



STATE OF MAINE
Department of Environmental Protection

Paul R. LePage
GOVERNOR

Patricia W. Aho
COMMISSIONER

Mr. James Barrise
President
Merlin One LLC
1922 State Street Road
Castle Hill, ME 04757
e-mail: jabarrise@gwi.net

December 2, 2014

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0000361
Maine Waste Discharge License (WDL) Application #W000638-5R-E-R
Final Permit

Dear Mr. Barrise:

Enclosed please find a copy of your **final** MEPDES permit/WDL which was approved by the Department of Environmental Protection. Please read the permit and its attached conditions carefully. You must follow the conditions in the order to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State Law and is subject to enforcement action.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled "*Appealing a Commissioner's Licensing Decision.*"

If you have any questions regarding the matter, please feel free to call me at 287-7693.

Sincerely,

Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality

Enc.

cc: Sean Bernard, DEP/NMRO
Sandy Mojica, USEPA Marelyn Vega, USEPA Olga Vergara, USEPA

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STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION
AUGUSTA, ME 04333

DEPARTMENT ORDER

IN THE MATTER OF

MERLIN ONE LLC)	MAINE POLLUTANT DISCHARGE
CARIBOU, AROOSTOOK COUNTY, MAINE)	ELIMINATION SYSTEM PERMIT
ELECTRICAL GENERATING STATION)	AND
ME0000361)	WASTE DISCHARGE LICENSE
W000638-5R-E-R)	RENEWAL

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, *et seq.*, and Maine Law 38 M.R.S.A., Section 414-A *et seq.*, and all applicable regulations, the Department of Environmental Protection (Department hereinafter) has considered the application of MERLIN ONE LLC (Merlin/permittee hereinafter) with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

Merlin has submitted a timely and complete application to the Department to renew combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0000361/Maine Waste Discharge License (WDL) #W000638-5R-D-R (permit hereinafter), which was issued by the Department on September 29, 2009, for a five-year term. The permit, issued to the former owner WPS New England Generation Inc., approved the discharge of up to 31 million gallons per day (MGD) of cooling and process waste water from the Caribou Generating Station to the Aroostook River, Class B, in Caribou, Maine. The generating facility has been mothballed due to economic circumstances but Merlin has requested renewal of the permit as future demand for electricity may warrant operating the facility in the next five-year period.

PERMIT SUMMARY

This permitting action is carrying forward all the terms and conditions of the September 29, 2009 permit.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated October 28, 2014 and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.
2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.
3. The provisions of the State's antidegradation policy, 38 MRSA Section 464(4)(F), will be met, in that:
 - a. Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;
 - b. Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected;
 - c. Where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;
 - d. Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification, that higher water quality will be maintained and protected; and
 - e. Where a discharge will result in lowering the existing quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.
4. The discharge will be subject to effluent limitations that require application of best practicable treatment.

ACTION

THEREFORE, the Department APPROVES the above noted application of MERLIN ONE LLC to discharge up to 31 million gallons per day (MGD) of non-contact cooling and miscellaneous waste waters to the Aroostook River, Class B, subject to the attached conditions and all applicable standards and regulations including:

1. "Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits," revised July 1, 2002, copy attached.
2. The attached Special Conditions, including any effluent limitations and monitoring requirements.
3. This permit and the authorization to discharge become effective upon the date of signature below and expire at midnight five (5) years from the effective date. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of this permit, the authorization to discharge and the terms and conditions of this permit and all modifications and minor revisions thereto remain in effect until a final Department decision on the renewal application becomes effective. [Maine Administrative Procedure Act, 5 M.R.S.A. § 10002 and Rules Concerning the Processing of Applications and Other Administrative Matters, 06-096 CMR 2(21)(A) (amended August 25, 2013)]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

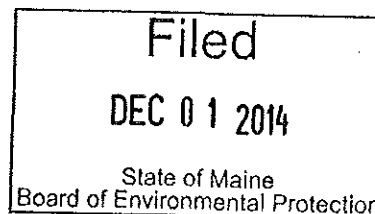
DONE AND DATED AT AUGUSTA, MAINE, THIS 1st DAY OF December 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Michael P. Kuhn
for PATRICIA W. AHO, Commissioner

Date of initial receipt of application: October 17, 2014

Date of application acceptance: October 22, 2014



Date filed with Board of Environmental Protection _____

This Order prepared by GREGG WOOD, BUREAU OF LAND AND WATER QUALITY

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge **rotary screen backwash waters** from **Outfalls #002 and #006** to the Aroostook River.

No numeric permit limitations or monitoring requirements (with the exception of pH) have been established for these outfalls due to the nature of the discharges.

The pH shall not be less than 6.0 or greater than 9.0 at anytime.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

2. The permittee is authorized to discharge **Unit #1 condenser cooling waters** from **Outfall #003** and **Units #2 condenser cooling waters** from **Outfall #005** to the Aroostook River. Such discharges shall be limited and monitored by the permittee as specified below. Also see Special Condition A(5).

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	Monthly <u>Average</u> as specified	Daily <u>Maximum</u> as specified	Monthly <u>Average</u> as specified	Daily <u>Maximum</u> as specified	Measurement <u>Frequency</u> as specified	Sample <u>Type</u> as specified
Flow	---	10.96 MGD	---	---	1/Day	Calculate ⁽¹⁾
Temperature	---	94°F	---	---	1/Day	Grab
pH	Not less than 6.0 or greater than 9.0 at anytime					---

Units #2 condenser cooling waters from Outfall #005

□ □	Monthly <u>Ave</u> <u>rage</u> as specified	Daily <u>Maximum</u> as specified	Monthly <u>Average</u> as specified	Daily <u>Maximum</u> As specified	Measurement <u>Frequency</u> as specified	Sample <u>Type</u> as specified
Flow	---	18.86 MGD	---	---	1/Day	Calculate ⁽¹⁾
Temperature	---	94°F	---	---	1/Day	Grab
pH	Not less than 6.0 or greater than 9.0 at anytime					---

Footnotes:

(1) Calculate via pump run time and pump capacity.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

3. The permittee is authorized to discharge **cooling water from plant air compressors and boiler feed pumps and roof drain waters from Outfall #004 and #007** to the Aroostook River. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	<u>Monthly Average</u> as specified	<u>Daily Maximum</u> as specified	<u>Monthly Average</u> as specified	<u>Daily Maximum</u> as specified	<u>Measurement Frequency</u> as specified	<u>Sample Type</u> as specified
Flow	Report MGD	---	---	---	1/Month ⁽¹⁾	Estimate
Total Suspended Solids	---	---	15 mg/L	100 mg/L	1/Month ⁽¹⁾	Grab
Oil & Grease	---	---	10 mg/L	15 mg/L	1/Month ⁽¹⁾	Grab
Temperature	---	87°F	---	---	1/Month ⁽¹⁾	Grab
pH	Not less than 6.0 or greater than 9.0 at anytime					---

Footnotes:

- (1) The permittee is only required to sample discharges of cooling water, plant air compressors waters and or boiler feed pump waters. The permittee is not required to sample discharges that are solely comprised of roof drain waters as a result of precipitation.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

4. The permittee is authorized to discharge waste waters associated with the **four diesel generators** from **Outfall #008** to the Aroostook River. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	<u>Monthly Average</u> as specified	<u>Daily Maximum</u> as specified	<u>Monthly Average</u> as specified	<u>Daily Maximum</u> as specified	<u>Measurement Frequency</u> as specified	<u>Sample Type</u> as specified
Flow	---	1.44 MGD	---	---	1/Day	Calculate ⁽¹⁾
Temperature	---	120°F	---	---	1/Day	Grab
Oil & Grease	---	---	15 mg/L	20 mg/L	1/Month	Grab
pH	Not less than 6.0 or greater than 9.0 at anytime					---

Footnotes:

- (1) Calculate via pump run time and pump capacity.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

5. The permittee is authorized to collectively discharge heat associated with waste water from **Outfall #003, Outfall #005, and Outfall #008** to the Aroostook River. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements			
	Weekly <u>Average</u> as specified	Daily <u>Maximum</u> as specified	Weekly <u>Average</u> as specified	Daily <u>Maximum</u> as specified	Measurement <u>Frequency</u> as specified	Sample <u>Type</u> as specified
River Temperature Increase (October 1-May 31) ⁽¹⁾	---	---	---	$\Delta T=5^{\circ}\text{F}$	1/Day	Calculate
River Temperature Increase (June 1 - September 30) ⁽¹⁾	---	---	$\Delta T=0.5^{\circ}\text{F}^{(2)}$	$\Delta T=0.5^{\circ}\text{F}^{(3)}$	1/Day	Calculate

See Special Condition C, *River Temperature Increase*, for the procedures to calculate river temperature increase.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Footnotes

Monitoring for all outfalls is only required if the facility is operational for more than 16 hours in any given month. However, the terms Qr, Qe, Tr, Te in the equation (Special Condition C of this permit) to calculate river temperature increase shall be recorded on a daily basis (year round) for those days when the facility is discharging.

The permittee must conduct sampling and analysis in accordance with; a) methods approved by 40 Code of Federal Regulations (CFR) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, or c) as otherwise specified by the Department. Samples that are sent out for analysis must be analyzed by a laboratory certified by the State of Maine's Department of Health and Human Services. Samples that are sent to a POTW licensed pursuant to *Waste discharge licenses*, 38 M.R.S.A. § 413 are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*, 10-144 CMR 263 (effective April 1, 2010). If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136 or as specified in this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report.

All analytical test results from monitoring of parameters required by this license shall be reported to the Department including results which are quantified below the respective reporting limits (RLs) specified by the Department or as specified by other approved test methods. A non-detect analytical test result shall be reported as <Y where Y is the minimum level for reporting quantitative data specified by the laboratory in their report for each respective parameter. Reporting a value of <Y that is greater than an established RL is not acceptable and will be rejected by the Department. Lab data that have an estimated value ("J" flagged) below an established RL shall be reported as "< RL". Reporting analytical data and its use in calculations must follow established Department guidelines specified in this permit or in available Department guidance documents.

- (1) The river temperature increase limitations in Special Condition A(5) of this permit apply to the combined thermal load from Outfalls #003, #005 and #008. See Special Condition C of this permit for the calculations required to determine the river temperature increase.
- (2) The weekly average limit is in effect between June 1 and September 30 of each calendar year and is applicable when the weekly average temperature of the Aroostook River is greater than or equal to 66°F but less than 73°F. For DMR reporting purposes, report the highest seven (7) day (consecutive) temperature increase during a calendar month.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Footnotes

- (3) The daily maximum thermal load limit is in effect between June 1 and September 30 of each calendar year and is applicable when the daily temperature of the Aroostook River is greater than or equal to 73°F. For DMR reporting purposes, report the highest daily thermal load during a calendar month.

B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent shall not contain a visible oil sheen, foam or floating solids at any time that would impair the usages designated for the classification of the receiving waters.
2. The effluent shall not contain materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the usages designated for the classification of the receiving waters.
3. The discharge shall not cause visible discoloration or turbidity in the receiving waters which would impair the usages designated for the classification of the receiving waters.
4. Notwithstanding specific conditions of this permit the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

C. RIVER TEMPERATURE INCREASE

The Qe, Qr, Te and Tr shall be recorded on a daily basis (year round) for those days when the facility is discharging. The daily recorded values and daily calculations shall be reported in a spreadsheet format to the Department as an attachment to the monthly Discharge Monitoring Report (DMR). The river temperature increase shall be calculated as follows:

$$\Delta T^{\circ}F = \frac{(Q_{e003})(T_{e003}-Tr) + (Q_{e005})(T_{e005}-Tr) + (Q_{e008})(T_{e008}-Tr)}{Q_r}$$

$\Delta T^{\circ}F$ = River temperature increase in °F.

Qe = Effluent flow for each outfall.

Qr = Flow of the Aroostook River in like units as Qe.

Te = Effluent temperature for each Outfall in °F.

Tr = Ambient temperature of the Aroostook River in °F.

SPECIAL CONDITIONS

C. RIVER TEMPERATURE INCREASE (cont'd)

Qr - The flow in the Aroostook River shall be calculated on a daily basis (year-round) for those days when the facility is discharging from Outfalls #003, #005 or #008 as follows:

- a) When the river is less than 840 cfs, the flow shall be calculated via turbine discharge curves.
- b) When the river is greater than or equal to 840 cfs, the flow shall be calculated via turbine discharge curves plus weir flow calculations to account for spillage over the dam.

Tr - The ambient temperature of the Aroostook River shall be measured once per day utilizing the Caribou Water Company's temperature gauge for those days when the facility is discharging. The weekly average temperature shall be reported on a year-round basis for those days when the facility is discharging from Outfalls #003, #005 or #008. The daily maximum temperature of the Aroostook River only needs to be reported on the DMR between June 1 - September 30 of each year. Tr and Te measurements shall be taken within 60 minutes of each other.

D. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit. Discharges of waste water from any other point source are not authorized under this permit, but shall be reported in accordance with Standard Condition B(5)(*Bypass*) of this permit.

E. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee shall notify the Department of the following of any substantial change in the volume or character of pollutants being discharged.

F. REOPENING OF PERMIT FOR MODIFICATIONS

Upon evaluation of the tests results in the Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at anytime and with notice to the permittee, modify this permit to: (1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded; (2) require additional effluent and/or ambient water quality monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

SPECIAL CONDITIONS

G. MONITORING AND REPORTING

Monitoring results shall be summarized for each calendar quarter and reported on separate Discharge Monitoring Report Forms provide by the Department and postmarked on or before the thirteenth (13th) day of the month or hand-delivered to a Department Regional Office such that the DMR's are received by the Department on or before the fifteenth (15th) day of the month following the completed reporting period. A signed copy of the Discharge Monitoring Report and all other reports required herein shall be submitted to the following address:

Department of Environmental Protection
Northern Maine Regional Office
Bureau of Land and Water Quality
1235 Central Drive, Skyway Park
Presque Isle, Maine 04769

Alternatively, if you are submitting an electronic Discharge Monitoring Report (eDMR), the completed eDMR must be electronically submitted to the Department by a facility authorized DMR Signatory not later than close of business on the 15th day of the month following the completed reporting period. Hard Copy documentation submitted in support of the eDMR must be postmarked on or before the thirteenth (13th) day of the month or hand-delivered to the Department's Regional Office such that it is received by the Department on or before the fifteenth (15th) day of the month following the completed reporting period. Electronic documentation in support of the eDMR must be submitted not later than close of business on the 15th day of the month following the completed reporting period.

H. SEVERABILITY

In the event that any provision, or part thereof, of this permit is declared to be unlawful by a reviewing court, the remainder of the permit shall remain in full force and effect, and shall be construed and enforced in all aspects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

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MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

A. GENERAL PROVISIONS

1. General compliance. All discharges shall be consistent with the terms and conditions of this permit; any changes in production capacity or process modifications which result in changes in the quantity or the characteristics of the discharge must be authorized by an additional license or by modifications of this permit; it shall be a violation of the terms and conditions of this permit to discharge any pollutant not identified and authorized herein or to discharge in excess of the rates or quantities authorized herein or to violate any other conditions of this permit.

2. Other materials. Other materials ordinarily produced or used in the operation of this facility, which have been specifically identified in the application, may be discharged at the maximum frequency and maximum level identified in the application, provided:

(a) They are not

(i) Designated as toxic or hazardous under the provisions of Sections 307 and 311, respectively, of the Federal Water Pollution Control Act; Title 38, Section 420, Maine Revised Statutes; or other applicable State Law; or

(ii) Known to be hazardous or toxic by the licensee.

(b) The discharge of such materials will not violate applicable water quality standards.

3. Duty to comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of State law and the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

(a) The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act, and 38 MRSA, §420 or Chapter 530.5 for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

(b) Any person who violates any provision of the laws administered by the Department, including without limitation, a violation of the terms of any order, rule license, permit, approval or decision of the Board or Commissioner is subject to the penalties set forth in 38 MRSA, §349.

4. Duty to provide information. The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

5. Permit actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

6. Reopener clause. The Department reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedule of compliance or other provisions which may be authorized under 38 MRSA, §414-A(5).

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

7. **Oil and hazardous substances.** Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under section 311 of the Federal Clean Water Act; section 106 of the Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980; or 38 MRSA §§ 1301, et. seq.

8. **Property rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.

9. **Confidentiality of records.** 38 MRSA §414(6) reads as follows. "Any records, reports or information obtained under this subchapter is available to the public, except that upon a showing satisfactory to the department by any person that any records, reports or information, or particular part or any record, report or information, other than the names and addresses of applicants, license applications, licenses, and effluent data, to which the department has access under this subchapter would, if made public, divulge methods or processes that are entitled to protection as trade secrets, these records, reports or information must be confidential and not available for public inspection or examination. Any records, reports or information may be disclosed to employees or authorized representatives of the State or the United States concerned with carrying out this subchapter or any applicable federal law, and to any party to a hearing held under this section on terms the commissioner may prescribe in order to protect these confidential records, reports and information, as long as this disclosure is material and relevant to any issue under consideration by the department."

10. **Duty to reapply.** If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

11. **Other laws.** The issuance of this permit does not authorize any injury to persons or property or invasion of other property rights, nor does it relieve the permittee of its obligation to comply with other applicable Federal, State or local laws and regulations.

12. **Inspection and entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the EPA Administrator), upon presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

B. OPERATION AND MAINTENANCE OF FACILITIES

1. General facility requirements.

- (a) The permittee shall collect all waste flows designated by the Department as requiring treatment and discharge them into an approved waste treatment facility in such a manner as to

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

maximize removal of pollutants unless authorization to the contrary is obtained from the Department.

- (b) The permittee shall at all times maintain in good working order and operate at maximum efficiency all waste water collection, treatment and/or control facilities.
- (c) All necessary waste treatment facilities will be installed and operational prior to the discharge of any wastewaters.
- (d) Final plans and specifications must be submitted to the Department for review prior to the construction or modification of any treatment facilities.
- (e) The permittee shall install flow measuring facilities of a design approved by the Department.
- (f) The permittee must provide an outfall of a design approved by the Department which is placed in the receiving waters in such a manner that the maximum mixing and dispersion of the wastewaters will be achieved as rapidly as possible.

2. Proper operation and maintenance. 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 conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

3. Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Bypasses.

(a) Definitions.

- (i) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
- (ii) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

- (b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this section.

(c) Notice.

- (i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

- (ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph D(1)(f), below. (24-hour notice).
- (d) Prohibition of bypass.
 - (i) Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
 - (A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (C) The permittee submitted notices as required under paragraph (c) of this section.
 - (ii) The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three conditions listed above in paragraph (d)(i) of this section.

6. Upsets.

- (a) Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- (b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (c) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- (c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (i) An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (ii) The permitted facility was at the time being properly operated; and
 - (iii) The permittee submitted notice of the upset as required in paragraph D(1)(f), below. (24 hour notice).
 - (iv) The permittee complied with any remedial measures required under paragraph B(4).
- (d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

C. MONITORING AND RECORDS

1. General Requirements. This permit shall be subject to such monitoring requirements as may be reasonably required by the Department including the installation, use and maintenance of monitoring equipment or methods (including, where appropriate, biological monitoring methods). The permittee shall provide the Department with periodic reports on the proper Department reporting form of monitoring results obtained pursuant to the monitoring requirements contained herein.

2. Representative sampling. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. If effluent limitations are based wholly or partially on quantities of a product processed, the permittee shall ensure samples are representative of times when production is taking place. Where discharge monitoring is required when production is less than 50%, the resulting data shall be reported as a daily measurement but not included in computation of averages, unless specifically authorized by the Department.

3. Monitoring and records.

- (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- (b) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.
- (c) Records of monitoring information shall include:
 - (i) The date, exact place, and time of sampling or measurements;
 - (ii) The individual(s) who performed the sampling or measurements;
 - (iii) The date(s) analyses were performed;
 - (iv) The individual(s) who performed the analyses;
 - (v) The analytical techniques or methods used; and
 - (vi) The results of such analyses.
- (d) Monitoring results must be conducted according to test procedures approved under 40 CFR part 136, unless other test procedures have been specified in the permit.
- (e) State law provides that any person who tampers with or renders inaccurate any monitoring devices or method required by any provision of law, or any order, rule license, permit approval or decision is subject to the penalties set forth in 38 MRSA, §349.

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STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

D. REPORTING REQUIREMENTS

1. Reporting requirements.

- (a) Planned changes. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
 - (i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
 - (ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under Section D(4).
 - (iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
- (b) Anticipated noncompliance. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- (c) Transfers. This permit is not transferable to any person except upon application to and approval of the Department pursuant to 38 MRSA, § 344 and Chapters 2 and 522.
- (d) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.
 - (i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Department for reporting results of monitoring of sludge use or disposal practices.
 - (ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Department.
 - (iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Department in the permit.
- (e) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
- (f) Twenty-four hour reporting.
 - (i) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

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has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(ii) The following shall be included as information which must be reported within 24 hours under this paragraph.

(A) Any unanticipated bypass which exceeds any effluent limitation in the permit.

(B) Any upset which exceeds any effluent limitation in the permit.

(C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit to be reported within 24 hours.

(iii) The Department may waive the written report on a case-by-case basis for reports under paragraph (f)(ii) of this section if the oral report has been received within 24 hours.

(g) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (d), (e), and (f) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (f) of this section.

(h) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

2. Signatory requirement. All applications, reports, or information submitted to the Department shall be signed and certified as required by Chapter 521, Section 5 of the Department's rules. State law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan or other document filed or required to be maintained by any order, rule, permit, approval or decision of the Board or Commissioner is subject to the penalties set forth in 38 MRSA, §349.

3. Availability of reports. Except for data determined to be confidential under A(9), above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. As required by State law, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal sanctions as provided by law.

4. Existing manufacturing, commercial, mining, and silvicultural dischargers. In addition to the reporting requirements under this Section, all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Department as soon as they know or have reason to believe:

(a) 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":

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

(ii) 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;

(iii) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with Chapter 521 Section 4(g)(7); or

(iv) The level established by the Department in accordance with Chapter 523 Section 5(f).

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STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

- (b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
- (i) Five hundred micrograms per liter (500 ug/l);
 - (ii) One milligram per liter (1 mg/l) for antimony;
 - (iii) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with Chapter 521 Section 4(g)(7); or
 - (iv) The level established by the Department in accordance with Chapter 523 Section 5(f).

5. Publicly owned treatment works.

- (a) All POTWs must provide adequate notice to the Department of the following:
- (i) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA or Chapter 528 if it were directly discharging those pollutants.
 - (ii) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
 - (iii) For purposes of this paragraph, adequate notice shall include information on (A) the quality and quantity of effluent introduced into the POTW, and (B) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.
- (b) When the effluent discharged by a POTW for a period of three consecutive months exceeds 80 percent of the permitted flow, the permittee shall submit to the Department a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans.

E. OTHER REQUIREMENTS

1. Emergency action - power failure. Within thirty days after the effective date of this permit, the permittee shall notify the Department of facilities and plans to be used in the event the primary source of power to its wastewater pumping and treatment facilities fails as follows.

- (a) For municipal sources. During power failure, all wastewaters which are normally treated shall receive a minimum of primary treatment and disinfection. Unless otherwise approved, alternate power supplies shall be provided for pumping stations and treatment facilities. Alternate power supplies shall be on-site generating units or an outside power source which is separate and independent from sources used for normal operation of the wastewater facilities.
- (b) For industrial and commercial sources. The permittee shall either maintain an alternative power source sufficient to operate the wastewater pumping and treatment facilities or halt, reduce or otherwise control production and or all discharges upon reduction or loss of power to the wastewater pumping or treatment facilities.

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2. **Spill prevention.** (applicable only to industrial sources) Within six months of the effective date of this permit, the permittee shall submit to the Department for review and approval, with or without conditions, a spill prevention plan. The plan shall delineate methods and measures to be taken to prevent and or contain any spills of pulp, chemicals, oils or other contaminants and shall specify means of disposal and or treatment to be used.

3. **Removed substances.** Solids, sludges trash rack cleanings, filter backwash, or other pollutants removed from or resulting from the treatment or control of waste waters shall be disposed of in a manner approved by the Department.

4. **Connection to municipal sewer.** (applicable only to industrial and commercial sources) All wastewaters designated by the Department as treatable in a municipal treatment system will be cosigned to that system when it is available. This permit will expire 90 days after the municipal treatment facility becomes available, unless this time is extended by the Department in writing.

F. DEFINITIONS. For the purposes of this permit, the following definitions shall apply. Other definitions applicable to this permit may be found in Chapters 520 through 529 of the Department's rules

Average means the arithmetic mean of values taken at the frequency required for each parameter over the specified period. For bacteria, the average shall be the geometric mean.

Average monthly discharge limitation means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. Except, however, bacteriological tests may be calculated as a geometric mean.

Average weekly discharge limitation means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best management practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Composite sample means a sample consisting of a minimum of eight grab samples collected at equal intervals during a 24 hour period (or a lesser period as specified in the section on monitoring and reporting) and combined proportional to the flow over that same time period.

Continuous discharge means a discharge which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.

Daily discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the day.

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Discharge Monitoring Report ("DMR") means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by approved States as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

Flow weighted composite sample means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.

Grab sample means an individual sample collected in a period of less than 15 minutes.

Interference means a Discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- (1) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
- (2) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Maximum daily discharge limitation means the highest allowable daily discharge.

New source means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

- (a) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or
- (b) After proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal.

Pass through means a discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

Permit means an authorization, license, or equivalent control document issued by EPA or an approved State to implement the requirements of 40 CFR parts 122, 123 and 124. Permit includes an NPDES general permit (Chapter 529). Permit does not include any permit which has not yet been the subject of final agency action, such as a draft permit or a proposed permit.

Person means an individual, firm, corporation, municipality, quasi-municipal corporation, state agency, federal agency or other legal entity.

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Point source means any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft, from which pollutants are or may be discharged.

Pollutant means dredged spoil, solid waste, junk, incinerator residue, sewage, refuse, effluent, garbage, sewage sludge, munitions, chemicals, biological or radiological materials, oil, petroleum products or byproducts, heat, wrecked or discarded equipment, rock, sand, dirt and industrial, municipal, domestic, commercial or agricultural wastes of any kind.

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly owned treatment works ("POTW") means any facility for the treatment of pollutants owned by the State or any political subdivision thereof, any municipality, district, quasi-municipal corporation or other public entity.

Septage means, for the purposes of this permit, any waste, refuse, effluent sludge or other material removed from a septic tank, cesspool, vault privy or similar source which concentrates wastes or to which chemicals have been added. Septage does not include wastes from a holding tank.

Time weighted composite means a composite sample consisting of a mixture of equal volume aliquots collected over a constant time interval.

Toxic pollutant includes any pollutant listed as toxic under section 307(a)(1) or, in the case of sludge use or disposal practices, any pollutant identified in regulations implementing section 405(d) of the CWA. Toxic pollutant also includes those substances or combination of substances, including disease causing agents, which after discharge or upon exposure, ingestion, inhalation or assimilation into any organism, including humans either directly through the environment or indirectly through ingestion through food chains, will, on the basis of information available to the board either alone or in combination with other substances already in the receiving waters or the discharge, cause death, disease, abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformations in such organism or their offspring.

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole effluent toxicity means the aggregate toxic effect of an effluent measured directly by a toxicity test.

**MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE**

FACT SHEET

Date: October 28, 2014

PERMIT NUMBER: **ME0000361**
LICENSE NUMBER: **W000638-5R-E-R**

NAME AND ADDRESS OF APPLICANT:

**MERLE ONE LLC
Caribou Generating Station
142 Lower Lyndon Street
Caribou, Maine 04736**

COUNTY: **Aroostook**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

**Caribou Generating Station
142 Lower Lyndon Street
Caribou, Maine 04736**

RECEIVING WATER/CLASSIFICATION: **Aroostook River, Class B**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Ms. Leslie Pelletier**
(207) 493-4589 x10
e-mail: **jabarresi@gwi.net**

1. APPLICATION SUMMARY

- a. Application – Merlin One LLC (Merlin/permittee hereinafter) has submitted a timely and complete application to the Department to renew combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0000361/Maine Waste Discharge License (WDL) #W00638-5R-D-R (permit hereinafter), which was issued by the Department on September 29, 2009, for a five-year term. The permit, issued to the former owner WPS New England Generation Inc., approved the discharge of up to 31 million gallons per day (MGD) of cooling and process waste water from the Caribou Generating Station to the Aroostook River, Class B, in Caribou, Maine. The generating facility has been mothballed due to economic circumstances but Merlin has requested renewal of the permit as future demand for electricity may warrant operating the facility in the next five-year period. See **Attachment A** of this Fact Sheet for a location map.

1. APPLICATION SUMMARY (cont'd)

- b. Source Description & Waste Water Treatment: The Caribou Generating Station is utilized as a standby emergency peaking facility and has a generating capacity of 30.1 megawatts (MW); 23.0 MW from two steam generation units and 7.1 MW from four diesel generation units. The six generation units are usually operational during the winter months. Operation of the six units may be coincident but often times are operated as steam only or diesel only with units rarely operating for 24 hours per day.

The April 10, 1991 licensing action eliminated Outfall #001 (boiler blowdown) as the waste stream is now connected to the municipal sanitary collection system. The remaining outfalls contain the following waste streams:

Outfall #002 - River water utilized for steam generation Unit #1 rotary screen backwash. Waters are treated by 1/2" mesh screen. No numeric limitations, except pH are established for this outfall.

Outfall #003 - River water utilized for steam generation Unit #1 condenser cooling waters. Cooling waters do not receive treatment as the only pollutant of concern is heat. The daily maximum flow limitation is 10.96 MGD.

Outfall #004 - Consists of a number of floor drains (some modified with raised rims) and roof drains which convey bearing cooling/lubricating waters and storm water respectively.

Outfall #005 - River water utilized for steam generation Unit #2 condenser cooling waters. Cooling waters do not receive treatment as the only pollutant of concern is heat. The daily maximum flow limitation is 18.86 MGD.

Outfall #006 - River water utilized for steam generation Unit #2 rotary screen backwash. Waters are treated by 1/2" mesh screen. No numeric limitations, except pH are established for this outfall.

Outfall #007 - Consists of a number of floor drains (some modified with raised rims) and roof drains which convey bearing cooling/lubricating waters and storm water respectively.

Outfall #008 - River water utilized for diesel engine cooling plus auxiliary equipment bearing cooling water, municipal waters used for auxiliary cooling, and floor and roof drains. The waste stream receiving formal treatment is the diesel engine pit drain waste stream and the #5 compressor cooling water which passes through an oil/water separator prior to combining with the other waste streams that make up the discharge from Outfall #008. The daily maximum flow limit is 1.44 MGD

See **Attachment B** of this permit for a plan depicting the locations of the outfall pipes.

2. PERMIT SUMMARY

- a. History: The most recent licensing/permitting actions include the following:

March 2, 1999 - The Department issued WDL #W000638-5R-A-R to MPSC for a five-year term.

June 3, 1999 - The Department issued an Order transferring all licenses and permits from MPSC to PDI New England Inc. d/b/a WPS Power Generation Inc., a wholly owned subsidiary of WPS Power Development Inc.

September 18, 2002 - WPS New England Inc. submitted an application to modify WDL W000638-5R-A-R to incorporate the terms and conditions of the MEPDES permitting program. The modification was assigned a number of W000638-5R-B-M.

November 12, 2004 - The Department issued combination MEPDES permit #ME0000361/WDL #W000638-5R-C-R for a five year term.

September 29, 2009 - The Department issued combination MEPDES permit #ME0000361/WDL #W000638-5R-D-R for a five year term.

October 17, 2014 - Merlin submitted a timely and complete application to renew the 10/29/09 permit.

- b. Terms and conditions - This permitting action is carrying forward all the terms and conditions of the 10/29/09 permit.

3. CONDITIONS OF PERMITS:

Conditions of licenses, 38 M.R.S.A. § 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S.A., § 420 and 06-096 CMR 530 require the regulation of toxic substances not to exceed levels set forth in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (effective October 9, 2005), and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

4. RECEIVING WATER QUALITY STANDARDS:

Maine law, 38 M.R.S.A., Section 467(15)(C)(1)(e) classifies the Aroostook River at the point of discharge as a Class B waterway. Maine law, 38 M.R.S.A., Section 465(3) describes the classification standards for Class B waters as follows;

4. RECEIVING WATER QUALITY STANDARDS (cont'd)

Class B waters must be of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; navigation; and as habitat for fish and other aquatic life. The habitat must be characterized as unimpaired.

*The dissolved oxygen content of Class B waters may not be less than 7 parts per million or 75% of saturation, whichever is higher, except that for the period from October 1st to May 14th, in order to ensure spawning and egg incubation of indigenous fish species, the 7-day mean dissolved oxygen concentration may not be less than 9.5 parts per million and the 1-day minimum dissolved oxygen concentration may not be less than 8.0 parts per million in identified fish spawning areas. Between May 15th and September 30th, the number of *Escherichia coli* bacteria of human and domestic animal origin in these waters may not exceed a geometric mean of 64 per 100 milliliters or an instantaneous level of 236 per 100 milliliters. In determining human and domestic animal origin, the department shall assess licensed and unlicensed sources using available diagnostic procedures.*

Discharges to Class B waters may not cause adverse impact to aquatic life in that the receiving waters must be of sufficient quality to support all aquatic species indigenous to the receiving water without detrimental changes in the resident biological community.

5. RECEIVING WATER QUALITY CONDITIONS

The The 2012 Integrated Water Quality Monitoring and Assessment Report, published by the Department, often referred to as the 305b report indicates that the Aroostook River is meeting the standards of its assigned classification at and below the point of discharge.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

Technology-based treatment requirements representing application of best practicable treatment (38 M.R.S.A. 414-A) are based on EPA-NPDES program criteria and standards, 40 Code of Federal Regulations (CFR) Part 125 Subpart A. Federal regulations, 40 CFR Part 125 specifies methods of imposing technology-based treatment requirements in permits. This Section provides for development of limitations on a case by case basis if EPA promulgated effluent limitation guidelines are applicable.

National Effluent Limitations Guidelines for the Steam Electric Power Generating Point Source Category were adopted on November 19, 1982 at 47 FR 52304. These guidelines are applicable to facilities primarily utilizing fossil (coal, oil or gas) and nuclear fuels. The Department used the EPA Steam Electric Power Generating Point Source Category (40 CFR, Part 423) guidelines to establish technology based limits in this permit and previous licensing actions.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

The waste waters generated and discharged by the facility via numerous outfalls are categorized as low volume waste waters pursuant to 40 CFR, Part 423. The limitations in this permitting action were derived as follows:

Outfall #002 & Outfall #006 - No numeric limitations (with the exception of pH) have been established in this permitting action based on the nature of the discharge. The pH limit is a technology based limit based on 40 CFR 423.12(b)(1).

Outfall #003 & Outfall #005- The daily maximum flow limitations of 10.96 MGD (Outfall #003) and 18.86 MGD (Outfall #005) are being carried forward in this permitting action. The daily maximum temperature limits of 94°F (both Outfalls) in the previous licensing action are being carried forward in this permitting action and are considered representative of the discharge.

Outfall #004 & #007 - The monthly average concentration limits for total suspended solids and oil & grease (100 mg/L and 15 mg/L respectively) are being carried forward from the previous licensing and are considered representative of the discharge and equally or more stringent than the BPT limits established in 40 CFR 423.12(b)(3). The daily maximum mass limits of 5.0 lbs/day for total suspended solids and 1.2 lbs/day for oil & grease in the previous licensing action are being eliminated in this permitting action. The federal regulations are intended to establish limitations for the bearing cooling waters not cooling waters and storm water runoff. Flows being discharged during wet weather events will elevate the mass of TSS being discharged and is not necessarily representative of operations at the power plant itself.

The daily maximum temperature limit of 87°F in the previous licensing action is being carried forward in this permitting action and is considered representative of the discharge. The pH limit is a technology based limit based on 40 CFR 423.12(b)(1).

Outfall #008 - The daily maximum flow and temperature limits of 1.2 MGD and 120°F respectively, in the previous licensing action are being carried forward and are considered representative of the discharge. The pH limit is a technology based limit based on 40 CFR 423.12(b)(1).

Temperature Difference (Outfalls #003, #005 and #008) - Chapter 582, *Regulations Relating To Temperature*, states that no discharge shall cause the ambient temperature of any freshwater body such as a stream or river, as measured outside a mixing zone, to be raised more than 5°F. The regulation also limits a discharger to an in-stream temperature increase (ΔT) of 0.5° F above the ambient receiving water temperature when the weekly average temperature of the receiving water is greater than or equal to 66° F or when the daily maximum temperature is greater than or equal to 73° F. The temperature thresholds are based on EPA water quality criterion for the protection of brook trout and Atlantic salmon (both species indigenous to the Aroostook River). The weekly average temperature of 66° F was derived to protect for normal growth of the brook trout and the daily maximum threshold

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

temperature of 73° F protects for the survival of juveniles and adult Atlantic salmon during the summer months. As a point of clarification, the Department interprets the term "weekly average temperature" to mean a seven (7) day rolling average. To promote consistency, the Department also interprets the ΔT of 0.5° F as a weekly rolling average criterion when the receiving water temperature is $\geq 66^\circ \text{F}$ and $< 73^\circ \text{F}$. When the receiving water temperature is $\geq 73^\circ \text{F}$, compliance with the ΔT of 0.5° F is evaluated on a daily basis.

Maine law, 38 M.R.S.A. §464(4)(D), states that the assimilative capacity of a receiving water shall be calculated utilizing a seven-day low event with a recurrence interval of ten years that is often referred to as the 7Q10. The Department has determined that the 7Q10 flow of the Aroostook River is 174 cfs (114 MGD) based on a recent (2000-2003) river flow information collected by the Department during ambient water quality sampling. To determine the potential impact of the combined thermal discharge to the Aroostook River during 7Q10 low flow conditions and receiving water temperatures at or above the critical temperature thresholds cited above, the following calculation indicates a worst case ΔT is:

Criterion:

- 1) Aroostook River: 7Q10 = 176 cfs \Rightarrow 114 MGD
- 2) Temperature: When the 7-day rolling average temperature of the receiving water (RW) is $< 66^\circ \text{F}$, a discharge is limited to changing the receiving water temperature by 5°F ($\Delta T = 5^\circ \text{F}$).
- 3) When the 7-day rolling average temperature of the receiving water is $\geq 66^\circ \text{F}$, a discharge is limited to changing the receiving water temperature by 0.5°F ($\Delta T = 0.5^\circ \text{F}$).
- 4) To simplify compliance with this standard, it is assumed that the receiving water will $\geq 66^\circ \text{F}$ between June 1 and September 30 of each year and below 66°F the remainder of the year. Therefore, the $\Delta T = 0.5^\circ \text{F}$ limitation is in effect between June 1 and September 30 and the $\Delta T = 5^\circ \text{F}$ is in effect between October 1 and May 31 of each year.

Calculations:

1. Calculate thermal load that will result in a $\Delta T = 5^\circ \text{F}$ at 7Q10.

$$(114 \text{ MGD})(8.34)(5^\circ \text{F}) = 4.75 \times 10^9 \text{ BTU's/day}$$

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

2. Calculate thermal load that will result in a $\Delta T = 0.5^\circ\text{F}$ at 7Q10

$$7Q10 \Rightarrow (114 \text{ MGD})(8.34)(0.5^\circ\text{F}) = 4.75 \times 10^8 \text{ BTU's/day}$$

Permit limitations

Outfall #003: 10.96 MGD, Daily Maximum Temperature = 94°F

Outfall #005: 18.86 MGD, Daily Maximum Temperature = 94°F

Outfall #008: 1.20 MGD, Daily Maximum Temperature = 120°F

Theoretical thermal load from each outfall as presently permitted

$$\text{Outfall \#003: } (10.96 \text{ MGD})(8.34)(94^\circ\text{F} - 66^\circ\text{F}) = 2.56 \times 10^9 \text{ BTU's/day}$$

$$\text{Outfall \#005: } (18.86 \text{ MGD})(8.34)(94^\circ\text{F} - 66^\circ\text{F}) = 4.40 \times 10^9 \text{ BTU's/day}$$

$$\text{Outfall \#008: } (1.20 \text{ MGD})(8.34)(120^\circ\text{F} - 66^\circ\text{F}) = \underline{0.540 \times 10^9 \text{ BTU's/day}}$$

$$\Sigma = 7.50 \times 10^9 \text{ BTU's/day}$$

In a letter of November 10, 1998 to the Department, Maine Public Service (MPS), former owner/operator calculated the actual thermal load from each outfall based on the thermodynamics associated with each generating unit rather than using "nameplate" data. MPS has indicated that it is not possible for the permitted flows and daily maximum temperature limits to occur simultaneously. MPS calculates the maximum thermal loads as follows:

$$\text{Outfall \#003: } 1.55 \times 10^9 \text{ BTU's/day}$$

$$\text{Outfall \#005: } 2.40 \times 10^9 \text{ BTU's/day}$$

$$\text{Outfall \#008: } \underline{0.24 \times 10^9 \text{ BTU's/day}}$$

$$\Sigma = 4.19 \times 10^9 \text{ BTU's/day}$$

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Calculate impact to the receiving water based on the river @ a 7Q10 low flow

Outfall #003: 1.55×10^9 BTU's/day $\Rightarrow \Delta T = 1.64^\circ\text{F}$

Outfall #005: 2.4×10^9 BTU's/day $\Rightarrow \Delta T = 2.52^\circ\text{F}$

Outfall #008: 0.24×10^9 BTU's/day $\Rightarrow \Delta T = 0.25^\circ\text{F}$
 $\Sigma \Delta T = 4.41^\circ\text{F}$

The calculations indicate that if the Aroostook River was at 7Q10 low flow conditions and the plant was operating at maximum flow and temperature limits for Outfalls #003, #005 and #008, the combined discharge would not comply with the Department's Chapter 582 during the summer months or winter months. As a result, this permit establishes summer and winter time instream temperature increase ($\Delta T^\circ\text{F}$) limits (consistent with Chapter 582) and daily maximum end-of-pipe flow and temperature limits.

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted, the Department has determined the existing water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the waterbody to meet standards for Class B classification.

8. PUBLIC COMMENTS

Public notice of this application was made in the Aroostook Republican newspaper on or about October 8, 2014. The Department receives public comment on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to chapter 522 of the Department's rules.

9. DEPARTMENT CONTACTS

Additional information concerning this permitting action may be obtained from and written comments should be sent to:

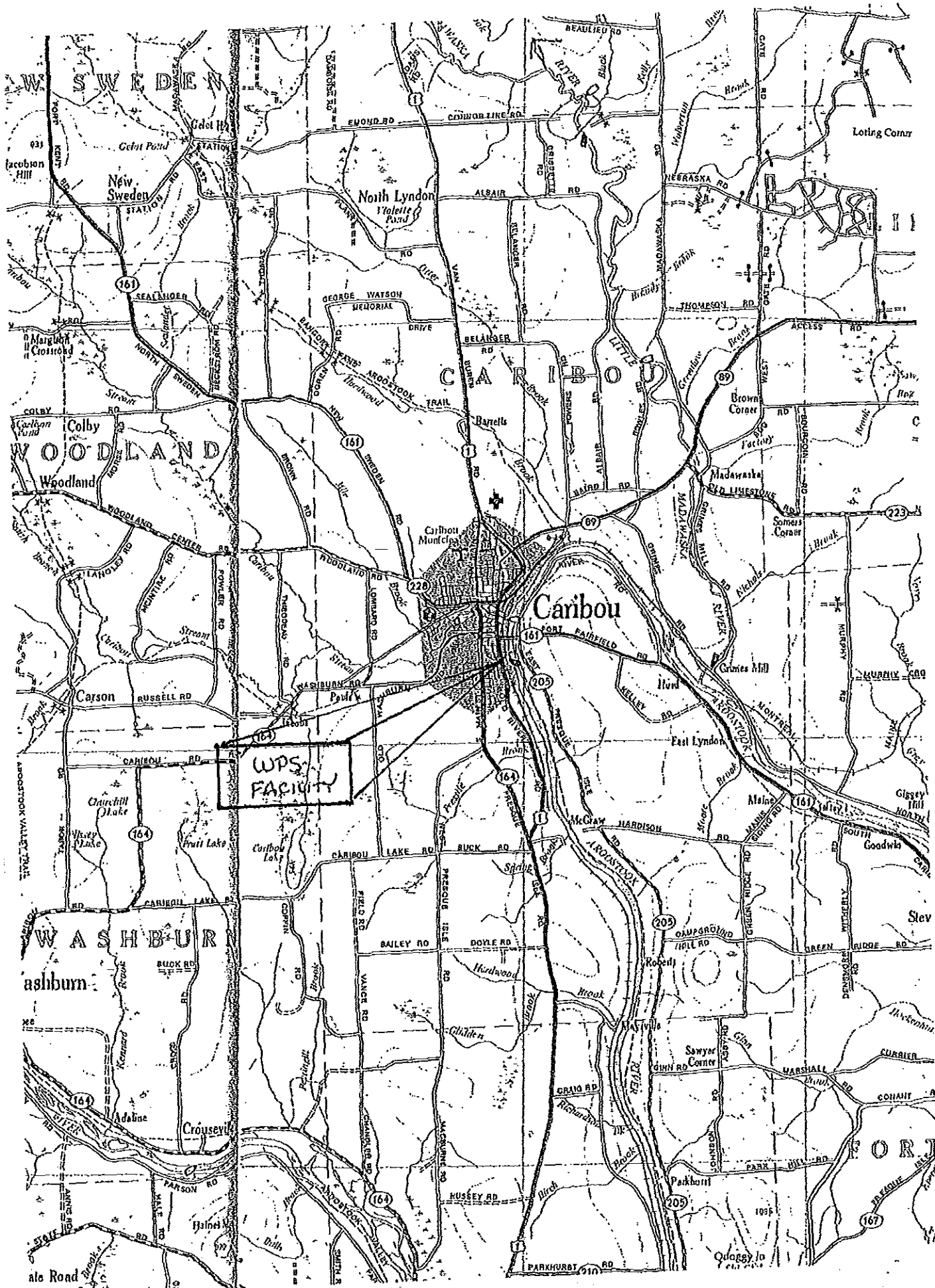
Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017
Electronic mail: gregg.wood@maine.gov

Telephone (207) 287-7693

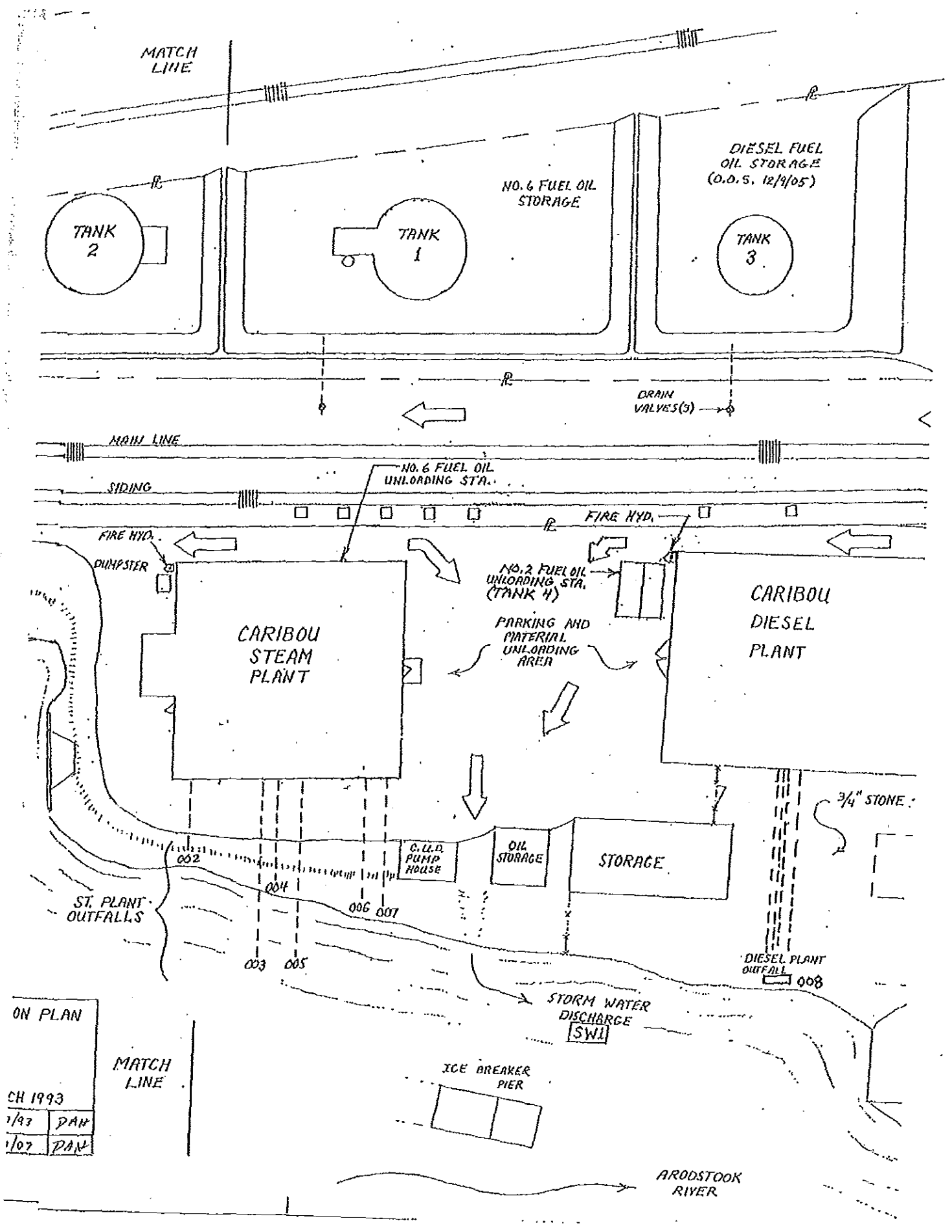
10. RESPONSE TO COMMENTS

During the period of October 28, 2014, through the issuance date of the permit/license, the Department solicited comments on the proposed draft permit/license to be issued for the discharge(s) from the permittee's facility. The Department did not receive comments from the permittee, state or federal agencies or interested parties that resulted in any substantive change(s) in the terms and conditions of the permit. Therefore, the Department has not prepared a Response to Comments.

ATTACHMENT A



ATTACHMENT B





DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: March 2012

Contact: (207) 287-2811

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's ("DEP") Commissioner: (1) in an administrative process before the Board of Environmental Protection ("Board"); or (2) in a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S.A. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S.A. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S.A. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This INFORMATION SHEET, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S.A. §§ 341-D(4) & 346, the *Maine Administrative Procedure Act*, 5 M.R.S.A. § 11001, and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 CMR 2 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days of the date on which the Commissioner's decision was filed with the Board will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by the Board's receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner a copy of the appeal documents and if the person appealing is not the applicant in the license proceeding at issue the applicant must also be sent a copy of the appeal documents. All of the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

Appeal materials must contain the following information at the time submitted:

1. *Aggrieved Status.* The appeal must explain how the person filing the appeal has standing to maintain an appeal. This requires an explanation of how the person filing the appeal may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.
6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing on the appeal is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.
7. *New or additional evidence to be offered.* The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered by the Board in an appeal only when the evidence is relevant and material and that the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2.

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed the license normally remains in effect pending the processing of the appeal. A license holder may proceed with a project pending the outcome of an appeal but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge receipt of an appeal, including the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, and any materials submitted in response to the appeal will be sent to Board members with a recommendation from DEP staff. Persons filing appeals and interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, a license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2; 5 M.R.S.A. § 11001; & M.R. Civ. P. 80C. A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. Failure to file a timely appeal will result in the Board's or the Commissioner's decision becoming final.

An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S.A. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452 or for judicial appeals contact the court clerk's office in which your appeal will be filed.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.
