STATE OF MAINE

Department of Environmental Protection

Paul R. LePage
GOVERNOR

Patricia W. Aho
COMMISSIONER

October 16, 2014

Mr. David Ettinger
Plant Manager
ReEnergy Livermore Falls LLC
P.O. Box 4300, Diamond Road
Livermore Falls, ME. 04254
e-mail: dettinger@reenergyholdings.com

Mr. Willam Parker
Environmental Manager
ReEnergy Livermore Falls LLC
P.O. Box 430
Fort Fairfield, ME. 04742
wparker@reenergyholdings.com

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0023710
Maine Waste Discharge License (WDL) #W007705-5S-H-M
Minor Revision

Dear Mr. Ettinger & Mr. Parker:

Enclosed please find a copy of your **final** MEPDES permit and Maine WDL **minor revision** which was approved by the Department of Environmental Protection. Please read the minor revision carefully as 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: Beth DeHaas, DEP/CMRO
Sandy Mojica, USEPA
Marelyn Vega, USEPA

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-3901 FAX: (207) 287-3435
RAY BLDG., HOSPITAL ST.

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PRESQUE ISLE, MAINE 04769-2094
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web site: www.maine.gov/dep

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

DEPARTMENT ORDER

IN THE MATTER OF

REENERGY LIVERMORE FALLS LLC	)	MAINE POLLUTANT DISCHARGE
LIVERMORE FALLS, ANDROSCOGGIN	)	ELIMINATION SYSTEM PERMIT
COUNTY, MAINE	)	
ELECTRICAL GENERATING STATION	)	AND
ME0023710	)	WASTE DISCHARGE LICENSE
W007705-5S-H-M **APPROVAL**	)	**MINOR REVISION**

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, *et. seq.* and *Conditions of Licenses*, 38 M.R.S.A., Section 414-A *et seq.*, and applicable regulations, the Department of Environmental Protection (Department hereinafter) has considered a request by REENERGY LIVERMORE FALLS LLC (ReEnergy/permittee hereinafter) to modify combination Maine Pollutant Discharge Elimination System (MEPDES) permit ME0023710/Maine Waste Discharge License (WDL) #W007705-5R-F-R (permit hereinafter), which was issued by the Department on September 12, 2011. With its supportive data, agency review comments, and other related material on file, the Department FINDS THE FOLLOWING FACTS:

MODIFICATION(S) REQUESTED

ReEnergy has submitted a request to the Department to modify MEPDES permit ME0023710/WDL #W007705-5R-F-R, to add language to the footnotes section of Special Condition A, *Effluent Limitations and Monitoring Requirements* and add a new Special Condition E entitled, *Total Suspended Solids* (TSS). More specifically, the permittee requested the Sampling Location footnote be modified to reflect new sampling locations, the Total Suspended Solids (TSS) footnote be modified to instruct the permittee on influent and effluent sampling to obtain the necessary data to calculate the net TSS discharge mass and concentrations levels in the formula in the new Special Condition E of the permit.

MODIFICATION(S) GRANTED/DENIED

The proposed language changes are acceptable to the Department. To provide consistency, all of the language in the permit and fact sheet of the September 12, 2011 document issued to Boralex Livermore Falls LP as revised by this minor revision, have been incorporated into this document.

CONCLUSIONS

BASED on the findings on page one of this minor revision, 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.A., 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 natural resource, that water quality will be maintained and protected;

   c. 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.

ACTION

THEREFORE, the Department APPROVES the above noted request by REENERGY LIVERMORE FALLS LLC to modify MEPDES permit ME0023710/WDL #W007705-5R-G-R, dated September 12, 2011, 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 to MEPDES permit ME0023710/WDL #W007705-5R-G-R, dated September 12, 2011.

2. The attached Special Conditions, including any effluent limitations and monitoring requirements.

3. All terms and conditions of MEPDES permit ME0023710/WDL #W007705-5R-G-R, dated September 12, 2011, not modified by this permitting action remain in effect and enforceable.

4. This minor revision becomes effective upon the date of signature below and expires at midnight on September 12, 2016. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of this permit, the terms and conditions of this permit and all subsequent 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) (effective April 1, 2003)].

DONE AND DATED AT AUGUSTA, MAINE, THIS 17th DAY OF October, 2014.

COMMISSIONER OF ENVIRONMENTAL PROTECTION

BY: Michael Kuhns
for Patricia W. Aho, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application July 28, 2014.
Date of application acceptance July 29, 2014.

Filed
OCT 21 2014
State of Maine
Board of Environmental Protection

Date filed with Board of Environmental Protection

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

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORINGREQUIREMENTS

1. Beginning effective date of this permit, the permittee is authorized to discharge **cooling tower blowdown, boiler blowdown, demineralization system ion exchange regeneration waters, and storm water** from **Outfall #001E** to the Androscoggin River. The discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow [50050]	0.138 MGD [03]	0.175 MGD [03]	---	---	Continuous [99/99]	Meter [MT]
Temperature, °F [00011] *(Oct. 1 – May 31)*	---	---	---	90°F [15]	---	---
Temperature, °F [00011] *(June 1 – Sept. 30)*	---	---	---	90°F [15]	1/Month [01/30]	Grab [GR]
Free Available Chlorine[(1)] [50064]	---	---	0.2 mg/L [19]	0.5 mg/L [19]	1/Month [01/30]	Grab [GR]
Total Suspended Solids[(2)] [00530]	34 lbs/day [26]	73 lbs/day [26]	30 mg/L [19]	50 mg/L [19]	2/Month [02/30]	Grab [GR]
Zinc (Total) [01092]	1.2 lbs/day [26]	1.4 lbs/day [26]	1.0 mg/L [19]	1.0 mg/L [19]	1/Month [01/30]	Grab [GR]
Oil and Grease [03582]	---	---	15 mg/L [19]	20 mg/L [19]	1/Month [01/30]	Grab [GR]
Chromium (Total) [01034]	0.23 lbs/day [26]	0.28 lbs/day [26]	0.20 mg/L [19]	0.20 mg/L [19]	1/Month [01/30]	Grab [GR]
pH [00400]	The pH shall be ≥ 6.0 and ≤ 9.0 at any time[(3)]				1/Month [01/30]	Grab [GR]

SPECIAL CONDITIONS
A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall #001E

Sampling Location: Effluent sampling from Outfall #001E shall be performed at a sampling station located in the raw water pumphouse building immediately prior to discharge to the river. The sample point is located after the final confluence of waste water and is representative of the water conditions at the final outfall structure. Any change in sampling location must be approved by the Department in writing. (Note: Any required sampling of raw water (influent sampling) will be taken from the raw water makeup line to the cooling tower. The sample station is the spigot which is located off the raw water fill line just prior to the level control valve.

Sampling – Sampling and analysis must be conducted in accordance with; a) methods approved in 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 shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services. Samples that are sent to another POTW licensed pursuant to *Waste discharge licenses*, 38 M.R.S.A. § 413 or laboratory facilities that analyze compliance samples in-house are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*, 10-144 CMR 263 (last amended February 13, 2000).

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. See **Attachment A** of this permit for a list of the Department's RL's. 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.

Footnotes:

(1) **Free available chlorine** - Pursuant to 40 CFR, Part 423.12(b)(8), free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available chlorine nor total residual chlorine at any time unless the utility can demonstrate to the Department that the units cannot operate at or below this level of chlorination.

SPECIAL CONDITIONS

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

(2) **Total Suspended Solids (TSS)** – Effluent TSS results shall be calculated using the formula provided in Special Condition E of this permit. Sampling shall be done during 3 sampling events to gather 2 monthly influent/effluent TSS samples. The first sampling event will be for the collection of an influent sample only. After approximately 4 days of plant operations (the time required to turn over the circulation water system's 250,000 gallon capacity one time at a normal blowdown rate of 40 gpm or ~ 4.3 days), the first effluent sample and a second influent sample will be collected. After an additional 4 day period, the second effluent sample will be collected.

(3) **pH** - The pH of the discharge from all outfalls may be outside of the range of 6.0 - 9.0 standard units provided it is not more than 0.5 standard units outside of the background pH of the intake water for the facility or precipitation at the time of sampling or 0.5 standards units outside the limitation range of 6.0 -9.0 standard units. To determine compliance with this provision, the permittee must sample and document the ambient pH of the intake water or precipitation if a pH result of the discharge is reported outside of the range limitation of 6.0 - 9.0 standard units.

SPECIAL CONDITIONS

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

2. Beginning the effective date of the permit, the permittee is authorized to discharge storm water runoff from **OUTFALLS SW001, SW002 and SW003** to adjacent wooded areas.

   OUTFALL SW003 - Northeast of the facility. See **Attachment A** of the Fact Sheet*.
   OUTFALL SW002 – Southeast of the facility. See **Attachment A** of the Fact Sheet*.
   OUTFALL SW001 – Southwesterly of the facility. See **Attachment A** of the Fact Sheet*.

   See **Attachment B** of the Fact Sheet* attached to this permit for a site location map of the facility.

   a. Storm Water Pollution Prevention Plan (SWPPP)

      With respect to areas of the facility contributing storm water flow subject to this permit, the permittee shall develop, implement, maintain and annually update a Storm Water Pollution Prevention Plan (SWPPP) for the facility that is consistent with the SWPPP requirements established in Part V of the Department's *Multi-Sector General Permit Maine Pollutant Discharge Elimination System Stormwater Discharge Associated with Industrial Activity*, dated April 26, 2011. See **Attachment A** of this permit for as copy of the SWPPP requirements. The permittee shall maintain a copy of the SWPPP on-site for Department or USEPA staff inspection. **Within 30 days of any change** in design, construction, operation, maintenance, or any chemical spill at the facility which has or may have a significant effect on the amount of pollutants present in storm water, the permittee shall amend the SWPPP and note all changes.

   b. Monitoring Requirements [(1)]

      At a minimum frequency of once per calendar quarter, the permittee shall perform and document a visual examination of a storm water discharge at the end of the storm water conduit for each outfall (Outfalls #004, #005, #006, #007 and #008) in accordance with Department guidance document #DEPLW0768, *Standard Operating Procedure Guidelines for Visual Monitoring of Stormwater Associated with Industrial Activities, Instructions for Completing the Visual Monitoring Form and Visual Monitoring Form*) (all included as **Attachment B*** of this permit).The permittee shall document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The permittee must maintain the visual examination reports on-site with the SWPPP for a minimum of three years from the observation date.

* See MEPDES ME0023710/WDL #W007705-5R-F-R which was issued by the Department on September 12, 2011.

SPECIAL CONDITIONS

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

Footnotes: (1) Should less stringent monitoring requirements be adopted by the Department during the term of this permit, the permittee may a request a modification of the permit to incorporate the new monitoring requirements or the Department may initiate a modification of the permit pursuant to Special Condition I of this permit, after notice and opportunity for comment by ReEnergy Livermore Falls LLC to incorporate less stringent storm water monitoring requirements.

B. NARRATIVE EFFLUENT LIMITATIONS

1. There shall be no discharge of polychlorinated biphenyl compounds (PCB's).

2. The effluent shall not contain a visible oil sheen, foam or floating solids at any time which would impair the usages designated by the classification of the receiving waters.

3. 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 by the classification of the receiving waters.

4. The discharge shall not cause visible discoloration or turbidity in the receiving waters which would impair the usages designated by the classification of the receiving waters.

5. 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. METAL CLEANING WASTES

The chemical metal cleansing wastes generated when cleaning the heat recovery steam generator shall not be discharged and be transported off-site for proper disposal/treatment pursuant to all applicable federal, state, and local laws and regulations.

D. COOLING TOWER CLEANING WASTES

The cooling tower solids shall be removed for drying either on-site or off-site followed by proper disposal off-site pursuant to all applicable federal, state, and local laws and regulations.

SPECIAL CONDITIONS

E. TOTAL SUSPENDED SOLIDS (TSS)

Effluent TSS (mg/L) shall be calculated using the following equation. Influent TSS (TSS_R) and Outfall TSS (TSS_O) samples shall be collected and reported as provided under footnote (2) of Special Condition A.

$$TSS_O - TSS_R = TSS_E$$

Where TSS_O = Outflow TSS (mg/L)
TSS_R = Influent TSS (mg/L) X 6
TSS_E = Effluent TSS (mg/L)

Effluent Total Suspended Solids (lbs) shall be calculated using the formula TSS_E X Flow (MGD) X 8.34. The Flow used in this calculation shall be the total effluent flow on the day the effluent sample was collected.

F. MERCURY

All mercury sampling (1/Year) required by this permit or required to determine compliance with interim limitations established pursuant to Department rule Chapter 519, shall be conducted in accordance with EPA's "clean sampling techniques" found in EPA Method 1669, Sampling Ambient Water For Trace Metals At EPA Water Quality Criteria Levels. All mercury analysis shall be conducted in accordance with EPA Method 1631, Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Fluorescence Spectrometry. See **Attachment C,** *Effluent Mercury Test Report*, of MEPDES ME0023710/WDL #W007705-5R-G-R which was issued by the Department on September 12, 2011for the Department's form for reporting mercury test results.

G. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee shall notify the Department of the following:

1. Any substantial change in the volume or character of pollutants being discharged.

2. For the purposes of this section, adequate notice shall include information on:

   a. The quality or quantity of waste water introduced to the waste water collection and treatment system; and

   b. Any anticipated impact from the change in the quality or quantity of the waste water to be discharged.

SPECIAL CONDITIONS

H. 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 July 26, 2011, 2) the terms and conditions of this permit; and 3) only from the outfalls cited in this permit. Discharges of waste water from any other point source are not authorized under this permit, and shall be reported in accordance with Standard Condition B(5)(*Bypass*) of this permit.

I. 06-096 CMR 530(2)(D)(4) STATEMENT FOR REDUCED/WAIVED TOXICS TESTING

By December 31 of each calendar year, the permittee shall provide the Department with a certification describing any of the following that have occurred since the effective date of this permit *[PCS Code 95799]*: See **Attachment D** of the Fact Sheet of MEPDES ME0023710/WDL #W007705-5R-F-R which was issued by the Department on September 12, 2011for an acceptable certification form to satisfy this Special Condition.

a. Changes in the number or types of non-domestic wastes contributed directly or indirectly to the wastewater treatment works that may increase the toxicity of the discharge;

b. Changes in the operation of the treatment works that may increase the toxicity of the discharge; and

c. Changes in industrial manufacturing processes contributing wastewater to the treatment works that may increase the toxicity of the discharge.

In addition, in the comments section of the certification form, the permittee shall provide the Department with statements describing;

d. Changes in storm water collection or inflow/infiltration affecting the facility that may increase the toxicity of the discharge.

e. Increases in the type or volume of hauled wastes accepted by the facility.

The Department reserves the right to reinstate annual (surveillance level) testing or other toxicity testing if new information becomes available that indicates the discharge may cause or have a reasonable potential to cause exceedences of ambient water quality criteria/thresholds.

SPECIAL CONDITIONS

J. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and shall be postmarked by the thirteenth (13th) day of the month or hand-delivered to a Department Regional Office such that the DMRs are received by the Department by the fifteenth (15th) day of the month following the completed reporting period. A signed copy of the DMR and all other reports required herein shall be submitted, unless otherwise specified, to the Department's facility inspector at:

Department of Environmental Protection
Central Maine Regional Office
Division of Water Quality Management
17 State House Station
August, Maine 04333

J. MONITORING AND REPORTING

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.

K. REOPENING OF PERMIT FOR MODIFICATIONS

Upon evaluation of test results required by the Special Conditions of this permit, new site specific information or any other test results or information gathered 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 monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

L. 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.

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.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **July 26, 2011**
Revised: **October 16, 2014**

PERMIT NUMBER: **ME0023710**
LICENSE NUMBER: **W007705-5S-H-R**

NAME AND ADDRESS OF APPLICANT:

RENERGY LIVERMORE FALLS LLC
Formerly BORALEX LIVERMORE FALLS LP
267 Diamond Road
Livermore Falls, Maine 04254

COUNTY: **Androscoggin County**

NAME AND ADRESS WHERE DISCHARGE OCCURS:

267 Diamond Road
Livermore Falls, Maine 04254

RECEIVING WATER/CLASSIFICATION: **Androscoggin River/Class C**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. David Ettinger**
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1. APPLICATION SUMMARY

a. Application – ReEnergy Livermore Falls LLC (ReEnergy/permittee hereinafter) has submitted a timely and complete application to the Department for the renewal of combination Maine Pollutant Discharge Elimination System (MEPDES) permit ME0023710/Maine Waste Discharge License (WDL) #W007705-5R-F-R (permit hereinafter), which was issued by the Department on December 13, 2006 and is due to expire on December 13, 2011. The permit authorized the discharge of miscellaneous waste waters including 138,000 gallons per day (gpd) of cooling tower and boiler blowdown, 6,000 gpd of demineralization system ion exchange regeneration water and unspecified quantity of floor washdown waters and storm water runoff from a fuel storage area associated with a biomass fired electrical generating facility to the Androscoggin River, Class C, in Livermore Falls, Maine.

1. APPLICATION SUMMARY (cont'd)

b. Source Description: Sources of waste water/storm water runoff are as follows:

Power Plant

ReEnergy operates a 39.6 megawatt steam electric power generating station that is fueled by various biomass wood fuels. Biomass fuel consists of Construction/Demolition Wood Debris (CDWD) and conventional wood fuel. CDWD consists of chipped wood demolition debris (including pallets) with painted, chemically treated, and wood mixed with roofing and other non-wood related demolition products. Non-wood related products are removed from the fuel such that the amount remaining is determined to be insignificant.

Biomass fuel is delivered by enclosed trailer truck to the facility. The facility's fuel receiving system consists of two truck dumpers and two receiving hoppers and an enclosed scalper/hog. Fuel is conveyed to the long-term fuel storage area by way of an enclosed conveyor, then transferred via fuel reclaiming equipment, additional covered conveyors and an enclosed boiler feed system to the boiler furnace.

The facility's ash removal system consists of an ash conditioning system, enclosed conveyors, and an enclosed ash storage area. Also, various auxiliary systems are installed to support proper operation of the boiler and turbine/generator system.

See **Attachment B** of this permit for a water balance diagram for this facility.

Storm water

The topography of the site promotes runoff drainage from the fuel storage pad into a lined detention pond located along the west side of the fuel storage pad. The site is currently accessed by the Diamond Road. Slopes range from 2% to 26% and an approximate 27-foot change in elevation is realized from the southwest corner to the northeast corner of the site.

Sub-catchment 1 is the vegetated area located along the westerly edge of the facility. This area drains down the vegetated slope from the northwestern corner of the facility towards the southeast. The runoff is collected in a riprap drainage swale. Storm water leaves the property and discharges to a wooded area via a pipe measuring 20 inches in diameter and is designated as Outfall SW001. See **Attachment A** of this Fact Sheet attached to MEPDES ME0023710/WDL #W007705-5R-F-R which was issued by the Department on September 12, 2011.

1. APPLICATION SUMMARY (cont'd)

Sub-catchment 2 is located east of the fuel storage pad and includes a vegetated area that runs parallel with and includes a portion of the property belonging to the Livermore Falls Transfer Station.

Sub-catchment 3 is located to the northeast of the fuel storage pad. Sub-catchment 3 includes a portion of the production facility, cooling tower and part of the facility switchyard. Storm water leaves the property through a culvert under Diamond Road just prior to the facility security gate and is designated as Outfall SW003. Outfall 003 discharges to a wooded area which is located near the northeast corner of this sub-catchment.

Sub-catchment 4 includes the fuel storage area and storage building roof. The area drains to the lined detention pond to the southwest corner of the pad. The leachate from the exposed material travels in a southwesterly direction to the asphalt drainage swale which directs storm water into the lined detention pond via a widened paved drainage swale. During extreme storm events, storm water could fill the lined detention pond and spill into the smaller dry, unlined pond. Should the lined pond fill, the lined pond's emergency spillway would discharge into the unlined pond. Storm water from the unlined pond discharges through Outfall 001 which discharges to a wooded area located on the facility site.

The outlet of the lined detention pond is pumped to the common waste water outfall pipe that discharges to Outfall #001E. Under emergency situations, such as a need for additional fire-fighting water or if the water pumps fail at the raw water pump house and cooling water is needed to bring the power plant safely off line. This water will be pumped to the cooling tower. The facility will notify the Department within 24 hours of an emergency event requiring use of the water from the lined detention pond. Hydrology analysis of the storm water generated during a 24-hour, 25-year storm events (assuming no wood fuel is being stored on the asphalt pad) indicates the emergency spillway for the wet pond will be active. With as little as 5% of the storage area used, a discharge over the spillway will not occur. According to facility personnel, the storage area is rarely vacant of wood fuel. Approximately 30% of the operations area of the facility property located in the northwest portion of the facility property drains through a system of swales and pipes to the unlined runoff detention pond located on the north edge of the facility property. The runoff accumulating in this pond normally infiltrates into the ground or evaporates.

Two portions of the property where operations take place drain away from the runoff detention pond. One area is the northwest corner comprising approximately 10% of the operations area of the facility. The area contains virtually all of the main access roadway used by suppliers to bring fuel oils, lubricants and chemicals to the facility. The second area is the southwest corner of the facility. This area includes approximately 10% of the area where operations take place. Passing through it is only a small portion of the facility access roadway. In this drainage area there is a small area drain that lies directly beneath

1. APPLICATION SUMMARY (cont'd)

the No. 2 fuel oil/urea/sulfuric acid/sodium hydroxide/emergency generator diesel fuel storage tank off-loading standpipes mounted on the east wall of the turbine/generator building. It is connected to the foundation drains that discharge into the runoff detention pond.

Therefore, approximately 80% of the area of the facility used for plant operations drains to two ponds. Runoff collected in these lined ponds can be held, under nearly all but extreme precipitation conditions. If an oil spill should occur in sub-catchment 4, any oil would drain to the lined pond. Oil accumulating on the surface of the water can be skimmed off and disposed. No means for detention of runoff from other three areas are in place.

e. Treatment:
Power Plant

All of the plant floor drains in the turbine/generator building are directed to a 450-gallon oil/water separator. The oil/water separator has a design flow of 30 gpm with a 15 minute retention capacity. The oil/water separator removes sediment and floating pollutants (oil) from incoming water. Regular maintenance is required to remove accumulated debris. The oil/water separators will be maintained according to the Operations & Maintenance Manual provided with the separators, and records of inspections and maintenance activities will be kept in the facility's SWPPP.

Underflow from the oil/water separator flows to the turbine/generator building sump. One of two pumps lift the wastewater into a 10,000 gallon neutralization tank where its pH is adjusted (along with demineralizer regeneration wastewater) and then conveys the water into the cooling tower circulation return line. Blow down from the cooling tower joins several other wastewater flows and is discharged to the Androscoggin River through Outfall #001E via a corrugated metal pipe measuring 18 inches in diameter and extends out into the river approximately 20 feet. Also, oil used or held in equipment supporting the turbine generator rests inside minor containment structures which are designed to retain drips and minor leakage of oil. If a spill of oil were to occur, the oil would be collected in the oil/water separator.

Sulfuric acid is used for cooling tower water pH control. Sodium hydroxide is used for demineralizer regeneration and neutralization of the demineralizer regenerant and other wastewaters. Sodium hypochlorite is used for cooling tower water treatment.

Storm water

No structural treatment systems other than detention ponds are in place to treat storm water runoff associated with industrial activities at the site. To the extent practical, best management practices (BMPs) are incorporated to limit the potential for contaminates entering storm water discharge.

2. PERMIT SUMMARY

a. Terms and Conditions - This permitting action carries forward all the terms and conditions of the 12/13/06 permitting action except that the requirements of the Storm Water Pollution Prevention Plan (SWPPP) have been modified to be consistent with the requirements in the Department's most current Multi-Sector General Permit for stormwater.

b. History: The most recent relevant regulatory actions include the following:

March 10, 1992 – The Department issued a new WDL to Northeast Empire Limited Partnership (NELP) for a five-year term. WDL #W007705-42-A-N authorized the discharge of miscellaneous non-process waste waters from a newly constructed biomass fueled electrical generating facility.

June, 1992 - NELP's Beaverwood facility commenced operations and began discharging to the Androscoggin River.

September 28, 1992 - The EPA issued NPDES permit #ME0023710 for a five-year term. The permit authorized the same discharge and contained the same numeric limitations and monitoring requirements contained in the 3/10/92 State WDL.

July 12, 2000 – The Department administratively modified the 3/10/92 WDL by establishing interim mean and maximum technology based concentration limitations of 25.0 ng/L and 37.5 ng/L, respectively for mercury.

December 28, 2000 – The Department issued WDL renewal #W007705-5R-B-R for a five-year term.

January 12, 2001 - The State of Maine received authorization from the EPA to administer the NPDES permit program in Maine.

May 8, 2002 – The Department transferred all permits and licenses issued by the Department for the Livermore Falls electrical generation facility to Boralex Livermore Falls Inc.

December 16, 2006 – The Department issued combination MEPDES permit #ME0023710/Maine WDL #W007705-5R-D- R for a five year term.

June 22, 2011 – Boralex submitted a timely and complete application to the Department to renew the 12/16/11 MEPDES permit/WDL.

3. CONDITIONS OF PERMITS

Maine law, 38 M.R.S.A. Section 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., Section 420 and Department rule 06-096 CMR Chapter 530, *Surface Water Toxics Control Program,* require the regulation of toxic substances not to exceed levels set forth in Department rule 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, 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., §467(1)(A)(2) states that the Androscoggin River at and below the point of discharge from the ReEnergy facility is classified as a Class C waterway. Maine law, 38 M.R.S.A., §465(4) describes the classification standards for Class C waters as follows;

A. Class C 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 a habitat for fish and other aquatic life.

B. The dissolved oxygen content of Class C water may be not less than 5 parts per million or 60% of saturation, whichever is higher, except that in identified salmonid spawning areas where water quality is sufficient to ensure spawning, egg incubation and survival of early life stages, that water quality sufficient for these purposes must be maintained. In order to provide additional protection for the growth of indigenous fish, the following standards apply.

(1) The 30-day average dissolved oxygen criterion of a Class C water is 6.5 parts per million using a temperature of 22 degrees centigrade or the ambient temperature of the water body, whichever is less, if:

(a) A license or water quality certificate other than a general permit was issued prior to March 16, 2004 for the Class C water and was not based on a 6.5 parts per million 30-day average dissolved oxygen criterion; or

(b) A discharge or a hydropower project was in existence on March 16, 2005 and required but did not have a license or water quality certificate other than a general permit for the Class C water. This criterion for the water body applies to licenses and water quality certificates issued on or after March 16, 2004.

4. RECEIVING WATER QUALITY STANDARDS (cont'd)

(2) In Class C waters not governed by subparagraph (1), dissolved oxygen may not be less than 6.5 parts per million as a 30-day average based upon a temperature of 24 degrees centigrade or the ambient temperature of the water body, whichever is less. This criterion for the water body applies to licenses and water quality certificates issued on or after March 16, 2004. The department may negotiate and enter into agreements with licensees and water quality certificate holders in order to provide further protection for the growth of indigenous fish. Agreements entered into under this paragraph are enforceable as department orders according to the provisions of sections 347-A to 349.

Between May 15th and September 30th, the number of Escherichia coli bacteria of human and domestic animal origin in Class C waters may not exceed a geometric mean of 126 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. The board shall adopt rules governing the procedure for designation of spawning areas. Those rules must include provision for periodic review of designated spawning areas and consultation with affected persons prior to designation of a stretch of water as a spawning area.

C. Discharges to Class C waters may cause some changes to aquatic life, except that the receiving waters must be of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community. This paragraph does not apply to aquatic pesticide or chemical discharges approved by the department and conducted by the department, the Department of Inland Fisheries and Wildlife or an agent of either agency for the purpose of restoring biological communities affected by an invasive species.

5. RECEIVING WATER QUALITY CONDITIONS

The 2010 Integrated Water Quality Monitoring and Assessment Report, [often referred to as the 305(b) Report] prepared by the Department pursuant to Section 305(b) of the Clean Water Act, lists the Androscoggin River main stem in the following tables entitled:

Category 4-A: Rivers and Streams with Impaired Use, TMDL Completed, Water Impaired by Atmospheric Deposition of Mercury

Category 4-A: Rivers and Streams With Impaired Use Other Than Mercury, TMDL Completed

Category 4-B: Rivers and Streams Impaired by Pollutants – Pollution Control Requirements Reasonably Expected to Result in Attainment

Category 5-D: Rivers and Streams Impaired by Legacy Pollutants

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

Category 4-A: Rivers and Streams with Impaired Use, TMDL Completed, Water Impaired by Atmospheric Deposition of Mercury states all freshwaters in the State of Maine are impairment by atmospheric deposition of mercury: a regional scale TMDL has been approved. Maine has a fish consumption advisory for fish taken from all fresh waters due to mercury. Many waters, and many fish from any given waters, 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 Human Services decided to establish a statewide advisory for all fresh waters that recommends limits on consumption. Maine has already instituted statewide programs for removal and reduction of mercury sources. For a more in-depth discussion on mercury discharges from the ReEnergy facility see Section 6(j) of this Fact Sheet.

Category 4-A: Rivers and Streams With Impaired Use Other Than Mercury, TMDL Completed, states that an 8.19 mile Class C segment of the main stem of the Androscoggin River upstream of the Gulf Island Pond Dam is impaired by algae blooms and low dissolved oxygen levels caused by phosphorus loadings and biochemical oxygen demand and total suspended solids loadings. The May 2005 final TMDL prepared by the Department contains the following italicized text:

> *Gulf Island Pond does not attain Class C minimum and monthly average dissolved oxygen criteria in a four-mile segment directly above Gulf Island dam primarily in deeper areas of the water column from 30 to 80 feet of depth. In addition, algae blooms occur from excessive amounts of phosphorus discharged to the river flowing into the pond preventing attainment of the designated uses of water contact recreation. In addition to GIP, the Livermore Falls impoundment does not attain Class C aquatic life criteria as indicated by recent water quality evaluations utilizing macro-invertebrate sampling and the use of a linear discriminate modeling.* [It is noted the Livermore Falls impoundment is approximately 3 miles upstream of the ReEnergy discharge.]
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> *The pollutants of concern are carbonaceous biochemical oxygen demand (BOD), ortho-phosphorus (ortho-P), total phosphorus (total-P), and total suspended solids (TSS). Reduction of phosphorus is needed to eliminate algae blooms in Gulf Island Pond. Reduction of carbonaceous BOD, TSS, and phosphorus, is needed to improve dissolved oxygen levels to attainment of Class C criteria. In addition, an instream oxygen injection system currently located five miles above Gulf Island Dam needs to be re-designed to provide additional amounts of oxygen in other areas of the pond.*
>
> *TSS and algae contribute to sediment oxygen demand, a major source of oxygen depletion in the deeper areas of Gulf Island Pond. The 2002 Modeling Report investigated the importance of sediment oxygen demand, oxygen injection, and paper mill BOD input levels upon the model prediction of dissolved oxygen. Sediment oxygen demand (SOD) was found to be the most important since the model prediction of DO changed the most within given percentages of change for SOD. Varying oxygen injection rates resulted in the second largest response to model prediction of DO and the amounts*

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

input for the paper mill BOD inputs resulted in the lowest response of the model DO. This is a useful exercise in showing that reducing pollutants that contribute to SOD (algae, TSS) and oxygen injection are more efficient cleanup actions than reducing paper mill BOD. TSS also is the major cause of non-attainment of Class C aquatic life criteria in the Livermore Falls impoundment.

In orders issued by the Board of Environmental Protection (BEP) on February 7, 2008, the impairment issues cited above were addressed by establishing lower BOD limits and more stringent total and ortho-phosphorus limits for the Rumford Paper Company mill in Rumford and the Verso Androscoggin mill in Jay. In addition, the Gulf Island Pond Partnership upgraded the oxygen injection system that was placed in Gulf Island Pond back in 1992. In preparing the May 2005 TMDL, the Department determined that the discharge from the ReEnergy facility was not causing or contributing to the impairments cited above.

Category 4-B: Rivers and Streams Impaired by Pollutants – Pollution Control Requirements Reasonably Expected to Result in Attainment lists 140 miles of the Class C section of the Androscoggin River as impaired for fishing (consumption) due to the presence of dioxin. The report states with the receiving waters are expected to attain compliance with standards by 2020 as both mills on the river have not detected dioxin or furan compounds in their bleach plant waste streams and each mill has passed the above/below test for fish tissue sampling. The Department has no information that the ReEnergy facility is discharging dioxin that is or would cause or contribute to said impairment.

Category 5-D: Rivers and Streams Impaired by Legacy Pollutants states the 71.6 miles of the Class C section of the Androscoggin River from Rumford to the Gulf Island Pond Dam is impaired due to the presence of polychlorinated biphenyls (PCBs). The Department has no information that the ReEnergy facility is discharging PCBs that are or would cause or contribute to said impairment.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

The Boralex facility is subject to the National Effluent Guidelines for the Steam Electric Power Generating Point Source Category found at 40 Code of Federal Regulation (CFR) Part 423. Applicable sections of 40 CFR Part 423 include:

40 CFR §423.12(b)(3):	Limits TSS, oil & grease from low volume waste sources
40 CFR §423.12(b)(7):	Limits free available chlorine, in cooling tower blowdown
40 CFR §423.13(d)(1):	Limits total chromium and total zinc in cooling tower blowdown

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

Historically (prior to 2000), WDL's and federal NPDES permits differed in alpha-numeric designations of the individual outfalls. The alpha-numeric designations for the internal waste streams and final discharge point were as follows:

001A – Cooling Tower Blowdown, Floor Washdown Waters - Internal waste stream
001B – Ion-Exchange Treatment System Backwash – Internal waste stream
001D – Fuel Storage Area Storm Water Run-off – Internal Waste Stream
001E – Combined Waste Waters – Final outfall that conveys waste waters from 001A, 001B, and 001D to the Androscoggin River.

To simplify monitoring the discharge and reporting test results required, the previous permit only require monitoring of Outfall 001E. Being that the non-process waste waters are co-mingled with the storm water runoff from the fuel storage pad prior to discharge, the previous permitting action established mass limitations to restrict the pollutant loading for the non-process waste waters equal to the levels in the historical licensing/permitting actions. It is noted the individual internal waste streams were indirectly limited by mass as each waste stream was limited by flow and concentration. The previous permitting action established the most stringent concentration limit for each parameter established in the historical licensing/permitting action.

For a history on establishing limitations and monitoring requirements in the previous permitting action, see **Attachment C** of the Fact Sheet attached to MEPDES ME0023710/WDL #W007705-5R-G-R which was issued by the Department on September 12, 2011.

This permitting action is establishing monthly average and daily maximum mass and or concentration limits for Outfall #001E as follows.

a. Flow: The previous permitting action established monthly average and daily maximum dry weather flow limits of 0.138 MGD and 0.175 MGD, respectively that are being carried forward in this permitting action. A review of the monthly Discharge Monitoring Report (DMR) data for the period January 2007 – October 2010 indicates the facility has been in compliance with the limitation 100% of the time as dry weather flows from Outfall #001E have been reported as follows;

Flow (DMRs=46)

Value	Limit (MGD)	Range (MGD)	Mean (MGD)
Monthly Average	0.138	0.00696 – 0.010	0.018
Daily Maximum	0.175	0.017 – 0.0608	0.032

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

b. Dilution Factors: Dilution factors associated with the discharge from the permittee's facility were derived in accordance with freshwater protocols established in Department Rule Chapter 530, *Surface Water Toxics Control Program*, November 2005. With a monthly average dry weather (excludes storm water contribution) permit flow limitation of 0.138 MGD, the dilution factors for the waste waters discharged from the facility can be calculated as follows:

$$\text{Dilution Factor} = \frac{(\text{River Flow in cfs})(\text{Conversion Factor})}{\text{Plant Flow in MGD}}$$

$$\text{Acute Dilution}^{(1)} = \frac{(433 \text{ cfs})(0.6464)}{(0.138 \text{ MGD})} = 2{,}028{:}1$$

$$\text{Chronic Dilution} = \frac{(1{,}730 \text{ cfs})(0.6464)}{(0.138 \text{ MGD})} = 8{,}103{:}1$$

$$\text{Harmonic Dilution} = \frac{(3{,}197 \text{ cfs})(0.6464)}{(0.138 \text{ MGD})} = 14{,}975{:}1$$

Footnote:

(1)-Chapter 530(4)(B)(1) states that analyses using numeric acute criteria for aquatic life must be based on ¼ of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone. The regulation goes on to say that where it can be demonstrated that a discharge achieves rapid and complete mixing with the receiving water by way of an efficient diffuser or other effective method, analyses may use a greater proportion of the stream flow, up to including all of it. Being that the final outfall pipe only extends out into the receiving water approximately 20 feet, the Department has made the determination that ¼ of the 1Q10 stream flow is applicable.

c. Temperature:

The previous permitting action established a year-round daily maximum limit of 90°F but only established seasonal monitoring (1/Month) from June 1 – September 30, the most critical time for impacts to the receiving waters. See **Attachment C** of the Fact Sheet attached to MEPDES ME0023710/WDL #W007705-5R-G-R which was issued by the Department on September 12, 2011, for a discussion on the Department's rules regarding thermal discharges and calculations relating to the impact (lack thereof) of the thermal discharge on the Androscoggin River.

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

A review of the monthly Discharge Monitoring Report (DMR) data for the period January 2007 – October 2010 indicates the facility has been in compliance with the limitation 100% of the time as summertime discharge temperatures from Outfall #001E have been reported as follows;

Temperature (DMRs=16)

Value	Limit (°F)	Range (°F)	Mean (°F)
Daily Maximum	90	56.53 – 72.96	61.1

d. Free Available Chlorine (FAC): The previous permitting action established technology based monthly average and daily maximum concentration limits pursuant to federal regulation, 40 CFR, §423.12(b)(7) as follows:

Monthly Average	Daily Maximum
0.2 mg/L	0.5 mg/L

This permitting action is carrying forward said limitations along with the monitoring frequency of 1/Month. A review of the monthly Discharge Monitoring Report (DMR) data for the period April 2007 – October 2010 indicates the facility has been in compliance with the limitation 100% of the time as values for Outfall #001E have been reported as follows;

Free available chlorine (DMRs=43)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	0.2	0.02 – 0.18	0.09
Daily Maximum	0.5	0.08 - 0.50	0.21

e. Total Suspended Solids (TSS): The previous permitting action established technology based monthly average and daily maximum concentration limits pursuant to federal regulation, 40 CFR, §423.12(b)(3) as follows:

	Monthly Average	Daily Maximum
001E	30 mg/L	50 mg/L

Department rule 06-096 CMR Chapter 523 Section 6.f. states in part " *all pollutants limited in permits shall have limitations, standards or prohibitions expressed in terms of mass.* " Therefore, the previous permitting action established monthly average and daily maximum mass limits for TSS based on the concentration limits cited above and the previous license flow limits of 0.138 MGD as a monthly average and 0.175 MGD as a daily maximum. The calculations are as follows:

Monthly Average: (30 mg/L)(8.34)(0.138 MGD) = 34 lbs/.day

Daily Maximum: (50 mg/L)(8.34)(0.175 MGD) = 73 lbs/day

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

A review of the monthly Discharge Monitoring Report (DMR) data for the period April 2007 – October 2010 indicates the facility has been in compliance with the limitation 99% of the time as concentration and mass values for Outfall #001E have been reported as follows;

TSS Concentration (DMRs=43)

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	30	<1 - 95	10
Daily Maximum	50	<1 - 95	10

TSS Mass (DMRs=43)

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	34	0.18 – 13.9	1.8
Daily Maximum	73	0.18 – 13.9	1.8

Further investigation has shown that the cooling water drawn from the Androscoggin River contains TSS. A portion of this TSS is made up of silica. Both influent and effluent silica levels are monitored daily by the facility operator and comparison of the influent and effluent silica values indicates that the influent is concentrated by a factor of 6 as it passes through the ReEnergy plant. Based on this information the Department has agreed to allow ReEnergy to remove the amount of TSS contributed by intake and concentration of river water as part of the cooling tower operations (influent TSS X 6 = TSS_R) from the TSS in the plant outflow (TSS_O) to determine the amount of TSS added to the effluent outflow by plant operations (TSS_E).

f. Zinc (Total): The previous permitting action established technology based monthly average and daily maximum concentration limits of 1.0 mg/L pursuant to 40 CFR, 423.13(d)(1) as follows:

	Monthly Average	Daily Maximum
001E	1.0 mg/L	1.0 mg/L

Pursuant to Department rule 06-096 CMR Chapter 523 Section 6.f, and to be consistent with the methodology for regulating TSS, the previous permitting action established monthly average and daily maximum mass limits for zinc based on the concentration limits cited above and the previous permit flow limits of 0.138 MGD as a monthly average and 0.165 MGD as a daily maximum. The calculations are as follows:

Monthly Average: (1.0 mg/L)(8.34)(0.138 MGD) = 1.2 lbs/.day
Daily Maximum: (1.0 mg/L)(8.34)(0.165 MGD) = 1.4 lbs/day

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

The concentration and mass limits for total zinc are being carried forward in this permitting action. A review of the monthly Discharge Monitoring Report (DMR) data for the period April 2007 – October 2010 indicates the facility has been in compliance with the limitation 100% of the time as concentration and mass values for Outfall #001E have been reported as follows;

Zinc Concentration (DMRs=43)

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	1.0	0.023 – 0.193	0.069
Daily Maximum	1.0	0.023 – 0.193	0.069

Zinc Mass (DMRs=43)

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	1.2	0.0034 – 0.145	0.015
Daily Maximum	1.4	0.0034 – 0.145	0.015

g. Oil & Grease – Special Condition A, Effluent Limitations and Monitoring requirements in the previous permitting action established technology based monthly average and daily maximum concentration limits as follows:

	Monthly Average	Daily Maximum
001E	15 mg/L	15 mg/L

Text in the Fact Sheet of the previous permitting action describing the derivation of the oil & grease limitations was not consistent with the limits in the table of Special Condition A of the permit. The Fact Sheet stated: "*The concentration limits was based on a Department best professional judgment of the level at which an oil sheen will be visible and is consistent with other permitting actions for like discharges of storm water runoff.*"

To be consistent with the methodology of establishing the most stringent limit(s) associated with the previous licensed internal waste streams, this permitting action is establishing a daily maximum technology based concentration limit of 15 mg/L. No mass limits are being established in this permitting action due to the nature of the pollutant."

The intent of the previous permitting action was to establish both the monthly average and daily maximum concentration limits for oil & grease at 15 mg/L. The discrepancy is being eliminated in this permit as Special Condition A of this permit list both concentration limits as 15 mg/L.

A review of the monthly Discharge Monitoring Report (DMR) data for the period April 2007 – October 2010 indicates the facility has been in compliance with the limitation 100% of the time as concentration values for Outfall #001E have been reported as follows;

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

Oil & grease Concentration (DMRs=43)

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	15	<5.0 – 5.6	2.5
Daily Maximum	15	<5.0 – 5.6	2.5

h. Chromium (Total): The previous permitting action established technology based monthly average and daily maximum concentration limits of 0.20 mg/L pursuant to 40 CFR, 423.12(b)(6) as follows:

	Monthly Average	Daily Maximum
001E	0.20 mg/L	0.20 mg/L

Pursuant to Department rule 06-096 CMR Chapter 523 Section 6.f, and to be consistent with the methodology for regulating other pollutants that can be expressed in mass, the previous permitting action established monthly average and daily maximum mass limits for total chromium based on the concentration limits cited above and the permitted flow limits of 0.138 MGD as a monthly average and 0.165 MGD as a daily maximum. The calculations are as follows:

Monthly Average: (0.20 mg/L)(8.34)(0.138 MGD) = 0.23 lbs/.day

Daily Maximum: (0.20 mg/L)(8.34)(0.165 MGD) = 0.28 lbs/day

A review of the monthly Discharge Monitoring Report (DMR) data for the period April 2007 – October 2010 indicates the facility has been in compliance with the limitation 100% of the time as concentration and mass values for Outfall #001E have been reported as follows;

Chromium Concentration (DMRs=43)

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	0.2	0.007 – 0.196	0.064
Daily Maximum	0.2	0.007 – 0.196	0.064

Chromium Mass (DMRs=43)

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	0.23	0.003 – 0.0468	0.014
Daily Maximum	0.28	0.003 – 0.0468	0.014

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

i. pH - The previous permitting action established technology based pH range limitations as follows:

	Daily Maximum
001E	6.0 - 9.0 SU

The limits were based on a Department best professional judgment of pH levels associated with storm water runoff. It is noted the limitations were footnoted such that that discharges may be outside the 6.0-9.0 standard unit range if due to the intake make-up water and or precipitation. The limitations and footnotes are being carried forward in this permitting action.

A review of the DMR data for the period January 2007 –May 2010 indicates the permitee has been in compliance with the pH limitations 100% of the time in said period as pH values have ranged from 7.54 standard units (su) to 8.97 su.

j. Whole effluent toxicity (WET) & priority pollutant (PP) testing – Maine law, 38 M.R.S.A., §414-A and §420, prohibit the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. Department rule, 06-096 CMR Chapter 530, *Surface Water Toxics Control Program* sets forth effluent monitoring requirements and procedures to establish safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected and narrative and numeric water quality criteria are met. Department rule 06-096 CMR Chapter 584, Surface *Water Quality Criteria for Toxic Pollutants*, sets forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

WET, priority pollutant and analytical chemistry testing, as required by Chapter 530, is being taken into consideration in the preparation of this permit. WET monitoring is required to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. Acute and chronic WET tests are performed on invertebrate water flea (*Ceriodaphnia dubia*) and vertebrate brook trout (*Salvelinus fontinalis*). Chemical-specific monitoring is required to assess the levels of individual toxic pollutants in the discharge, comparing each pollutant to acute, chronic, and human health water quality criteria. Analytical chemistry refers to a suite of chemical tests for ammonia-nitrogen, total aluminum, total cadmium, total chromium, total copper, total hardness (fresh water only), total lead, total nickel, total silver, total zinc, total arsenic, total cyanide and total residual chlorine.

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

Department rule Chapter 530.2.A specifies dischargers subject to the requirements of this rule are as follows, *"[a]ll licensed dischargers of industrial process wastewater or domestic wastes discharging to surface waters of the State...."* Chapter 530 Section 2.B. categorizes dischargers subject to the toxics rule into one of four levels (Levels I through IV). Level IV dischargers are *"[t]hose dischargers having a chronic dilution factor of at least 500 to 1 and a permitted flow of less than 1 million gallons per day."* The chronic dilution factor associated with the discharge from the Boralex facility is 8,103 to 1 and the facility is authorized to discharge less than 1.0 MGD. Therefore, this facility is considered a Level IV facility for purposes of toxics testing. Chapter 530 Section 2.D provides, with certain conditions, that routine testing for Level IV dischargers is waived. The Department is making a best professional judgment that the Boralex facility qualifies for waived routine toxics testing under the provisions of Department rule Chapter 530 based on available chronic dilution, permitted discharge flow rate, and historical WET and chemical specific testing information to support that the discharge does not contain toxic pollutants in toxic amounts.

Department rule Chapter 530 Section 2.D.4. states, *"[a]ll dischargers having waived or reduced testing must file statements with the Department on or before December 31 of each year describing the following.*

(a) Changes in the number or types of non-domestic wastes contributed directly or indirectly to the wastewater treatment works that may increase the toxicity of the discharge;

(b) Changes in the operation of the treatment works that may increase the toxicity of the discharge; and

(c) Changes in industrial manufacturing processes contributing wastewater to the treatment works that may increase the toxicity of the discharge."

This permitting action is formally establishing the notification requirement in this permitting action as Special Condition G, *06-096 CMR 530(2)(D)(4) Statement For Reduced/Waived Toxics Testing*, pursuant to Chapter 530 Section 2.D.4. See **Attachment D** of the Fact Sheet attached to MEPDES ME0023710/WDL #W007705-5R-G-R which was issued by the Department on September 12, 2011, for an acceptable certification form to satisfy this Special Condition. This permit provides for reconsideration of testing requirements, including the imposition of certain testing, in consideration of the nature of the wastewater discharged, existing wastewater treatment, and receiving water characteristics.

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

In addition to the waiver provided by Chapter 530, the facility has already demonstrated the discharges associated with this facility do not exceed or have a reasonable potential to exceed critical ambient water quality thresholds for acute, chronic or human health criteria. See the discussion in **Attachment C** of the Fact Sheet attached to MEPDES ME0023710/WDL #W007705-5R-G-R which was issued by the Department on September 12, 2011, for a discussion regarding this matter.

k. Mercury: Pursuant to Maine law, 38 M.R.S.A. §420 and Department rule, 06-096 CMR Chapter 519, *Interim Effluent Limitations and Controls for the Discharge of Mercury*, the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee on July 12, 2000, thereby administratively modifying WDL#W007705-42-A-N by establishing interim monthly average and daily maximum effluent concentration limits of 25.0 parts per trillion (ppt) and 37.5 ppt, respectively, and a minimum monitoring frequency requirement of two tests per year for mercury. The interim mercury limits were scheduled to expire on October 1, 2001. However, effective June 15, 2001, the Maine Legislature enacted Maine law, 38 M.R.S.A. §413, sub-§11 specifying that interim mercury limits and monitoring requirements remain in effect. It is noted that the mercury effluent limitations have not been incorporated into Special Condition A, *Effluent Limitations And Monitoring Requirements*, of this permit as the limits and monitoring frequencies are regulated separately through Maine law, 38 M.R.S.A. §413 and Department rule Chapter 519. The interim mercury limits remain in effect and enforceable and modifications to the limits and/or monitoring frequencies will be formalized outside of this permitting document pursuant to Maine law, 38 M.R.S.A. §413 and Department rule Chapter 519.

Maine law 38 M.R.S.A., §420 1-B,(B)(1) states that a facility is not in violation of the AWQC for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to section 413, subsection 11. A review of the Department's database for the previous 60-month period indicates mercury test results reported have ranged from 5.6 ppt to 37.5 ppt with an arithmetic mean (n=19) of 13.8 ppt.

Storm Water – Outfalls 006 and 007

The Fact Sheet of the previous permitting action stated the following, "On May 18, 2005, the Department issued a Draft Position Paper for industrial facility monitoring (including Sector O, Steam Electric Generation Facilities) which states that for storm water discharges associated with industrial activities "*DEP is currently shifting its emphasis from analytical monitoring to pollution prevention, visual monitoring, and a DEP facility inspection program*". As a result the Department is not requiring ReEnergy to monitor for specific pollutants in this permitting action provided that BMPs and housekeeping measures are in place to avoid spills, leaks and other pathways that would allow pollutants

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

to contaminate groundwater and stormwater. The ReEnergy facility maintains a stormwater pollution prevention plan (SWPPP) which discusses BMPs and housekeeping practices utilized at the facility to reduce the potential for contaminates coming into contact with stormwater."

To be consistent with the SWPPP requirements in the Department's April 2011 Multi-Sector General Permit (MSGP), this permitting action is modifying Special Condition A(2) accordingly.

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 C classification.

8. DEPARTMENT CONTACTS

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

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