditions. *See* 40 C.F.R. §§ 124.53 and 124.55.

The Draft Permit's effluent monitoring requirements have been established under the authority of CWA §§ 308(a) and 402(a)(2) and in accordance with 40 C.F.R. §§ 122.41(j), 122.44(i) and 122.48. The monitoring program in the permit specifies routine sampling and analysis which will provide continuous, representative information on the levels of regulated materials in the waste water discharge streams. The approved analytical procedures are to be found in 40 C.F.R. Part 136 unless other procedures are explicitly required in the permit.

The CWA's anti-backsliding requirements prohibit a NPDES permit from being renewed, reissued or modified with less stringent limitations or conditions than those contained in the previous permit unless an exception to the anti-backsliding requirements applies. *See* CWA §§ 402(o) and 303(d)(4) and 40 C.F.R. §122.44(l)(1) and (2). EPA's anti-backsliding provisions found at 40 C.F.R. §122.44(l) generally prohibit the relaxation of permit limits, standards, and conditions.

In addition to technology-based and water quality-based requirements, limits for thermal discharges may potentially be based on a variance from such requirements under CWA § 316(a). The permittee has not, however, sought relaxation of those limitations under a § 316(a) variance. For the derivation of the thermal discharge limit, see Section 6.3.1 of this Fact Sheet.

Permit limits on cooling water withdrawals may be imposed in a NPDES permit under CWA § 316(b). The requirements of CWA § 316(b) are discussed in further detail in Section 6.4 of this Fact Sheet.

The permit must also satisfy the requirements of the Endangered Species Act (ESA) and the Essential Fish Habitat (EFH) provisions of the 1996 Amendments (PL 104-297) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et seq. (1998)). There are no endangered species located in the Ammonoosuc River and EFH requirements are discussed further in Section 8.0 of this Fact Sheet.

## **6.0 Explanation of the Permit's Effluent Limitation(s)**

### **6.1 Facility Information**

Pinetree Power is a 15 MW base-load electric generating station. The station is located on the north bank of the Ammonoosuc River in Bethlehem, New Hampshire. See Attachment B for a map showing the geographical location of the facility. The plant burns regionally grown wood chips and saw mill bark as its primary fuel source to generate energy at a maximum rate of 289 million BTU's per hour. Bethlehem Power Station Stormwater Pollution Prevention Plan, June 1, 2007, page 3. Wood chips are brought to the plant by trucks. The main process areas of the

plant include: mechanical truck dump stations, wood storage yard, loader/conveyor building, chip silos, boiler, turbine, generator, maintenance shop, cooling tower, and electrostatic precipitator. “The site is manned 24hrs/day 365 days a year” Id, 4.

Heat resulting from incineration of the wood chips produces steam in the boiler. Steam is used to power a turbine electric generator which produces electric power for commercial sale. The turbine exhaust is directed to a surface condenser (non-contact) to convert the steam to water for reuse in the boiler. A two-cell mechanical draft cooling tower (180,000 gallon capacity) is used to cool and recirculate cooling water through the condenser. Multi-clone and a three-field electrostatic precipitator are used to remove particulates from boiler emissions. Wood ash is stored in bins prior to removal for off-site agricultural use.

Water used for domestic purposes at the facility is withdrawn from four artesian wells and discharged to a septic system. Cooling tower make-up water is taken from the Ammonoosuc River. Depending on the time of year, the station may need up to 360,000 gallons per day. On dry days (i.e., low humidity) the cooling tower may evaporate an estimated 250 gallons per minute.

There are two intake structures located five feet apart, imbedded in the middle of the river and flush with the river bottom. Each intake structure consists of a small excavated area covered with a 2' by 4' Johnson (aka wedgewire) screen. The screens are made of stainless steel and have a mesh size of 0.03 inches (0.76 mm). Water flows by gravity through the screens and then through a 10 inch pipe to a below ground sump located on the bank of the river. The gravity feed rate is approximately 450 gpm depending on the height of the river. Station personnel check the intake screens once per year. Rocks and debris may need to be removed if flow is impeded. No aquatic organisms have ever been observed on the screens. August 3, 2012 email from Mark Driscoll, Plant Manager to Sharon DeMeo, EPA. The sump's capacity is 50,000 gallons. Three variable speed pumps are used to transfer sump water up to the station. There are two 300 gpm and one 200 gpm maximum capacity pumps, although only one pump at a time is used to transfer water. Water is continually recirculated in the sump until needed.

River water is pumped up to a “drain/tempering” tank at maximum rate of 300 gpm prior to its use in the cooling tower. Other wastewater streams from the station are directed to this tank including: boiler blowdown, sandfilter backwash, demineralizer regeneration, mechanical equipment cooling, cooling tower “graver” treatment filtrate (blowdown), artesian well flushing (2-3 hours/month), condenser cleaning<sup>3</sup>, laboratory wastewater and other miscellaneous floor drain wastes. The cooling tower is used to remove heat from the condenser non-contact cooling water in a closed-looped system. When needed due to evaporation, water is pumped from the drain/tempering tank to the towers. A schematic drawing of the flow of water at the facility and the various discharges from the facility is presented in Attachment C. Every three to five years, solids are removed from the tempering tank. Solids are removed from the cooling tower water

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<sup>3</sup> Plugs are used to clean the condenser tubes. The solids are collected and disposed of off-site. The filtrate and rinse waters are directed to the recirculating cooling system.

by a side-stream softener system called “graver”. The filtrate from this system, containing tower treatment chemicals, is directed to the tempering tank (at 50 gpm) and the solids are removed for off-site disposal.

There are four underground storage (“surge”) tanks (each with 37,500 gallon capacity) that are also used to store cooling/process water. Usually, two of the tanks remain full in case water is needed and two tanks are kept empty for internal wastestream discharges (i.e. boiler blowdowns) when needed. These tanks are filled during an outage to perform maintenance on the cooling system.

## 6.2 Descriptions of Permitted Outfalls

### **Outfall 001 (Process Wastewater)**

Outfall 001 is the discharge from the drain and tempering tank (also referred to as drain/tempering tank). The drain/tempering tank has three 50 gpm pumps that are used to transfer water to the cooling towers, storage tanks, or the discharge line. Therefore a maximum flow rate of 150 gpm may be discharged to the Ammonoosuc River. An eight inch pipe is used for the discharge. In case of an emergency discharge, samples would be collected from a manhole located about ten feet from the river. Historically, the only discharge to the Ammonoosuc River of cooling/process waste was in 1991 to conduct a benthic macroinvertebrate study in the receiving stream. Although Pinetree Power has never needed to discharge since the station began operations in 1986, the company continues to apply for the option of discharging during emergencies.

### **Outfall 002 (Storm Water)**

Storm water throughout most<sup>4</sup> of the site collects in a series of underground culverts, which combine and emerge from the ground at the old outfall 002 location. A series of stone rip rap and grass swales were recently completed along the ditch that parallels the facility access road, in order to reduce iron levels in the stormwater. The sampling location for outfall 002 is now a 5-gallon collection bucket located after the swale system, prior to the wetland area on the east side of the access road. Stormwater then flows through a culvert underneath the access road, into another wetland on the west side of the access road, through another culvert underneath Route 116 and along a ditch between Route 116 and the railroad tracks, Stormwater eventually joins with a small brook and flows under the railroad tracks and into the Ammonoosuc River.

After sampling data consistently showed iron results higher than the maximum daily limit of 1.0 mg/L, extensive work was done to the property in 2010. *See* Attachment A-2 of this Fact Sheet for sampling data. Work completed on the storm water collection system includes: isolation of log storage drainage area, sealing fuel yard area, new swale system along access road, and replacement of storm water pipe. Limited data since 2011 show iron levels below permit limits.

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<sup>4</sup> Storm water from the wood chip storage area flows to a swale and infiltrates the ground. Mountain runoff from behind the plant drains to a pond area located just east of the plant. The pond eventually drains to the river.

### 6.3 Derivation of Effluent Limits under the CWA and/or State of New Hampshire Water Quality Standards

#### 6.3.1 Outfall Location 001 (Process Wastewater)

##### Conventional Pollutants

Limitations for conventional pollutants in the Draft Permit (pH, Oil and Grease, and Total Suspended Solids) are based upon those in the existing permit in accordance with the antibacksliding requirements found in 40 CFR §122.44.

The maximum daily flow limit of 0.20 MGD in the existing and Draft Permit reflects the maximum volume that the facility would need to discharge should an emergency situation arise. This flow includes the wastewater in the drain/tempering tank and cooling tower (through the drain/tempering tank). Should Pinetree Power discharge, the flow rate shall not exceed 150 gpm as required by the Draft Permit. At this flow rate, the effluent adds a one percent increase over the 7Q10 flow levels after accounting for the State's 10 percent reserve rule. At 150 gpm discharge rate, it will take approximately 24 hours to discharge 0.2 million gallons. Monitoring for all parameters including performing a WET test is required during any discharge.

The Total Suspended Solids (TSS) limit of 100 mg/L and the Oil & Grease (O&G) limit of 20 mg/L were originally based on Best Practicable Control Technology (BPT) requirements established in the Federal Guidelines for the Steam Electric Power Generating Point Source Category (40 CFR Part 423.12), using EPA's BPJ authority.

The pH limits are based on New Hampshire's Surface Water Quality Regulations Env-Wq 1703.18 and New Hampshire's State statutes (N.H. RSA 485-A:8). Language included in the Draft Permit allows for a change in pH limit(s) under certain conditions for process wastewater flows. A change would be considered if the applicant can demonstrate to the satisfaction of the New Hampshire Department of Environmental Services, Water Division (NHDES-WD) that the in-stream pH standard will be protected when the discharge is outside the permitted range. At that time, the applicant or NHDES-WD may request (in writing) that the permit limits be modified by EPA to incorporate the results of the demonstration.

Anticipating the situation where NHDES-WD grants a formal approval changing the pH limit(s) to outside the 6.5 to 8.0 Standard Units (S.U.), EPA maintains a provision to the Draft Permit allowing EPA to modify the pH limit(s) using a certified letter approach. *See* Part I.A.8.b and Part I.C of the Draft Permit. This change would be allowed as long as it can be demonstrated that the revised pH limit range does not alter the naturally occurring receiving water pH. However, the pH limit range shall not be less restrictive than 6.0 - 9.0 S.U. This range is established using EPA's BPJ authority and based on the pH limits found in the National Effluent Limitation Guideline (Steam Electric Power Generating Point Source Category at 40 CFR §423.12(b)(1)).

If the State approves results from a pH demonstration study, the permit's pH limit range can be relaxed in accordance with 40 CFR 122.44(l)(2)(i)(B), based on new information not available at

the time of this permit's issuance. This new information includes results from the pH demonstration study that justifies the application of a less stringent effluent limitation. EPA anticipates that the limit determined from the demonstration study, as approved by the NHDES-WD, would satisfy all effluent requirements for this discharge category and would comply with NH-Standards.

### **Nonconventional and Toxic Pollutants**

#### ***Total Residual Oxidants***

The limit for Total Residual Oxidants (TRO) in the Draft Permit is based on the Total Residual Chlorine (TRC) limit in the existing permit in accordance with the antibacksliding requirements found in 40 CFR §122.44. The TRC limit was originally established based on Best Available Technology Economically Achievable (BAT) requirements established in the Federal Guidelines for the Steam Electric Power Generating Point Source Category (40 CFR Part 423.13) using EPA's BPJ authority. TRC was required because the facility used only chlorine as a biocide in the cooling tower. However, Pinetree Power has now stopped using NALCO water treatment chemicals and has switched over to ChemTreat, including formulations containing bromine (ChemTreat CL41 and C2189T). The test methods for TRC and TRO are the same. However, for wastewater containing bromides, the analysis using the TRC test method results in the measurement of total residual oxidants. Therefore, the Draft Permit limit of 0.2 mg/L is now a TRO limit.

#### ***Metals***

##### Chromium and Zinc

Limits for 126 priority pollutants<sup>5</sup>, total chromium and total zinc are based on the existing permit in accordance with the antibacksliding requirements found in 40 CFR §122.44. These limits were established during the last permit reissuance based on Best Available Technology Economically Achievable (BAT) requirements established in the Federal Guidelines for the Steam Electric Power Generating Point Source Category (40 CFR Part 423.13(d)(1) for cooling tower blowdown), using EPA's BPJ authority. The current permit includes a provision that gives the permittee an opportunity to demonstrate that none of the 126 priority pollutants occurs in any of the treatment chemicals added by the company using engineering calculations. This provision, also added using EPA's BPJ authority, was based on 40 CFR § 423.13(d)(3), which can be utilized "[a]t the permitting authority's discretion". EPA has removed this option in the Draft Permit since the facility operates its cooling tower and steam condenser system as a continuous recycle, closed-loop system resulting in no discharge to the receiving water and will only discharge if there is an emergency. Furthermore, the facility has never had an emergency where a discharge was necessary and therefore have never collected and analyzed samples for the 126 priority pollutants.

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<sup>5</sup> The 126 priority pollutants (See 40 C.F.R. 423 Appendix A) are those potentially contained in chemicals added for cooling tower maintenance. No detectable amount is allowed in the discharge. As per the effluent guidelines and included in the Draft Permit, compliance may be determined by engineering calculations.

### Iron

The iron limit is based on the limit in the existing permit in accordance with the antibacksliding requirements found in 40 CFR §122.44.

### Copper

The limit for total recoverable copper in the Draft Permit is based on the existing permit in accordance with the antibacksliding requirements found in 40 CFR §122.44. This limit has been updated based on an updated 7Q10 assessment. A recomputation of the maximum daily copper limit to account for this change shows a lower copper limit than the existing limit of 0.35 mg/L. The maximum daily copper limit of 0.31 mg/L in the Draft Permit is based on the acute aquatic-life criteria, found in the current NH-Standards, multiplied by the appropriate available dilution of the receiving water, as shown below.

#### *Dilution Factor*

In June 2007, for the Littleton Wastewater Treatment Plant permit, NH DES calculated the 7Q10 for the Ammonoosuc River at the Bethlehem Junction Gage as 26.97 cfs. Since the facility is over 5 miles downstream of the gage, 7Q10 at Pinetree Power was determined using Scenario II of the NH DES June 2002 “Interim Final Policy on 7Q10 and Withdrawals for Fresh Water Surface Waters.” An empirical equation developed by Dingman<sup>6</sup>, which estimates 7Q10 stream flows in un-gaged, unregulated streams in New Hampshire and Vermont as a function of watershed characteristics, was used to calculate the 7Q10 streamflow for the watershed area downstream from the gaging station. The formula variables are watershed (basin) area, mean basin elevation, and the percent of the basin underlain by coarse-grained stratified drift in contact with streams. The Dingman 7Q10 for the intervening drainage area between the gage and the facility is 0.96 cfs. In considering consumptive water uses, the NH DES Registered Water User Database indicates there is one input that needed to be added to the Dingman 7Q10 for the intervening area. That input is the flow from the Bethlehem POTW, which averaged 0.26 cfs during 2009 through 2011.<sup>7</sup> Therefore, the 7Q10 at Pinetree Power is the Bethlehem Junction Gage (26.97 cfs), plus the Dingman 7Q10 (0.96 cfs) and the average flow from the Wastewater Treatment Plant (0.26 cfs). A 7Q10 just downstream of Pinetree Power is 28.2 cfs.

Further, given the 7Q10 just below Pinetree Power, the design flow of the facility (0.2 MGD), and accounting for 90% of the river’s assimilative capacity (therefore reserving 10 % for future

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<sup>6</sup> Dingman, S.L., and S.C. Lawlor, 1995. Estimating Low-Flow Quantiles from Drainage-Basin Characteristics in New Hampshire and Vermont, American Water Resources Association, Water Resources Bulletin, pp. 243-256.

<sup>7</sup> This is considered a net input because the Bethlehem water supply is withdrawn from surface waters in the basin upstream of the gage. The gage accounts for those withdrawals but does not account for the return flow to the river via the Wastewater Treatment System discharge.

needs, in accordance with the requirements of Env-Wq 1705.01), a dilution factor of 82 was calculated as shown below.

$$DF = \frac{(Q_{001})}{Q_{PDF} \times 1.547} \times 0.90$$

where:

DF = Dilution Factor

$Q_{001}$  = 7Q10 flow at Outfall 001, in cfs

0.90 = Factor to reserve 10% assimilative capacity

$Q_{PDF}$  = Maximum flow of process discharge from Outfall 001, in MGD

1.547 = Factor to convert MGD to cfs

$$DF = [28.2 \text{ cfs}/(0.2\text{mgd} \times 1.547)] \times 0.9 = 82$$

This dilution factor, which is lower than that used for the existing permit (93.5), is for calculating the water quality-based copper limit necessary to meet the acute aquatic life criteria when and if there is an emergency discharge.

### *Copper Limit*

The risk of toxicity posed by the presence of copper in fresh water systems is a function of the hardness of the water in which it is found. Likewise, water quality criteria for copper are dependent upon the hardness of the water in which the criteria are being applied. The acute freshwater aquatic life criteria for copper specified in the New Hampshire Water Quality Standards is 3.6 µg/l (see Env-Wq 1703.21, Table 1). This criteria is based on a hardness value of 25 mg/l CaCO<sub>3</sub>, in accordance with New Hampshire's water quality standards (see Env-Wq 1703.21, Table 1703.1, footnote f). The results of analyses conducted on samples of the Ammonoosuc River water in conjunction with yearly whole effluent toxicity (WET) tests from 2007-2011 indicate that the ambient hardness is less than 25 mg/l calcium carbonate (CaCO<sub>3</sub>). Therefore, in accordance with the state water quality standards, a hardness value of 25 mg/l is used in the determination of water quality criteria for copper in the receiving water.

Metals can be present in both dissolved and particulate forms in the water column. However, extensive studies suggest that it is the dissolved fraction that is biologically available, and therefore presents the greatest risk of toxicity to aquatic life inhabiting the water column. This conclusion is widely accepted by the scientific community both within and outside of EPA (*Water Quality Standards Handbook: Second Edition*, Chapter 3.6 and Appendix J, EPA 1994 [EPA 823-B-94-005a]). *Also see* <http://water.epa.gov/scitech/swguidance/standards/handbook/chapter03.cfm>. As a result, water quality criteria are established in terms of dissolved metals.

Differences in the chemical composition between effluent and receiving water affects the partitioning of metals between the particulate and dissolved fractions as the effluent mixes with the receiving water, often resulting in a transition from the particulate to dissolved form (*The*

*Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion* (USEPA 1996 [EPA-823-B96-007])<sup>8</sup>. Therefore, quantifying only the dissolved fraction of metals in the effluent prior to discharge may not accurately reflect the biologically-available portion of metals in the receiving water. Therefore, effluent limits for metals are expressed as total recoverable metals in accordance with the requirements of 40 CFR § 122.45(c). The total recoverable concentration of a metal is a measure of both the dissolved and particulate fraction. In order to establish total recoverable limits that will ensure attainment of dissolved aquatic life criteria, conversion factors have been developed to reflect the partitioning of metals as the effluent mixes with the receiving water, allowing for the translation between a dissolved criterion and a total recoverable limit (and vice-versa). These conversion factors are the fraction of the total recoverable metal in the effluent that will be in the dissolved form in the receiving water (*The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion* (USEPA 1996 [EPA-823-B96-007])).

Conversion factors for translating dissolved criteria into total recoverable limits are found in the New Hampshire water quality standards at Env-Wq 1703.21, Table 1703.2 (also see *The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion* (USEPA 1996 [EPA-823-B96-007])). Dividing the dissolved acute criteria for copper by the applicable conversion factor (0.96) and then multiplying those values by the dilution factor (82) yields the maximum concentration of total recoverable copper (i.e., effluent limits) that may be discharged without resulting in the criteria being exceeded, as shown below.

$$\text{MDL} = \text{DF} \times (\text{ALC}/\text{CF})$$

where:

MDL = Maximum Daily Limit at Outfall 001, in  $\mu\text{g}/\text{L}$

DF = Dilution Factor from previous equation

ALC = Aquatic-Life Criteria from NH-Standards in  $\mu\text{g}/\text{L}$ ;

CF = Conversion Factor from NH-Standards Table 1703.2 for ALC

$$\text{Maximum Daily (Acute) Concentration} = 82 \times (3.6 \mu\text{g}/\text{l}/0.96) = 308 \mu\text{g}/\text{l} (0.31 \text{ mg}/\text{l})$$

The results of copper analyses conducted on samples of the effluent in conjunction with yearly whole effluent toxicity (WET) testing of the non-discharged drain/tempering tank (Part I.A.3.a of the permit) from 2007 to 2011 show that the concentration of copper in the samples analyzed

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<sup>8</sup> *The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion* (USEPA 1996 [EPA-823-B96-007]) was used as the basis for the use of the criteria conversion factor (CF). National Guidance requires that permits limits for metals are to be expressed in terms of total recoverable metal and not dissolved metal. As such, conversion factors are used to develop total recoverable limits from dissolved criteria. The conversion factor reflects how the discharge of a particular metal partitions between the particulate and dissolved form after mixing with the receiving water. In the absence of site-specific data describing how a particular discharge partitions in the receiving water, a default assumption equivalent to the criteria conversion factor is used in accordance with guidance.

ranged from 0.02 mg/l to 0.04 mg/l (40 µg/l). *See* Appendix A-1 of this Fact Sheet. In addition, Pinetree Power stopped using NALCO water treatment chemicals and has switched over to ChemTreat, including one formulation which contains cupric nitrate (ChemTreat CL2150).

The boiler, preheaters and air precipitator at Pinetree Power are physically cleaned without the use of water. Solids are mixed with bottom ash and landfilled. Therefore, the Draft Permit includes a provision that prohibits the discharge of metal cleaning wastes. *See* Part I.A.7.c of the Draft Permit.

### *Temperature*

The temperature limit of 85 degrees Fahrenheit (°F) and a temperature change ( ΔT) of 20 °F in the Draft Permit meets the narrative temperature criteria of the NH-Standards [Env-Wq 1703.13(b)]. Performing an energy balance on this facility's discharge using the river's temperature extremes, its 7Q10 flow likely to occur during either the summer or the winter low-flow periods, and the facility's maximum discharge temperature indicates that this facility's thermal discharge would cause an indiscernible rise in the ambient streamflow temperature. For example, assuming that during the summer and the winter low-flow periods, the in-stream ambient temperatures just above the outfall are 70 °F and 35 °F, respectively, and that the 7Q10 flow is 28.2 cfs, the 85 °F thermal discharge would only cause an increase in receiving water temperatures of 0.2 and 0.5 °F, respectively, over ambient conditions. The equation used to calculate the increase in river temperature due to the 85 degree Fahrenheit (°F) discharge from facility is shown below.<sup>9</sup>

$$T_{rf} = [(Q_{ra} \times T_{ra}) + (Q_p \times T_p)] \div (Q_{ra} + Q_p)$$

where:

- $T_{rf}$  = Temperature in river just below Outfall 001, in °F
- $Q_{ra}$  = Flow (7Q10) in river just above Outfall 001, in cfs
- $T_{ra}$  = Temperature in river just above Outfall 001, in °F
- $Q_p$  = Flow of process discharge from facility, in cfs (to convert process flow in MGD to cfs, multiply by 1.547)
- $T_p$  = Temperature of process discharge from facility, in °F

Complete mixing is assumed in this case because the river flow is rapid and turbulent in the area of the discharge. In addition, the discharge temperature is expected to be lower than the 85 °F limit because the discharge originates from the drain/tempering tank and not directly from the cooling tower. Furthermore, EPA has determined that, for this facility, the best available technology (BAT) for thermal pollution control is the use of its cooling towers. Therefore, there is no need for a 316(a) variance from this technology standard.

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<sup>9</sup> Each temperature shown in the equation is referenced to a base temperature, which in this situation in 0°F. The base temperature component of the equation is not shown as it cancels out. Consequently, the temperatures used in the equation are delta T's which represent the change in temperature above the base temperature of 0°F.

### Whole Effluent Toxicity

EPA's *Technical Support Document for Water Quality Based Toxics Control* (USEPA 1991 [EPA/505/290-001]) recommends using an "integrated strategy" containing both pollutant (chemical) specific approaches and whole effluent (biological) toxicity approaches to control toxic pollutants in effluent discharges from entering the nation's waterways. EPA-Region I adopted this "integrated strategy" on July 1, 1991, for use in permit development and issuance. These approaches are designed to protect both aquatic life and human health. Pollutant-specific approaches such as those found in the Gold Book and state regulations address individual chemicals, whereas whole effluent toxicity (WET) approaches evaluate interactions between pollutants thus rendering an "overall" or "aggregate" toxicity assessment of the effluent. Furthermore, WET measures the "additive" and/or "antagonistic" effects of individual chemical pollutants, which pollutant-specific approaches do not; thus, the need for both approaches. In addition, the presence of an unknown toxic pollutant can be discovered and addressed through this process.

Section 101(a)(3) of the CWA specifically prohibits the discharge of toxic pollutants in toxic amounts and New Hampshire law states that, "all waters shall be free from toxic substances or chemical constituents in concentrations or combination that injure or are inimical to plants, animals, humans, or aquatic life; ...." (NH RSA 485-A:8, VI and the NH Code of Administrative Rules, Part Env-Wq 1703.21). The federal NPDES regulations found at 40 CFR §122.44(d)(1)(v) require whole effluent toxicity limits in a permit when reasonable potential exists for a discharge to cause or contribute to an excursion above state narrative criteria for toxicity. Furthermore, the results of toxicity tests may be used to demonstrate compliance with the "no toxics in toxics amounts" requirement found in both the CWA and in the State of New Hampshire's regulations.

The New Hampshire Fish and Game Department and the U.S. Fish & Wildlife Service, among other partners and volunteers, participate in efforts to restore and enhance migratory fish populations in the Connecticut River basin, including the Ammonoosuc River, as part of the Anadromous Fish Program. In order to support this program by assuring that Pinetree Power does not discharge an effluent of toxic nature into the Ammonoosuc River, EPA-New England has included Whole Effluent Toxicity (WET) testing in the Draft Permit. EPA believes this is warranted given the discharge may contain Water Treatment Chemicals (WTCs) used in the boiler water and cooling system which may be toxic to aquatic organisms if released in sufficient concentrations.

Where EPA - New England believes toxicity testing is appropriate and necessary as described above, the type of toxicity testing (acute and/or chronic) and the effluent limitation (LC50 and/or NOAEL) are set based upon available dilution. Based upon available dilution and in accordance with EPA-New England's Toxicity Policy, an acute limit of LC50 using a sample of 100 percent effluent is maintained to the Draft Permit. LC50 is defined as the concentration of toxicant, or in this case, as percentage of effluent that would be lethal to 50 % of the test organisms during a specific time period. The No Observed Acute Effect Level (NOAEL) monitoring-only

requirement is included in the Draft Permit due to the potential presences of WTCs in the discharge.

Results of these toxicity tests are included in the Draft Permit to demonstrate compliance with the no toxic provision of the NH-Standards. The Draft Permit includes the WET testing requirement for each discharge event. The acute WET test calls for 48 hour testing using the species Daphnid (Ceriodaphnia dubia) and Fathead Minnow (Pimephales promelas). Results from these tests will provide the EPA, the State and the permittee with an estimate of the overall toxic content of its discharge. If toxicity violations are shown, monitoring frequency and testing requirements may be increased in addition to enforcement actions. The permit may also be modified, or alternatively, revoked and reissued to incorporate additional toxicity testing requirements or chemical specific limit(s).

This Draft Permit requires reporting of selected parameters determined from the chemical analysis of the WET tests 100 % effluent sample. Specifically, Hardness, Ammonia, Total Solids, Total Organic Carbon and Total Cadmium, Lead, Nickel and Aluminum are to be reported on the appropriate Discharge Monitoring Report (DMR) for entry into EPA's ICIS Data Base. Total Residual Chlorine (TRC), pH, Total Suspended Solids, copper and zinc, also required by the WET protocol, are included in the Draft Permit with appropriate limitations as determined during this permit reissuance and discussed elsewhere in this Fact Sheet. *See* Draft Permit, Attachment A, page A-7.

### **Water Treatment Chemicals (WTCs)**

This facility operates its cooling tower and steam condenser system as a continuous recycle, closed-loop system resulting in no discharge to the receiving water. However, cooling tower blowdown, boiler blowdown, and other process wastewater may be discharged from Pinetree Power through Outfall 001(drain/tempering tank) during an emergency. Given the nature of the possibly sudden and infrequent discharge, EPA-New England is concerned about the potential build-up of toxic substances in the drain/tempering tank. Water treatment chemicals are added to both the cooling water and the boiler water; therefore the blowdown wastewater contains these chemicals. Thus, monitoring water in the drain/tempering tank would lend insight into whether or not there is potential for the discharge of toxic substances in the process waste through Outfall 001.

Consequently, EPA has required sampling every year during the last permit term. *See* Attachment A-1 of this Fact Sheet. Based on positive results, except for 2009, the Draft Permit requires sampling every other year, during July. The permittee must collect a representative sample of water from the drain/tempering tank and perform, on that sample, a 48-Hour static acute WET test using two species, Daphnid (Ceriodaphnia dubia) and the Fathead Minnow (Pimephales promelas) as previously described.

EPA-New England believes this approach is necessary to monitor for the potential build up, if any, of toxic substances in the drain/tempering tank due to the facility's method of operation and in order to prevent future exceedances in permitted limits and/or in-stream NH-Standards should

the tempering tank need to be suddenly drained. Furthermore, when an emergency discharge situation occurs, there will be little or no opportunity to evaluate this effluent's ability to meet permitted limits and/or in stream NH-Standards. Therefore, EPA-New England decided to take the proactive stance outlined above to be prepared for the onset of an "emergency discharge" situation if and when it occurs. Results of these analyses are considered "New Information" and could result in additional limits and/or monitoring requirements for Outfall 001 (process wastewater).

Attachment A-1 of this Fact Sheet shows annual WET test results from 2007 to 2011. Samples collected from the drain/tempering tank in 2009 demonstrate that the effluent, if discharged, would not have meet the LC50 permit limit. In addition, NOAEL for that sample was 25% and 50% for Ceriodaphnia and Pimephales, respectively.

### 6.3.2 Outfall Location 002 (Storm Water)

Since EPA has not promulgated any ELGs for storm water discharge from power plants, EPA concludes that is reasonable to look to the most recent Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities<sup>10</sup> (MSGP) for guidance on determining appropriate monitoring, inspection and reporting requirements and limits for Pinetree Power. As with the existing permit, EPA has determined the following technology-based requirements on a BPJ basis: (1) continue the existing permit's storm water limit of 15 mg/L for Oil & Grease in the Draft Permit in accordance with the antibacksliding requirements found in 40 CFR §122.44; (2) continue monitoring with a maximum discharge limit for iron based on the 2008 MSGP, Part 8, Subpart O – Steam Electric Generating Facilities; (3) continue TSS monitoring with a maximum discharge limit of 100 mg/L based on the 2008 MSGP, Part 8, Subpart A – Timber Products, Subsector A3 – Log Storage and Handling; and (4) require the permittee to annually update and implement its Storm Water Pollution Prevention Plan (SWPPP) for its storm water discharges.

Iron is limited to 1.0 mg/L at this location (maximum daily limit) based on the benchmark value in the 2008 Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities for Steam Electric Generating Facilities (Part 8, Subpart O). This benchmark was set equal to the National Recommended Water Quality Criteria for iron in freshwater. Groundwater and storm water from the facility first discharge to a wetland area prior to the Ammonoosuc River. Water quality-based effluent limits are based on a dilution factor calculated using the permitted flow of the facility and the low flow condition in the receiving water. Generally, for discharges to wetland areas, a dilution factor of one is assumed since rivers do not contribute any appreciable flow to wetlands. As a result, the state water quality criteria are applied at the end of pipe with no allowance for dilution. The New Hampshire freshwater chronic criteria concentration for iron is 1.0 mg/L, which is the permitted limit for Pinetree Power. *See* New Hampshire Code of Administrative Rules, Env-Wq 1703.21.

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<sup>10</sup> See Federal Register, Vol. 73, No. 189, September 29, 2008, p. 56572-56578, as modified effective May 27, 2009.

Attachment A-2 of this Fact Sheet shows sampling results of storm water samples collected from August 2006 through July 2012. These results show consistent exceedances of the 1.0 mg/L iron permit limit until 2011. As previously discussed, extensive work was completed on the storm water collection system, including isolation of the log storage drainage area, sealing the fuel yard area, a new swale system along the access road, and replacement of storm water piping. Limited data since 2011 show iron levels below permit limits.

A provision has been maintained in the Draft Permit, similar to that required by the 2008 Draft MSGP, which allows for a reduction in monitoring if four consecutive monitoring values show compliance with the permit limits.

The Draft Permit also includes pH limits that are based on NH WQS, which require that the pH be within the range of 6.5 - 8.0 standard units (s.u.). The MSGP, Part 8, Subpart A – Timber Products, requires pH in the range of 6.0-9.0 s.u for discharges resulting from the spray down or intentional wetting of logs at wet deck storage areas. The water quality-based limits are more stringent than the technology-based limits that would otherwise be imposed by EPA and, therefore, the water quality-based limits govern the permit.

### **Storm Water Pollution Prevention Plan**

Pursuant to Section 304(e) of the CWA and 40 C.F.R. §122.44(k), Best Management Practices (BMP) may be expressly incorporated into a permit on a case-by-case basis where necessary to carry out Section 402(a)(1) of the CWA. This facility engages in activities which could result in the discharge of toxic and hazardous pollutants to waters of the United States either directly or indirectly through storm water runoff. These operations include at least one of the following from which there is or could be site runoff: material storage, in-facility transfer, material processing, material handling, or loading and unloading. The permit requires this facility to update its SWPPP which includes BMPs appropriate for this specific facility to control storm water discharges from these and other activities which could contribute pollutants to waters of the United States, potentially violating the State's Water Quality Standards. Specifically, at this facility, waste ash and wood chip storage areas are examples of material storage, processing and handling operations that shall be included in the SWPPP.

The goal of the SWPPP is to reduce, or prevent the discharge of pollutants through the storm water system. The SWPPP requirements in the Draft Permit are intended to provide a systematic approach by which the permittee shall at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the condition of the permit. The SWPPP approach involves the following four main steps:

- (1) Forming a team of qualified facility personnel who will be responsible for updating the SWPPP and assisting the plant manager in its implementation;
- (2) Assessing and reassessing the potential storm water pollution sources;
- (3) Selecting and implementing appropriate management practices and controls for these potential pollution sources; and
- (4) Reevaluating, periodically, the effectiveness of the SWPPP in preventing storm water

contamination and in complying with the various terms and conditions of the Draft Permit.

The Draft Permit requires the permittee to update and submit the SWPPP no later than 60 days after the permit's effective date and continue to implement the plan throughout the duration of the permit. The SWPPP shall be prepared in accordance with good engineering practices and identify potential sources of pollutants which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity for the facility. The SWPPP is a supporting element to any numerical effluent limitations in the Draft Permit. Consequently, the SWPPP is as equally enforceable as the numerical limits. The permittee is encouraged to reference EPA Industrial SWPPP guidance at [http://www.epa.gov/npdes/pubs/industrial\\_swppp\\_guide.pdf](http://www.epa.gov/npdes/pubs/industrial_swppp_guide.pdf)

#### 6.4 Cooling Water Intake Structure -CWA § 316(b)

With any NPDES permit issuance or reissuance, EPA is required to evaluate or re-evaluate compliance with applicable standards, including those stated in CWA Section 316(b) regarding cooling water intake structures (CWIS). CWA §316(b) applies if the permit applicant seeks to withdraw cooling water from waters of the United States. To satisfy §316(b) the permit applicant must demonstrate to the satisfaction of the EPA (or, if appropriate, the State) that the location, design, construction, and capacity of the facility's CWIS(s) reflect the best technology available (BTA) for minimizing adverse environmental impacts. Such impacts include death or injury to aquatic organisms by impingement (being pinned against screens or other parts of a CWIS) or entrainment (being drawn into cooling water systems and subjected to thermal, physical or chemical stresses).

EPA has or plans to promulgate §316(b) regulations describing technology standard requirements for the following:

1. New power plants and other types of new facilities with CWISs (so-called "Phase I" facilities). 66 Fed. Reg. 65255 (Dec. 18, 2001) (effective date of the regulations is January 17, 2002);
2. A new Existing Facilities Rule ("Phase II") that addresses all electric generating as well as manufacturing facilities with cooling water intake structures was proposed in April, 2011; the Final Rule is expected sometime this year;<sup>11</sup> and
3. New offshore oil and gas extraction facilities that have a design intake flow threshold of greater than 2 million gallons per day ("Phase III" facilities). 71 Fed. Reg. 35006 (June 16, 2006) (effective date is July 17, 2006).

These regulations do not, however, apply to wood-fired power plants such as Pinetree. Instead,

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<sup>11</sup> A previous "Phase II" Rule regulated power plants with flows of 50 million gallons per day or more ("Phase II" facilities) 69 Fed. Reg. 41576 (July 9, 2004) (effective date was September 7, 2004). On January 25, 2007, the United States Court of Appeals for the Second Circuit remanded several aspects of the Phase II Rule to EPA. As a result of the remand, EPA suspended the Rule on March 20, 2007.

EPA continues to rely upon the existing NPDES program, which implements section 316(b) for these facilities on a case-by-case, best professional judgment basis. See 40 C.F.R. § 125.90(b). EPA has determined that Pinetree Power's CWIS presently employs the best technology available for minimizing adverse environmental impact for the reasons presented below.

#### *“Location”*

Pinetree Power's CWIS is imbedded in the stream bed, flush with the bottom, in the middle of the Ammonoosuc River. The river water flow rate at this location is rapid at all times. For this reason, it is unlikely that fish or any other aquatic organisms would be impinged. Mark Driscoll, Plant Manager of Pinetree Power indicated that no aquatic organisms have ever been observed on the screens. August 3, 2012 email from Mark Driscoll, Plant Manager to Sharon DeMeo, EPA. Furthermore, the segment of the river in Bethlehem, NH, where the facility is located, is not a preferred location for spawning of salmon or other indigenous species. As a transient area only, there is little potential for entrainment of eggs and larvae.

#### *“Design and Construction”*

Pinetree Power's CWIS consists of two embedded chambers in the stream bed, covered with 2' by 4', 0.76 mm mesh wedgewire screens. This size mesh reduces entrainment of larvae and certain eggs. Water flows by gravity through the screens and then through a 10 inch pipe to a 50,000 gallon below ground sump, located on the bank of the river. The low intake velocity further reduces any potential for impingement.

#### *“Capacity”*

Pinetree Power utilizes two mechanical draft cooling towers for cooling condenser water. This recirculating system significantly reduces the amount of river water withdrawn compared to a once-through system.

### **7.0 Endangered Species Act**

Section 7(a) of the Endangered Species Act (ESA) of 1973, as amended (the “Act”), grants authority to and imposes requirements upon federal agencies regarding endangered or threatened species of fish, wildlife, or plants (“listed species”) and the habitats of such species that have been designated as critical (“critical habitat”).

Section 7(a)(2) of the Act requires every federal agency in consultation with and with the assistance of the Secretary of the Interior, to ensure that any action it authorizes, funds, or carries out, in the United States or upon the high seas, is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. The National Marine Fisheries Service (NMFS) administers Section 7 consultations for marine species and anadromous fish.

The United States Fish and Wildlife Service (USFWS) administers Section 7 consultations for freshwater species. EPA has made a determination that no listed species and/or critical habitat are found in the vicinity of the project. This determination was based in part on correspondence received by EPA from the USFWS (dated July 14, 2005), which stated that that based on information currently available, “no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s)....” and that “further consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act is not required” (U.S. Fish and Wildlife Service letter, dated July 14, 2005 regarding the Littleton Wastewater Treatment Plant).

In a letter to EPA dated July 10, 2007, the NMFS also stated that “no listed species are known to occur in the Ammonoosuc River...” and that “no further coordination with NMFS is necessary” (NMFS letter, July 2007 regarding the Littleton Wastewater Treatment Plant).

If new information becomes available regarding the presence of a listed species in the vicinity of the project, EPA will contact the federal agency responsible under the Endangered Species Act.

## **8.0 Essential Fish Habitat**

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 *et seq.*(1998)), EPA is required to consult with the National Marine Fishery Service (NMFS) if EPA’s action or proposed actions that it funds, permits, or undertakes, “may adversely impact any essential fish habitat.” 16 U.S.C. § 1855(b). The Amendments broadly define “essential fish habitat” (EFH) as: “waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. 16 U.S.C. § 1802(10). Adversely impact means any impact which reduces the quality and/or quantity of EFH. 50 C.F.R. § 600.910(a). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. *Id.*

Essential fish habitat is only designated for fish species for which federal Fisheries Management Plans exist. 16 U.S.C. § 1855(b)(1)(A). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999.

The Connecticut River and its tributaries, including the Ammonoosuc River in the vicinity of Pinetree Power, are designated essential fish habitat (EFH) for Atlantic salmon (*Salmo salar*). According to the New Hampshire Fish and Game Department, there is an extensive stocking program in the upper Ammonoosuc River. The reach of the Ammonoosuc River where the intake and discharge is located is a fish transient area, used by smolts during their spring migration to the sea via the Connecticut River.

EPA has concluded that the plant operating conditions and the limits and conditions contained in this Draft Permit minimize adverse effects to Atlantic salmon EFH for the following reasons:

- 1- The facility has been operating closed-loop, with no discharge for over 20 years;

- 2- The only permitted process waste discharge is during an emergency;
- 3- EPA and NHDES must be notified of a discharge and extensive monitoring is required;
- 4- Cooling towers are used to cool condenser cooling water;
- 5- If there were a discharge, the effluent would be rapidly diluted so as to raise the ambient temperature by no more than 0.5 degrees Fahrenheit;
- 6- Yearly WET testing is required for the drain/tempering tank contents to evaluate this effluent's ability to meet permitted limits and/or in stream NH-Standards; and
- 7- The location, design, construction, and capacity of the facility's cooling water intake structure(s) (CWIS) reflect the Best Technology Available (BTA) for minimizing adverse environmental impacts.

EPA believes the Draft Permit adequately protects Atlantic salmon EFH, and therefore additional mitigation is not warranted. If adverse impacts to EFH do occur as a result of this permit action, or if new information becomes available that changes the basis for this determination, then NMFS will be notified and consultation will be promptly initiated.

## **9.0 Monitoring and Reporting**

The effluent monitoring requirements have been established to yield data representative of the discharge under authority of Section 308 (a) of the CWA in accordance with 40 CFR §§122.41 (j), 122.44 (l), and 122.48. The sampling frequency for all parameters proposed in the Draft Permit is each discharge event, given that discharge will only occur during emergencies.

The Draft Permit includes new provisions related to Discharge Monitoring Report (DMR) submittals to EPA and the State. The Draft Permit requires that, no later than one year after the effective date of the permit, the permittee submit all monitoring data and other reports required by the permit to EPA using NetDMR, unless the permittee is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for submitting DMRs and reports ("opt-out request").

In the interim (until one year from the effective date of the permit), the permittee may either submit monitoring data and other reports to EPA in hard copy form, or report electronically using NetDMR.

NetDMR is a national web-based tool for regulated Clean Water Act permittees to submit discharge monitoring reports (DMRs) electronically via a secure Internet application to U.S. EPA through the Environmental Information Exchange Network. NetDMR allows participants to discontinue mailing in hard copy forms under 40 CFR § 122.41 and § 403.12. NetDMR is accessed from the following url: <http://www.epa.gov/netdmr>. Further information about NetDMR, including contacts for EPA Region 1, is provided on this website.

EPA currently conducts free training on the use of NetDMR, and anticipates that the availability of this training will continue to assist permittees with the transition to use of NetDMR. To participate in upcoming trainings, visit <http://www.epa.gov/netdmr> for contact information for New Hampshire.

The Draft Permit requires the permittee to report monitoring results obtained during each

calendar month using NetDMR, no later than the 15th day of the month following the completed reporting period. All reports required under the permit shall be submitted to EPA as an electronic attachment to the DMR. Once a permittee begins submitting reports using NetDMR, it will no longer be required to submit hard copies of DMRs or other reports to EPA or to NH DES.

The Draft Permit also includes an “opt-out” request process. Permittees who believe they can not use NetDMR due to technical or administrative infeasibilities, or other logical reasons, must demonstrate the reasonable basis that precludes the use of NetDMR. These permittees must submit the justification, in writing, to EPA at least sixty (60) days prior to the date the facility would otherwise be required to begin using NetDMR. Opt-outs become effective upon the date of written approval by EPA and are valid for twelve (12) months from the date of EPA approval. The opt-outs expire at the end of this twelve (12) month period. Upon expiration, the permittee must submit DMRs and reports to EPA using NetDMR, unless the permittee submits a renewed opt-out request sixty (60) days prior to expiration of its opt-out, and such a request is approved by EPA.

Until electronic reporting using NetDMR begins, or for those permittees that receive written approval from EPA to continue to submit hard copies of DMRs, the Draft Permit requires that submittal of DMRs and other reports required by the permit continue in hard copy format. Hard copies of DMRs must be postmarked no later than the 15th day of the month following the completed reporting period.

## **10.0 Antidegradation**

This Draft Permit is being reissued with some minor changes in permit limitations and requirements and in consideration of changes in water treatment chemistries at Pinetree Power. EPA has determined that the changes, as described in this Fact Sheet, will not cause lowering of water quality or loss of existing water uses and that no additional antidegradation review is warranted.

## **11.0 State Certification Requirements**

EPA may not issue a permit unless the State Water Pollution Control Agency with jurisdiction over the receiving water(s) either certifies that the effluent limitations and/or conditions contained in the permit are stringent enough to assure, among other things, that the discharge will not cause the receiving water to violate the State's Surface Water Quality Regulations or waives its right to certify as set forth in 40 CFR §124.53. The NHDES is the certifying authority within the State of New Hampshire.

Upon public noticing of the Draft Permit, EPA is formally requesting that the State's certifying authority make a written determination concerning certification. The State will be deemed to have waived its right to certify unless certification is received within 60 days of receipt of this request.

The State's certification should include the specific conditions necessary to assure compliance with applicable provisions of the Clean Water Act, Sections 208(e), 301, 302, 303, 306 and 307

and with appropriate requirements of State law. In addition, the State should provide a statement of the extent to which each condition of the Draft Permit can be made less stringent without violating the requirements of State law. Since certification is provided prior to permit issuance, failure to provide this statement for any condition waives the right to certify or object to any less stringent condition which may be established by EPA during the permit issuance process following public noticing as a result of information received during that noticing. If the State believes that any conditions more stringent than those contained in the Draft Permit are necessary to meet the requirements of either the CWA or State law, the State should include such conditions and, in each case, cite the CWA or State law reference upon which that condition is based. Failure to provide such a citation waives the right to certify as to that condition. The sludge conditions implementing section 405(d) of the CWA are not subject to the 401 certification requirements.

Reviews and appeals of limitations and conditions attributable to State certification shall be made through the applicable procedures of the State and may not be made through the applicable procedures of 40 CFR Part 124.

The New Hampshire Department of Environmental Services, Water Division is the certifying authority. EPA has discussed this Draft Permit with the Staff of the Wastewater Engineering Bureau and expects that the Draft Permit will be certified. Regulations governing state certification are set forth in 40 CFR §§124.53 and 124.55.

## **12.0 Comment Period, Hearing Requests, and Procedures for Final Decisions**

All persons, including applicants, who believe any condition of the Draft Permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to Sharon DeMeo, U.S. EPA, Office of Ecosystem Protection, Industrial Permits Branch, 5 Post Office Square, Suite 100, Mail Code OEP06-1, Boston, Massachusetts 02109-3912. Any person, prior to such date, may submit a request in writing for a public hearing to consider the Draft Permit to EPA and the State Agency. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public meeting may be held if the criteria stated in 40 C.F.R. § 124.12 are satisfied. In reaching a final decision on the Draft Permit, the EPA will respond to all significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period, and after any public hearings, if such hearings are held, the EPA will issue a Final Permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within 30 days following the notice of the Final Permit decision, any interested person may submit a petition for review of the permit to EPA's Environmental Appeals Board consistent with 40 C.F.R. § 124.19.

**13.0 EPA Contact**

Additional information concerning the Draft Permit may be obtained between the hours of 9:00 A.M. and 5:00 P.M., Monday through Friday, excluding holidays from:

**Ms. Sharon DeMeo, Environmental Engineer  
U.S. Environmental Protection Agency  
Office of Ecosystem Protection  
5 Post Office Square, Suite 100 (OEP06-1)  
Boston, Massachusetts 02109-3912  
Telephone: (617) 918-1995  
FAX No.: (617) 918-0995**

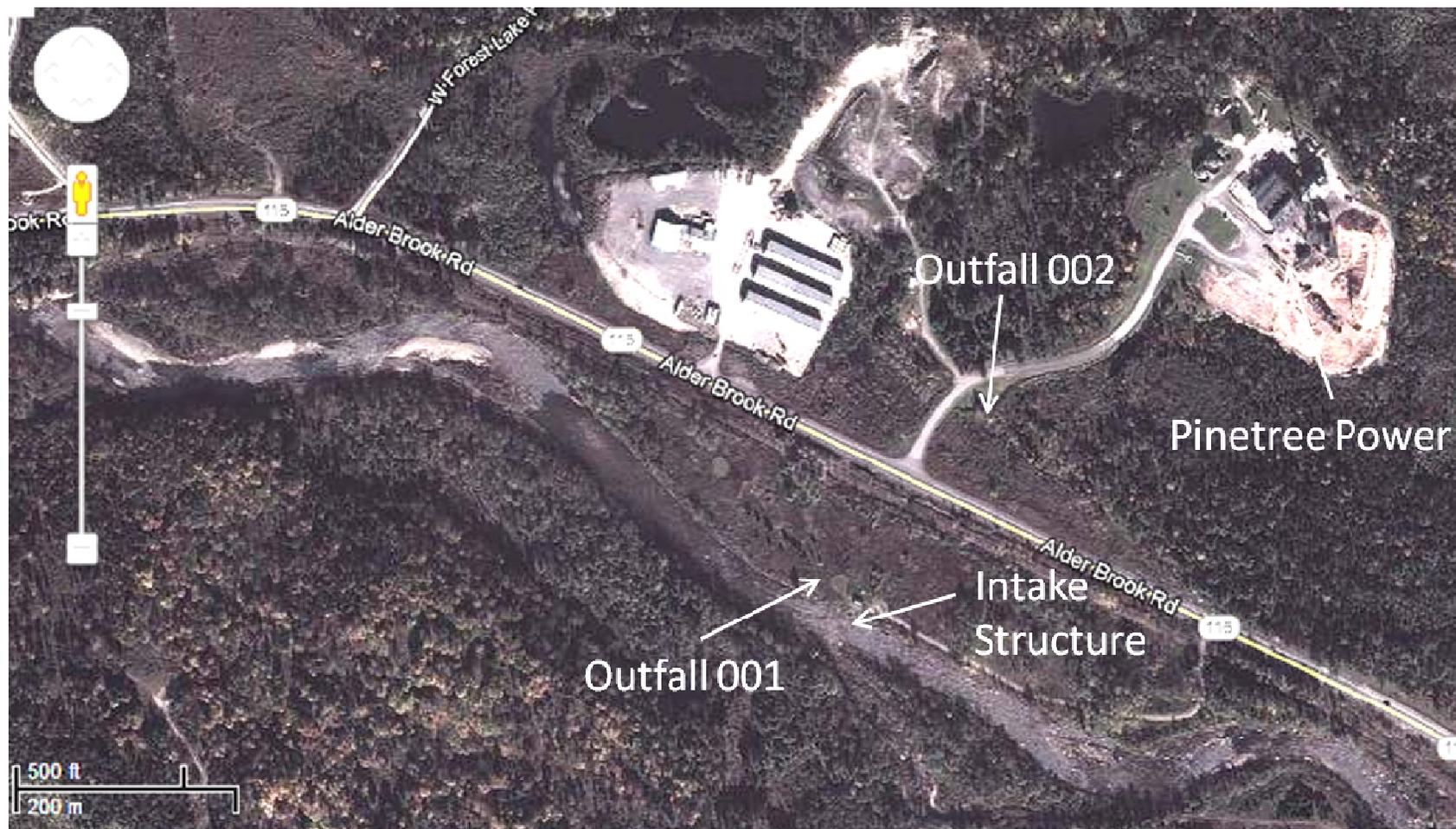
**September 2012**

**Date:**

**Stephen S. Perkins, Director  
Office of Ecosystem Protection  
U.S. Environmental Protection Agency**

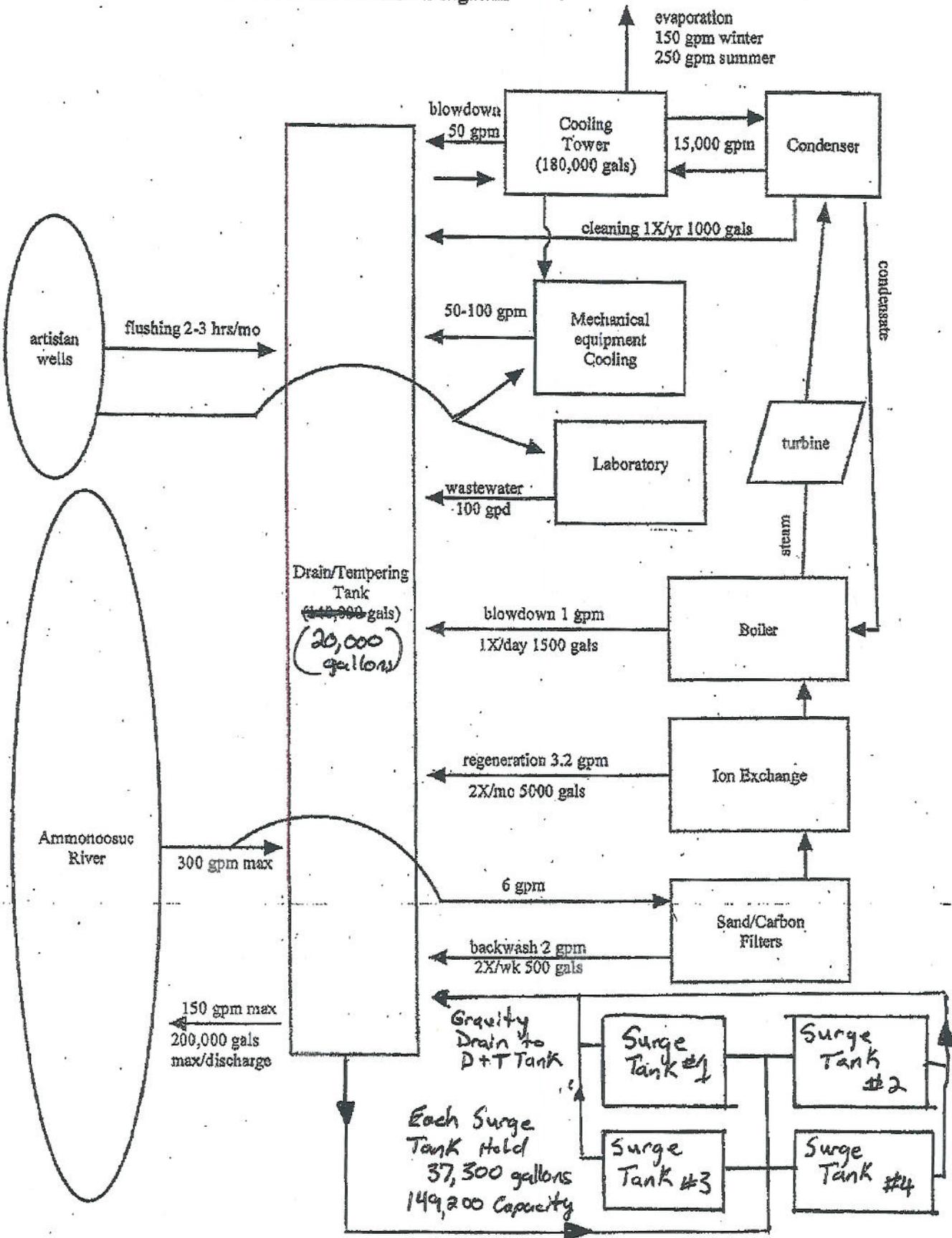
Pinetree Power - Outfall 001 (Process Wastewater)					Attachment A-1			NH0021423			
Data from WET testing - Represents process effluent should a discharge occur. There has been no discharge during the permit term.											
Parameter	Hardness	Al	Cd	Pb	Ni	Cr	Cu	Zn	pH	TSS	TS
Limits	Report	Report	Report	Report	Report	0.2	0.35	1	6.5	30	Report
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L
Report	D-MX	D-MX	D-MX	D-MX	D-MX	D-MX	D-MX	D-MX	MIN	M-AVG	D-MX
Date											
7/24/2007	32	0.11	<0.001	<0.001	<0.001	0.003	0.016	0.009	7.1	<5	200
7/24/2008	48	0.26	<0.001	<0.001	0.002	0.007	0.028	0.017	5.4	5	210
7/22/2009	36	0.09	<0.001	<0.001	0.003	0.004	0.04	0.018	5.3	<5	180
7/22/2010	38	0.27	<0.001	<0.001	0.001	0.002	0.025	0.007	7	5	220
7/6/2011	31	0.09	<0.001	<0.001	0.002	0.002	0.016	0.009	6.8	<5	180
min	31	0.09	0	0	0	0.002	0.016	0.007	5.3	5	180
max	48	0.27	0	0	0.003	0.007	0.04	0.018	7.1	5	220
No. of Violations	n/a	n/a	n/a	n/a	n/a	0	0	0	2	0	n/a
Parameter	TOC	DO	TRC	LC50 Ceriodaphnia	LC50 Pimephales	Am-N	NOAEL Ceriodaphnia	NOAEL Pimephales			
Limits	Report	Report	0.15	100	100	Report	Report	Report			
Units	mg/L	mg/L	mg/L	%	%	mg/L	%	%			
Report	D-MX	D-MX	D-MX	D-MN	D-MN	D-MX	D-MN	D-MN			
Date											
7/24/2007	11	7.9	0.05	100	100	<0.05	100	100			
7/24/2008	17	8.2	1.7	100	100	<0.05	100	100			
7/22/2009	8.1	9.2	0.5	46.7	100	<0.005	25	50			
7/22/2010	15	8.3	<0.05	100	100	<0.05	100	100			
7/6/2011	6.4	8	<0.05	100	100	0.06	100	100			
min	6.4	7.9	0	46.7	100	0	25	50			
max	17	9.2	1.7	100	100	0.06	100	100			
No. of Violations	n/a	n/a	1	1	0	n/a	n/a	n/a			

Pinetree Power - Oufall 002 (Storm Water)					Attachment A-2					NH0021423		
Parameter	COD	Flow	Flow	Iron	O&G	pH	pH	pH	pH	pH (rainfall)	TSS	TSS
Limit	Report	Report	Report	1	15	6	8.5	6.5	8	Report	Report	100
Units	mg/L	MGD	MGD	mg/L	mg/L	SU	SU	SU	SU	SU	mg/L	mg/L
Report	D-MX	D-MX	M-AVG	D-MX	D-MX	MIN	MAX	MIN	MAX	MIN	D-MX	D-MX
Date												
8/31/2006	60	0.0003	0.0003		5	7.86	7.86				16	
9/30/2006	20	0.0003	0.0003		5	7.7	7.7				6	
10/31/2006	30	0.0003	0.0003		5	7.51	7.51				6	
*1/31/2007												
4/30/2007	90			2.2	7			7.6	7.6	6.73		91
7/31/2007	30			1.1	5			7.31	7.31	7.04		27
10/31/2007	10			1.5	5			7.27	7.27	6.19		6
1/31/2008	50			1.2	5			7.54	7.54	7.01		5
4/30/2008	15			1.3	5			7.14	7.14	5.97		80
7/31/2008	60			2.5	5			7.15	7.15	5.44		10
10/31/2008	80			1.4	5			7.23	7.23	6.21		19
1/31/2009	30			1.3	5			7.26	7.26	6.84		6
4/30/2009	70			2.4	5			7.37	7.37	6.94		43
7/31/2009	40			1.1	5			7.47	7.47	6.39		6
10/31/2009	20			2.5	5			7.22	7.22	5.91		7
1/31/2010	130			1.5	5			7.04	7.04	6.47		10
4/30/2010	40			2.3	5			7.23	7.23	6.85		5
7/31/2010	120			1.8	5			7.46	7.46	7.62		27
10/31/2010	50			4.6	5			7.82	7.82	6.57		34
**1/31/2011												
4/30/2011	47			1	5			7.24	7.24	5.96		5
•7/31/2011												
10/31/2011	29			0.09	0			7.67	7.67	5.68		0
1/31/2012	15			0.44	0			7.16	7.16	6.71		0
•4/30/2012												
7/31/2012	31			0.19	0			7.44	7.44	5.87		0
min	10	0.0003	0.0003	0.09	0	7.51	7.51	7.04	7.04	5.44	6	0
max	130	0.0003	0.0003	4.6	7	7.86	7.86	7.82	7.82	7.62	16	91
No. of Violations	n/a	n/a	n/a	15	0	0	0	0	0	n/a	n/a	0
* no sample collected due to insufficient rainfall												
** no sample collected due to construction of stormwater swale												
• no sample collected - rain events occurred during off-hours												



\*Taken from maps.google.com

### Water-Balance Line Diagram



NEW HAMPSHIRE DEPARTMENT OF  
ENVIRONMENTAL SERVICES  
WATER DIVISION  
P.O. BOX 95  
CONCORD, NEW HAMPSHIRE 03302-0095

U.S. ENVIRONMENTAL PROTECTION  
AGENCY  
OFFICE OF ECOSYSTEM PROTECTION  
REGION I  
BOSTON, MASSACHUSETTS 022030001

JOINT PUBLIC NOTICE OF A DRAFT NATIONAL POLLUTANT DISCHARGE  
ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE INTO THE WATERS OF  
THE UNITED STATES UNDER SECTIONS 301 AND 402 OF THE CLEAN WATER ACT  
(THE "ACT"), AS AMENDED, AND REQUEST FOR STATE CERTIFICATION UNDER  
SECTION 401 OF THE ACT, AND ISSUANCE OF A STATE SURFACE WATER PERMIT  
UNDER NH RSA 485-A:13, I(a).

DATE OF NOTICE: **September 26, 2012**

PERMIT NUMBER: NH0021423

PUBLIC NOTICE NUMBER: NH-016-12

NAME AND MAILING ADDRESS OF APPLICANT:

IPR-GDF SUEZ  
1241 Whitefield Road  
Bethlehem, NH 03574

NAME AND LOCATION OF FACILITY WHERE DISCHARGE OCCURS:

Pinetree Power, Inc.  
1241 Whitefield Road  
Bethlehem, NH 03574

RECEIVING WATER: Ammonoosuc River

RECEIVING WATER CLASSIFICATION: Class B

PREPARATION OF THE DRAFT PERMIT:

The U.S. Environmental Protection Agency (EPA) and the New Hampshire Department of Environmental Services, Water Division have cooperated in the development of a draft permit for the above identified facility. The effluent limits and permit conditions imposed have been drafted to assure that State Water Quality Standards and provisions of the Clean Water Act will be met. EPA has formally requested that the State certify the draft permit pursuant to Section 401 of the Clean Water Act and expects that the draft permit will be certified.

INFORMATION ABOUT THE DRAFT PERMIT:

A fact sheet (describing the type of facility; type and quantities of wastes; a brief summary of the basis for the draft permit conditions; and significant factual, legal and policy questions considered in preparing this draft permit) and the draft permit may be obtained at no cost at [http://www.epa.gov/region1/npdes/draft\\_permits\\_listing\\_nh.html](http://www.epa.gov/region1/npdes/draft_permits_listing_nh.html) or by writing or calling EPA's contact person named below:

Sharon DeMeo  
U.S. Environmental Protection Agency – Region 1  
5 Post Office Square, Suite 100 (OEP06-1)  
Boston, MA 02109-3912  
Telephone: (617) 918-1995

The administrative record containing all documents relating to the draft permit is on file and may be inspected at the EPA Boston office mentioned above between 9:00 a.m. and 5:00 p.m., Monday through Friday, except holidays.

**PUBLIC COMMENT AND REQUEST FOR PUBLIC HEARING:**

All persons, including applicants, who believe any condition of the draft permit is inappropriate, must raise all issues and submit all available arguments and all supporting material for their arguments in full by **October 25, 2012**, to the U.S. EPA, 5 Post Office Square, Boston, Massachusetts 02109-3912. Any person, prior to such date, may submit a request in writing to EPA and the State Agency for a public hearing to consider the draft permit. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit, the Regional Administrator will respond to all significant comments and make these responses available to the public at EPA's Boston office.

**FINAL PERMIT DECISION:**

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice.

HARRY T. STEWART, P.E., DIRECTOR  
WATER DIVISION  
NEW HAMPSHIRE DEPARTMENT OF  
ENVIRONMENTAL SERVICES

STEPHEN S. PERKINS, DIRECTOR  
OFFICE OF ECOSYSTEM PROTECTION  
U.S. ENVIRONMENTAL PROTECTION  
AGENCY - REGION I