Annual Report Form
WASTE TO ENERGY FACILITIES
for the Maine Department of Environmental Protection and Maine State Planning Office

FACILITY NAME: Penobscot Energy Recovery Report for Calendar Year: 2010

CONTACT PERSON: Peter Prata PHONE NO: 207-825-4566

DEP SOLID WASTE LICENSE NUMBER: S-011383-WG-A-N

This form must be used by respondents; another format is not acceptable, without prior approval.

VERIFICATION OF INFORMATION SUBMITTED, VIA THE ATTACHMENTS

I, Peter J. Prata, have examined this report and to the best of my
(please print name)

knowledge and belief, said report is true, correct and complete.

_____ Plant Manager _____

(authorized signature for company) (title) (date)

Name of Company: Penobscot Energy Recovery Cpmpany

Address: P. O. Box 160, Orrington, Maine 04474

Subscribed and sworn to before me on
(date) My commission expires (date)

_ Gary A. Stacey _____
(Notary Public – print name) (Notary Public – signature)

E. Carlo White
(name & title of form preparer, if different from above)

(address and business phone of preparer, if different from above)

Please return the completed original and applicable fee by April 30, 2009 to:
Vicky Bryant, Maine Dept. of Environmental Protection
17 State House Station, Augusta, Maine 04333-0017

Also, please e-mail your completed form (without attachments) by April 30, 2009 to:
susan.a.alderson@maine.gov (DEP) and rhonda.carl@maine.gov (SPO)

DOUBLE CLICK HERE to open new email with addresses

Narrative Report on Operations

Please include the following information for the reporting year:

(1) A summary of the operational records and any events outside of the normally expected operations of the facility;

PERC is a resource recovery facility. It processes MSW into RDF. The RDF is combusted in boilers to produce steam to drive a turbine that generates electricity. While wood can be combusted as a supplemental fuel none was in 2010. In addition to RDF, MSW processing produces FEPR. The FEPR consists of glass & grit, non-processables, and ferrous. The glass & grit and non-processable components are disposed in landfills. The ferrous is recovered for remanufacture. The combustion of the RDF and the application of lime for acid gas control produces ash. The ash is disposed in secure landfills. The 2010 summary of materials received, shipped out, processed, produced or combusted are presented below. The quantities of materials received or produced do not match those processed or shipped out because their inventories at the beginning and end of the year are not equal.

SOLIDS FLOW SUMMARY (Tons)

MSW Received	311696
FEPR Shipped	73359
Ash Shipped	56917
Bypass	1988

PROCESSING SUMMARY (Tons)

MSW Processed	311257
RDF Produced	238384
FEPR Produced	72874

COMBUSTION SUMMARY (Tons)

RDF Combusted	240285
Wood Combusted	0
Ash Produced	56937

There were few exceptional events during 2010. No special wastes were received at the facility.

Fires on the tipping floor in January and February resulted in waste being bypassed. The process lines were shutdown for approximately one day because of each incident. A fire in April on the conveyor carrying fuel from Process to the Powerhouse also caused the process lines to be down for a day.

Periodically during the year a local contractor brought a portable grinder to the facility to process the non-processable waste stream. This activity converted approximately 10200 tons of waste, which would otherwise have gone to landfill, into fuel.

Despite best efforts to mitigate odors there are occasional complaints. The main component of the odor control system is the ductwork and fans that convey air from the tipping floor, process and storage areas to the power house as combustion air. There odors are destroyed in the boiler furnaces. Further control is achieved by spraying a neutralizing agent in key locations of the plant during the warmer part of the year. A total of 7 odor complaints, including one in Hampden, were received between May and August. Complaints are investigated by plant personnel, often with Town officials, and corrective actions taken when waranted.

(2) A summary of changes to the operations manual made during the past year and any known proposed changes to operations;

There were no revisions to the draft operations manual made in 2010. Completion of the manual is dependent on resolving the issue of handling industrial waste. Under its solid waste license PERC is permitted to accept non-hazardous industrial waste. Since the Department has not provided a definition of industrial waste, procedures for acceptance of industrial waste, as distinct from MSW, could not be developed for inclusion in the manual. PERC understands that the Department will address this issue through the license renewal process in 2011.

(3) A report of minor changes to the facility site or operations not requiring departmental approval that have occurred during the reporting year. Changes handled in this manner are those that do not require licensing under minor revision or amendment provision of DEP Chapter 400.

Annual overhauls were done to the major components of both process lines, including the flail mills, trommels and secondary shredders. Both disc screens were rebuilt.

Concrete was poured in August to repair a hole near the west wall of the tipping floor where glass & grit is stored.

In 2099 ground faults occurred in some of the underground cables connecting the generator to the two station transformers. The affected cables were disconnected and overhead cables were run using the existing oil pipeline supports. They were not connected and the remaining underground cables disconnected, however, until March.

(4) A summary of the ash characterization results for the year, including detailed information concerning any ash characterization results that exceeded regulatory limits and the actions taken in response;

Ash sampling in 2010 was conducted five times, during one week per 10000 ton produced. Once a shift a sample was made up from core samples of the fly and bottom ash piles in a full ash trailer. At the end of the week the shift samples were

composited. The weekly composite samples were submitted to outside laboratories for analysis. Northeast Laboratory Services analyzed the samples for TCLP metals, total metals and other inorganic parameters. Two samples from the first and second half of the year were also submitted to Pace Analytical for dioxin/furan analysis.

The 2010 TCLP results are presented in Table 1. Most of the metal analytes were near or below detection limits. The first three Pb TCLP results were from 40 to 80% of the regulatory threshold (RT). The remaining two Pb TCLP results were below the detection limit. The cause for this change was not determined. There were no strong correlations between Pb TCLP and ash Ca content, lime usage or slurry strength. The absorbers were operated at high slurry flows during the entire year. Lime during the first sampling period was delivered from a New Brunswick quarry. Lime for subsequent periods were from a Quebec quarry. Therefore the source of the lime did not appear to be a factor in the Pb TCLP results.

TCLP results and statistical analysis since the third quarter of 1994 are presented in Table 2. The third quarter of 1994 represents the first sample set collected from the new ash load out building. The upper confidence limits remain below the regulatory thresholds for all analytes.

The total metals and other inorganic parameters are presented in Table 3. These parameters do not have regulatory thresholds. They were analyzed for informational purposes.

The dioxin/furan results are presented in Table 4. They include the 2,3,7,8 isomers and totals for each homologue. There are no regulatory thresholds for dioxin in ash. The data is collected as required by license condition and by regulation.

(5) A demonstration that sufficient disposal capacity is guaranteed for the ash and all residues expected to be generated during the next year;

A summary of ash and residue disposal follows:

Material	Tons	Destination
Ash	56917	JRL, Old Town, ME
FEPR Non-Processables	32	JRL, Old Town, ME
Glass & Grit	62950	JRL, Old Town, ME
Ferrous	10377	WTE Recycling, Greenfield, MA

PERC has contracts with Casella Waste Systems for FEPR and ash disposal through 2018. While Casella has an exclusive contract and must provide disposal for these waste streams, they have discretion to direct some of the wastes to other landfills. PERC has been advised by Casella that all residue streams were disposed in the

Juniper Ridge Landfill, operated by Casella. JRL had 6565000 tons of permitted capacity at the end of 2010. Permitted capacity is expected to last for the next 9 years.

(6) Characterization results for the wastes accepted for incineration;

PERC did not accept special wastes in 2010, only MSW. Therefore, no waste characteri-zations were conducted.

(7) Monitoring records if ground water, surface water, soil, or other monitoring is required by the facility's solid waste license;

PERC is not required to monitor soil, ground water or most surface water. As required by the MEPDES permit renewed on August 26, 2009 PERC conducts and documents visual examinations of the discharge from the outfall of its stormwater detention pond. The monitoring results of the wastewater treatment final effluent are included in the Discharge Monitoring Report submitted to the Department's Bureau of Land and Water Quality. PERC also submits excess emission reports, CEMS audit reports and stack test reports to the Department's Bureau of Air Quality.

(8) A summary of operator training conducted during the year; and

Since the operations manual was not completed, training could not be conducted on it. Training is provided to new employees within 6 months of the date of hire on the operating manual, as required by PERC's Part 70 Air Emission License. Members of PERC's structural fire brigade undergo training on a quarterly basis. New employees undergo training on the Integrated Contingency Plan that includes hazard communications and emergency response procedures.

(9) An annual update on cost and documentation of any changes made to the financial assurance instrument in accordance with DEP Chapter 400 Section 11.

A Letter of Credit (LOC) to close the facility by a third party was renewed on March 15, 2010. It was issued in the amount of $520,000. The Standby Trust Agreement issued on April 13, 2001 remains in effect. The LOC was renewed again on March 15, 2011 in the amount of $540,000.

FORM A
SOLID WASTE VOLUMES RECEIVED

WASTE SOURCE SUMMARY [1] (TONS)

MONTH	MUNICIPAL	COMMERCIAL	SPOT MARKET	OTHER [2]	TOTAL
JANUARY	14495.41	7442.00	1085.47		23022.88
FEBRUARY	13178.52	5219.20	803.41		19201.13
MARCH	16500.79	7577.54	976.34		25054.67
APRIL	16635.58	10792.56	1116.99		28545.13
MAY	15474.19	9289.35	1097.82		25861.36
JUNE	18541.14	9225.42	1254.89		29021.45
JULY	18379.90	8814.64	1109.54		28304.08
AUGUST	19023.03	7267.05	1027.29		27317.37
SEPTEMBER	18012.34	8975.25	1002.45		27990.04
OCTOBER	17160.71	8637.47	673.71		26471.89
NOVEMBER	16463.29	8592.37	737.53		25793.19
DECEMBER	16356.48	7941.73	814.13		25112.34
TOTALS	200221.38	99774.58	11699.57		311695.53

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1 In addition to the above, attach a month-by-month summary of waste received from each account. Indicate any accounts delivering waste from outside Maine and the amount of imported waste delivered. In lieu of names, each commercial account may be identified as a HAULER or as a BUSINESS.

2 OTHER INCLUDES WOOD CHIPS, INDUSTRIAL WASTES OR SPECIAL WASTES ACCEPTED.

FORM B

WASTE HANDLING SUMMARY

MSW <u>received</u> by state/province of origin (tons)

State/Province of Origin	Amount (tons)	Percent of Total
Maine	**224358**	**72**
Massachusetts	**78828**	**25**
New Hampshire	**8510**	**3**
Other state/province (fill in name):		
Other state/province (fill in name):		
Total	**311696**	**100**

Amount of RDF Produced:238384

Materials <u>disposition</u> by facility shipped to (tons):

Material	Tons	Receiving Facility
FEPR	**62950**	**Juniper Ridge Landfill, OT**
Bypass	**1988**	**Juniper Ridge Landfill, OT**
Recovered Metal	**10377**	**WTE Recycling Greenfield, MA**
Non-Processible/OBW	**32**	**Juniper Ridge Landfill, OT**
Other (describe waste stream):		
Ash	**56917**	**Juniper Ridge Landfill, OT**

FORM C
TIPPING FEES ($ PER TON)

CONTRACT HOLDER TIP FEES

	Low Fee	High fee	Average fee	Projected fee for next year
MUNICIPAL CUSTOMERS				
Host municipality(ies)	0	0	0	0
Charter municipalities	71.50	73.00	72.44	74.00
Contracted municipalities (more than one year)	55.00	56.49	55.61	56.00
Contracted municipalities (one year or less)				
Other (describe)				
COMMERCIAL CUSTOMERS				
Contracted (more than one year)	26.15	31.83	28.71	29.00
Short term contract (one year or less)				
Other (describe)				

SPOT MARKET - QUARTERLY AVERAGE TIP FEES

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
MUNICIPAL SPOT	68.00	68.00	70.00	70.00
COMMERCIAL SPOT	68.00	68.00	70.00	70.00

1 Please provide the lowest fee charged for each group.
2 Please provide the highest fee charged for each group.
3 Average is the sum of the tip fees paid by each group, divided by the total tons delivered by each group.

FORM D

REVENUES RECEIVED[1]

MONTH	TIPPING FEES[2] MUNICIPAL	TIPPING FEES[2] COMMERCIAL	SALES OF ELECTRICITY	OTHER [3]	TOTAL
JANUARY	1023867	226313	1830390	2926	3083495
FEBRUARY	929005	178334	1395305	3239	2505884
MARCH	1163072	244399	1332316	3655	2743442
APRIL	1162582	310199	2008346	3558	3484685
MAY	1082126	270558	2031527	3295	3387505
JUNE	1295307	291547	2009905	21067	3598866
JULY	1311591	282439	2016666	2667	3613363
AUGUST	1356955	251945	2096224	2629	3707753
SEPTEMBER	1283642	281431	1935989	2571	3503632
OCTOBER	1227437	267447	2124557	2848	3622287
NOVEMBER	1174728	268953	1853123	8301	3305105
DECEMBER	1167013	275912	1815482	1528	3259934
TOTALS	14177323	3149477	22449829	39324	39815951

Total number of kilowatt house of electricity generated in calendar year: 161927926

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1 Please attach a copy of the annual report for the relevant calendar year
2 Include spot market revenues in the appropriate column.
3 Itemize other sources of revenues (e.g. oily waste) and attach supporting documentation.

FORM E

EXPENDITURES [1]

VARIABLE EXPENDITURES		
Labor	6883	
Maintenance	8378	
Utilities	409	
Operations/maintenance total		15670
Wood chips		
Other (please identify) **Fuel Oil**	812	
Alternative fuel purchased total		812
Ash & Front End Processing Residue disposal		6318
Other variable costs		1418
FIXED EXPENDITURES		
New capital investments		36
Debt service		3050
Reserve		
TOTAL EXPENDITURES		27304

1 Please attach a copy of annual report for the relevant fiscal year.