



JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



GERALD D. REID
COMMISSIONER

April 18, 2019

Sherri Loon
KEI (USA) Power Management, LLC.
423 Brunswick Avenue
Gardiner, Maine 04345

*Sent via electronic mail
Delivery confirmation requested*

RE: *Maine Pollutant Discharge Elimination System (MEPDES) Permit ME0036625
Maine Waste Discharge License (WDL) Application W008080-5R-F-R
Proposed Draft MEPDES Permit – Renewal*

Dear Sherri Loon:

Attached is a proposed draft MEPDES permit and Maine WDL which the Department proposes to issue for your facility as a final document after opportunity for your review and comment. By transmittal of this letter, you are provided with an opportunity to comment on the proposed draft permit and its special and standard conditions. If it contains errors or does not accurately reflect present or proposed conditions, please respond to this Department so that changes can be considered.

By copy of this letter, the Department is requesting comments on the proposed draft permit from various state and federal agencies and from any other parties who have notified the Department of their interest in this matter.

The comment period begins on April 18, 2019 and ends on May 17, 2019. All comments on the proposed draft permit must be received in the Department of Environmental Protection office on or before the close of business on May 17, 2019. Failure to submit comments in a timely fashion will result in the proposed draft/license permit document being issued as drafted.

Comments in writing should be submitted to my attention at the following address:

Maine Department of Environmental Protection
Bureau of Water Quality
Division of Water Quality Management
17 State House Station
Augusta, ME 04333-0017
Aaron.A.Dumont@maine.gov

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

KEI (USA) Power Management, Inc.
April 18, 2019
Page 2 of 2

If you have any questions regarding the matter, please feel free to contact me.

Sincerely,

Aaron Dumont
Division of Water Quality Management
Bureau of Water Quality
ph: 207-592-7161
Enc.

A handwritten signature in blue ink that reads "Aaron Dumont". The signature is written in a cursive style with a prominent flourish at the end.

cc:

Jim Crowley, MEDEP
Pamela Parker, MEDEP
Lori Mitchell, MEDEP
Ellen Weitzler, USEPA
Alex Rosenberg, USEPA
Solanch Pastrana-Del Valle, USEPA
Marelyn Vega, USEPA
Richard Carvalho, USEPA
Shelley Puleo, USEPA
Environmental Review, IFW
Sean Mahoney, CLF



DEPARTMENT ORDER

IN THE MATTER OF

KEI (USA) POWER MANAGEMENT, INC)	MAINE POLLUTANT DISCHARGE
EUSTIS, FRANKLIN COUNTY, MAINE)	ELIMINATION SYSTEM PERMIT
COOLING WATER DISCHARGE)	AND
EUSTIS HYDRO PROJECT)	
ME0036625)	WASTE DISCHARGE LICENSE
W008080-5R-F-R)	RENEWAL
		APPROVAL

In compliance with the applicable provisions of *Pollution Control*, 38 M.R.S. §411 – 424-B, *Water Classification Program*, 38 M.R.S. §464 – 470 and *Federal Water Pollution Control Act*, Title 33 U.S.C. §1251, and applicable rules of the Department of Environmental Protection (Department), the Department has considered the application of the KEI (USA) Power Management, Inc., with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

On February 15, 2019, the Department accepted as complete for processing, a timely and complete application from KEI for renewal of combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0036625/Waste Discharge License (WDL) #W008080-5R-E-R, which was issued on March 12, 2014 for a five-year term. The 3/12/14 permit authorized the daily maximum discharge of 7,200 gallons per day of non-contact cooling water from one outfall (Outfall #001) at KEI’s Eustis Hydro Project to the North Branch Dead River, Class A, in Eustis, Maine.

PERMIT SUMMARY

This permitting action carries forward all the terms and conditions established in the previous permitting action.

CONCLUSIONS

BASED on the findings in the attached Draft Fact Sheet dated April 18, 2019, 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 M.R.S. §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 met or, 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 as defined in 38 M.R.S. §414-A(1)(D).
5. The discharge is necessary and there are no other reasonable alternatives available.

ACTION

THEREFORE, the Department APPROVES the application of the KEI (USA) POWER MANAGEMENT, INC. to discharge a daily maximum of 7,200 gallons per day of non-contact cooling water at a temperature not to exceed 95 degrees Fahrenheit from Outfall #001 from the Eustis Hydro Project in Eustis to the North Branch Dead River, Class A, in Eustis, Maine, SUBJECT TO THE FOLLOWING 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. §10002 and Rules Concerning the Processing of Applications and Other Administrative Matters, 06-096 CMR 2(21)(A) (last amended June 9, 2018)*].

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT AUGUSTA, MAINE, THIS ____ DAY OF _____, 2019.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
GERALD D. REID, Commissioner

Date of initial receipt of application: February 15, 2019

Date of application acceptance: February 15, 2019

Date filed with Board of Environmental Protection: _____

This Order prepared by Aaron Dumont, Bureau of Water Quality

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The discharge from Outfall #001 is limited to a daily maximum flow of 7,200 gallons per day and a daily maximum temperature of 95°F.
2. The permittee must not discharge wastewater that contains a visible oil sheen, foam, or floating solids at any time that would impair the designated uses or habitat characteristics of the receiving waters or would otherwise lower the quality of the receiving water below its assigned classification.
3. The permittee must not discharge wastewater that imparts color, taste, turbidity, toxicity, or other properties that would impair the designated uses or habitat characteristics of the receiving waters or would otherwise lower the quality of the receiving water below its assigned classification.
4. The permittee must notify the Department immediately of the discharge of any pollutants other than heat from the facility. The permittee must also notify the Department of any changes in facility design, operation or generating capacity that may affect the flow or temperature of the cooling water discharge.
5. All miscellaneous facility leakage and lubrication waters that may become contaminated with oil or grease are subject to Best Management Practices (BMPs) designed to prevent the release of contaminants to the waters of the State. The permittee must develop BMPs and must make the BMPs available in writing for the Department to review and comment upon request. BMPs must consist of, but not be limited to, the following, as appropriate: development and implementation of a spill prevention plan; use of oil absorbent pads or booms and/or physical berms to contain spills or leaks of hydraulic and lubrication oils; and the treatment of water collected in floor drains and sumps through an oil/grease trap or oil-water separator. Where bearing cooling water is used, BMPs must include the maintenance of a written log or record of bearing oil levels and maintenance activities. Where floor drains and sumps are used, BMPs must include (1) written procedures for the cleaning and maintenance of any oil-grease trap, oil skimmer or oil-water separator and (2) maintenance of a written log or record of visual inspections of sumps for oil and grease and of actions taken to prevent the discharge of oil or grease from the facility.

B. AUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with: 1) the permittee's General Application for Waste Discharge Permit, accepted for processing on February 15, 2019; 2) the terms and conditions of this permit; and 3) only from Outfall #001. Discharges of wastewater from any other point source(s) are not authorized under this permit, and must be reported in accordance with Standard Condition D(1)(f), *Twenty-four hour reporting*, of this permit.

SPECIAL CONDITIONS

C. NOTIFICATION REQUIREMENT

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

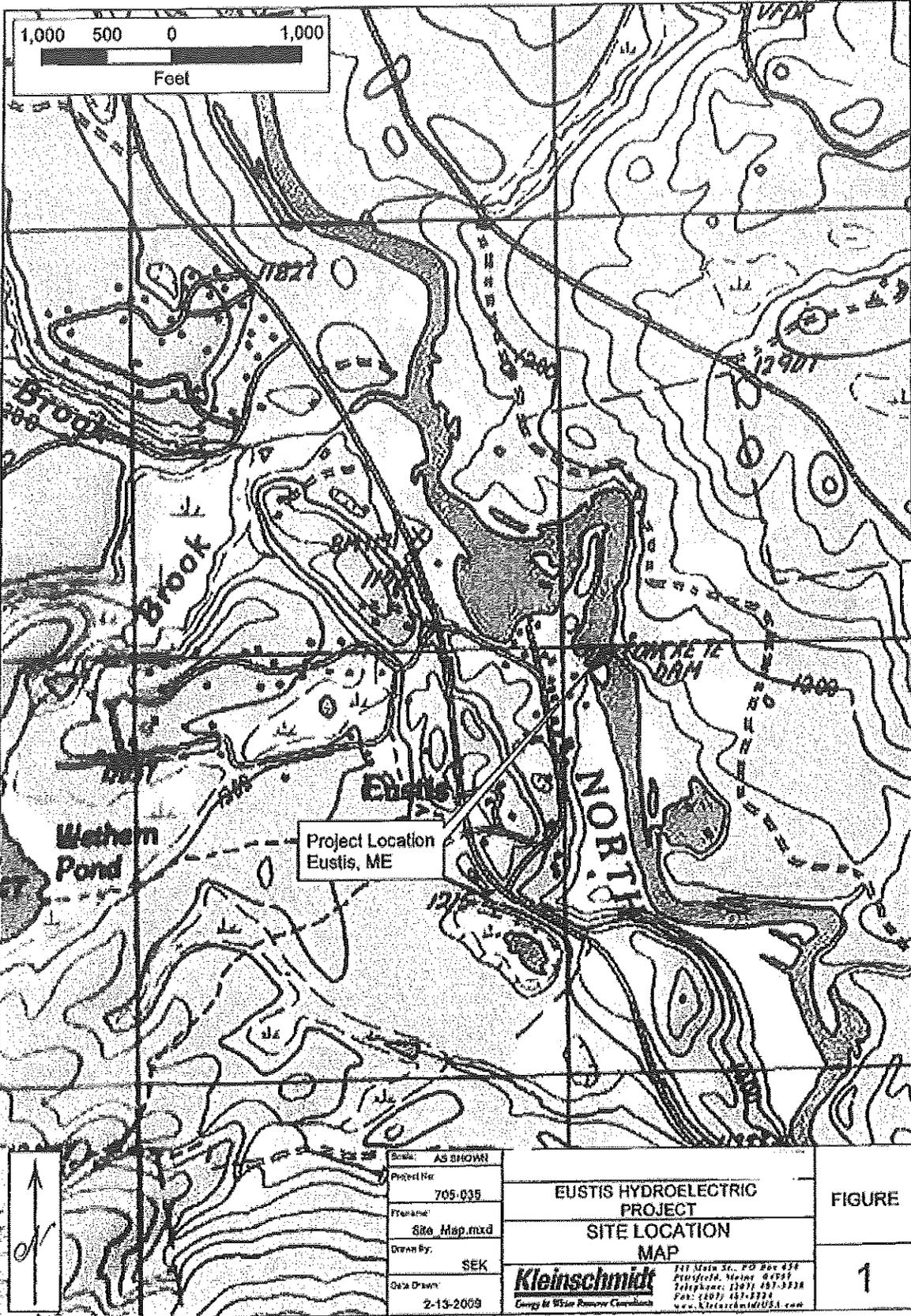
D. REOPENING OF PERMIT FOR MODIFICATIONS

In accordance with 38 M.R.S. §414-A(5) and based upon site inspections, additional site-specific or any other pertinent information or test results obtained during the term of this permit, the Department may, at any time and with notice to the permittee, modify this permit to establish limitations or require additional monitoring, inspections and/or reporting based on the new information.

E. SEVERABILITY

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

ATTACHMENT A



Scale:	AS SHOWN
Project No:	705-035
Filename:	Site Map.mxd
Drawn By:	SEK
Date Drawn:	2-13-2009

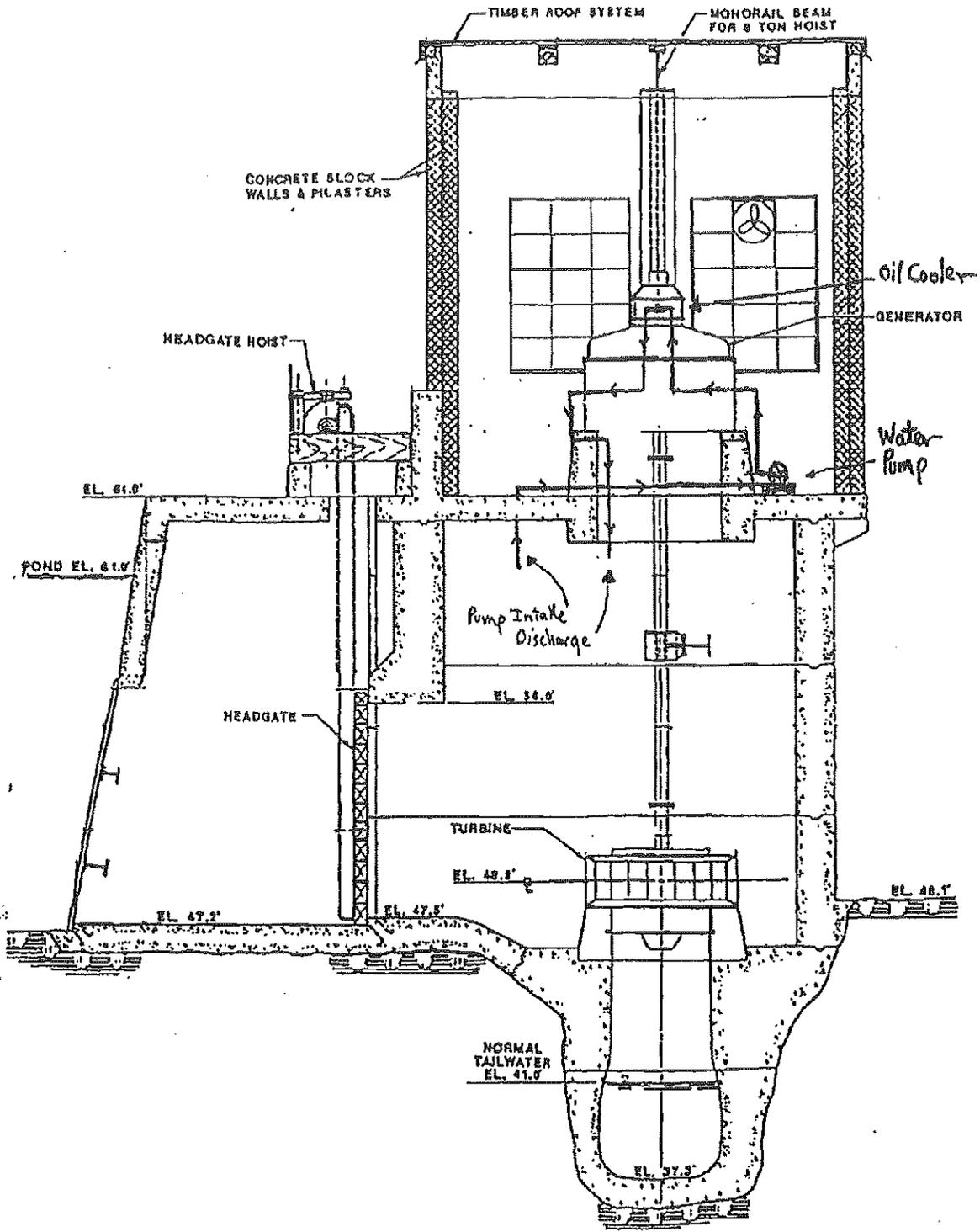
**EUSTIS HYDROELECTRIC
PROJECT
SITE LOCATION
MAP**

Kleinschmidt
Energy & Water Removal Consultants
141 Main St., PO Box 434
Pittsfield, Maine 04955
Telephone: (207) 637-3338
Fax: (207) 457-8724
www.kleinschmidtusa.com

FIGURE

1

ATTACHMENT B



1 0 2 4
 SCALE IN FEET

Eustis Hydroelectric Project
 Non-contact cooling water

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

FACT SHEET

DATE: **April 18, 2019**
PERMIT NUMBER: **ME0036625**
LICENSE NUMBER: **W008080-5R-F-R**

NAME AND ADDRESS OF APPLICANT:

**KEI (USA) POWER MANAGEMENT, INC.
423 BRUNSWICK AVENUE
GARDINER, MAINE, 04345**

NAME, ADDRESS, AND COUNTY WHERE DISCHARGE(S) OCCUR(S):

**KEI (MAINE) POWER MANAGEMENT (I), LLC
EUSTIS HYDRO PROJECT
12 DAY ROAD
EUSTIS, MAINE 04936
FRANKLIN COUNTY**

COGNIZANT OFFICIAL CONTACT INFORMATION:

**LEWIS LOON
(207) 203-3026
EMAIL: lewis.loon@kruger.com**

1. APPLICATION SUMMARY

Application: On February 15, 2019, the Department of Environmental Protection (Department) accepted as complete for processing, a timely and complete application from KEI (USA) Power Management, Inc., for renewal of combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0036625/Waste Discharge License (WDL) #W008080-5R-E-R, which was issued on March 12, 2014 for a five-year term. The 3/12/14 permit authorized the daily maximum discharge of 7,200 gallons per day of non-contact cooling water from one outfall (Outfall #001) at KEI's Eustis Hydro Project to the North Branch Dead River, Class A, in Eustis, Maine.

2. PERMIT SUMMARY

- a. Terms and Conditions: This permitting action carries forward all the terms and conditions established in the previous permitting action.
- b. History: The most current relevant regulatory actions include:

February 23, 1999 - The Department issued new license #W008080-5R-A-N to Ridgewood Maine Hydro Partners, LP for a five-year term.

January 12, 2001 – The State of Maine received authorization from the United States Environmental Protection Agency (USEPA) to administer the National Pollutant Discharge Elimination System (NPDES) permitting program in Maine.

April 1, 2004 – The Department issued combination MEPDES permit #ME0036625/WDL #W008080-5R-B-R to Ridgewood Maine Hydro Partners, LP for a five-year term.

April 15, 2009 – The Department issued combination MEPDES permit ME0036625/WDL #W008080-5R-C-R to Ridgewood Maine Hydro Partners, LP for a five-year term.

November 20, 2009 - The Department issued global transfer order #W008080-5R-D-T, transferring WDL #W008080-5R-C-R from Ridgewood Maine Hydro Partners, LP to KEI.

March 12, 2014 – The Department issued combination MEPDES permit ME0036625/WDL #W008080-5R-E-R to KEI for a five-year term.

February 15, 2019 – KEI submitted a timely and complete application for renewal of MEPDES permit #ME0036625 / #W008080-5R-E-R. The application was accepted as complete for processing on February 15, 2019 and designated WDL #W008080-5R-F-R.

- b. Source Description: The source of the discharge is a hydroelectric generating facility. The discharge consists of non-contact cooling water. The discharge flow rate is variable, depending on cooling needs, up to a maximum flow of 7,200 gallons per day (maximum cooling system capacity, based on information from applicant). The discharge occurs from a single outfall.

Other miscellaneous discharges from Outfall 001 consist of shaft lubrication waters, foundation leakage waters, and/or leakage from wicket gates and other equipment. In the event of leaks, spills or equipment failure, these sources may become contaminated with hydraulic or lubrication oil and grease.

2. PERMIT SUMMARY (cont'd)

All miscellaneous facility leakage and lubrication waters that may become contaminated with oil or grease are subject to Best Management Practices (BMPs) designed to prevent the release of contaminants to the waters of the State. Within 90 days of permit issuance, the permittee must develop written BMPs and must make the BMPs available to the Department for review and comment upon request.

BMPs must consist of, but not be limited to, the following, as appropriate: development and implementation of a spill prevention plan; use of oil absorbent pads or booms and/or physical berms to contain spills or leaks of hydraulic and lubrication oils; and the treatment of water collected in floor drains and sumps through an oil/grease trap or oil-water separator. Where bearing cooling water is used, BMPs must include the maintenance of a written log or record of bearing oil levels and maintenance activities. Where floor drains and sumps are used, BMPs must include (1) written procedures for the cleaning and maintenance of any oil-grease trap, oil skimmer or oil-water separator and (2) maintenance of a written log or record of visual inspections of sumps for oil and grease and of actions taken to prevent the discharge of oil or grease from the facility. See **Attachment A** of this Fact Sheet for a flow schematic for the facility.

3. CONDITIONS OF PERMITS

Conditions of licenses, 38 M.R.S. §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. §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 (last amended July 29, 2012), 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

Classification of major river basins, 38 M.R.S. §467(4)(D)(2) classifies the “tributaries of the Dead River as Class A unless otherwise specified, for which the North Branch Dead River is not further classified”, which includes the reach of river subject to KEI’s discharge, as Class A. *Standards for classification of fresh surface waters*, 38 M.R.S., §465(2) describes the standards for Class A waters.

Direct discharges into Class A waters licensed after January 1, 1986, are permitted only if, in addition to satisfying all other statutory requirements, the discharged effluent will be equal to or better than the existing water quality of the receiving waters. The Applicants have submitted information regarding reasonable alternatives to the current discharge (email correspondence dated February 4, 2014 from Lewis Loon to Yvette Meunier). The Department concludes that no reasonable alternative exists and that the Applicant has satisfied this requirement.

5. RECEIVING WATER CONDITIONS

The State of Maine 2016 Integrated Water Quality Monitoring and Assessment Report, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists the segment where the discharge occurs in the North Branch Dead River as ABD Assessment Unit ID ME0103000201_307R in the following categories:

Category 2: Attains some of the designated uses; no use is threatened; and insufficient data or no data and information is available to determine if the remaining uses are attained or threatened (with presumption that all uses are attained).

Category 4-A: Rivers and Streams with Impaired Use, TMDL Complete. Impairment in this context refers to a statewide fish consumption advisory due to elevated levels of mercury in some fish tissues. The Report states, "All freshwaters are listed in Category 4A (TMDL Completed) due to USEPA approval of a Regional Mercury TMDL. Maine has a fish consumption advisory for fish taken from all freshwaters due to mercury. Many waters, and many fish from any given water, do not exceed the action level for mercury. However, because it is impossible for someone consuming a fish to know whether the mercury level exceeds the action level, the Maine Department of Health and Human Services decided to establish a statewide advisory for all freshwater fish that recommends limits on consumption. Maine has already instituted statewide programs for removal and reduction of mercury sources."

The Department has no information that the discharge from KEI's Eustis Hydro Project, as permitted, causes or contributes to non-attainment of applicable water quality standards.

6. REGULATIONS RELATING TO TEMPERATURE

Regulations Relating to Temperature 06-096 CMR 582 (last amended February 18, 1989), states that no discharge must cause the ambient temperature of any freshwater body to be raised more than 5 degrees Fahrenheit, nor must any discharge cause the temperature of any waters to exceed the USEPA national ambient water quality criteria established to protect all species of fish that are indigenous to the receiving waters. When the ambient temperature of any body of water naturally exceeds the applicable USEPA criteria, no thermal discharge may be allowed which alone or in combination with other discharges would raise the ambient temperature of the receiving water more than 0.5 degrees Fahrenheit.

The Department has established that cold water fish species are indigenous to all Maine rivers and streams. USEPA has established maximum temperatures for the protection of growth and survival of cold water fish as follows: a weekly average temperature of 66 degrees Fahrenheit; and a daily maximum temperature of 73 degrees Fahrenheit.

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The USEPA has not promulgated National Effluent Guidelines for non-contact cooling water. The Department has made a best professional judgment (BPJ) determination that BPT for hydro project cooling water is no treatment, unless treatment to control thermal loading is determined to be required.

The Department has calculated that, under worst case conditions of maximum cooling water flow (7,200 gallons per day), maximum cooling water temperature (assumed 95 degrees Fahrenheit, based on staff analysis of industry data), and 7Q10 receiving water flow (17.5 cfs), and without any treatment to reduce thermal loading, the discharge will raise the ambient temperature of the receiving water by less than 4/100th of a degree Fahrenheit. Therefore, the Department has determined that neither effluent limitations nor monitoring requirements are necessary to ensure that applicable water quality standards are met and that the “equal to or better than” standard for Class A waters is satisfied.

However, the discharge will be subject to effluent limitations that require application of best practicable treatment as defined in 38 M.R.S. §414-A(1)(D). Within 90 days of permit issuance, the permittee must develop BMPs and must make the BMPs available in writing for the Department to review and comment upon request.

8. PUBLIC COMMENTS

Public notice of this application was made in the Kennebec Journal on or about January 15, 2019. The Department receives public comments on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits must have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to *Application Processing Procedures for Waste Discharge Licenses*, 06-096 CMR 522 (effective January 12, 2001).

9. DEPARTMENT CONTACTS

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

Aaron Dumont
Department of Environmental Protection
Bureau of Water Quality
17 State House Station
Augusta, Maine 04333-0017

10. RESPONSE TO COMMENTS

Reserved until the end of the formal 30-day public comment period.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

CONTENTS

SECTION	TOPIC	PAGE
A	GENERAL PROVISIONS	
1	General compliance	2
2	Other materials	2
3	Duty to Comply	2
4	Duty to provide information	2
5	Permit actions	2
6	Reopener clause	2
7	Oil and hazardous substances	2
8	Property rights	3
9	Confidentiality	3
10	Duty to reapply	3
11	Other laws	3
12	Inspection and entry	3
B	OPERATION AND MAINTENANCE OF FACILITIES	
1	General facility requirements	3
2	Proper operation and maintenance	4
3	Need to halt reduce not a defense	4
4	Duty to mitigate	4
5	Bypasses	4
6	Upsets	5
C	MONITORING AND RECORDS	
1	General requirements	6
2	Representative sampling	6
3	Monitoring and records	6
D	REPORTING REQUIREMENTS	
1	Reporting requirements	7
2	Signatory requirement	8
3	Availability of reports	8
4	Existing manufacturing, commercial, mining, and silvicultural dischargers	8
5	Publicly owned treatment works	9
E	OTHER PROVISIONS	
1	Emergency action - power failure	9
2	Spill prevention	10
3	Removed substances	10
4	Connection to municipal sewer	10
F	DEFINITIONS	10

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.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

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

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

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).

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

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.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

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.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

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.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

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.