IN THE MATTER OF

FPL ENERGY WYMAN,	LLC) N	MAINE POLLUTANT DISCHARGE
YARMOUTH, CUMBER	LAND COUNTY)	ELIMINATION SYSTEM PERMIT
INDUSTRIAL COOLING	G WATER)	AND
ME0000272)	WASTE DISCHARGE LICENSE
W000634-5R-I-R	APPROVAL)	RENEWAL

Pursuant to the provisions of the *Federal Water Pollution Control Act*, Title 33 USC, §1251, *Conditions of licenses*, 38 M.R.S.A. § 414-A, and applicable regulations, the Maine Department of Environmental Protection (Department) has considered the application of FPL ENERGY WYMAN, LLC (FPL), with its supportive data, agency review comments, and other related material on file and finds the following facts:

APPLICATION SUMMARY

FPL has applied to the Department for renewal of Waste Discharge License (WDL) #W000634-5R-H-R / Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0000272, which was issued on September 3, 2003 and is scheduled to expire on September 3, 2008. The 9/3/03 permit authorized the discharge of up to a daily maximum flow of: 1) 530 million gallons per day (MGD) of cooling waters; 2) 7.4 MGD of treated miscellaneous process waste waters; 3) 1.0 MGD of treated boiler chemical cleaning waste waters; and 4) 5.0 MGD of intake screen backwash waters from an oil-fired power plant, as well as an unspecified quantity of storm water runoff via eight (8) outfall points to the Casco Bay, Class SB, in Yarmouth, Maine.

On April 10, 2006, the Department amended the 9/3/03 permit by incorporating the whole effluent toxicity (WET), analytical chemistry and priority pollutant testing requirements of *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective October 9, 2005).

PERMIT SUMMARY

This permitting action is similar to the 9/3/03 permitting action and 4/10/05 permit amendment in that it is carrying forward:

OUTFALL #001A and OUTFALL #003A

- 1. the monthly average and daily maximum discharge flow limitations;
- 2. the seasonal monthly average and daily maximum effluent temperature limitations;

OUTFALL #002A

3. all effluent limitations and monitoring requirements (no changes);

OUTFALL #004A

- 4. the monthly average and daily maximum discharge flow limitations;
- 5. the monthly average and daily maximum concentration limitations for total suspended solids (TSS) and oil and grease (O&G);
- 6. the year-round daily maximum effluent temperature limitation;
- 7. the daily maximum pH range limitation;
- 8. whole effluent toxicity (WET), priority pollutant, and analytical chemistry testing requirements (screening level only pursuant to 4/10/05 amendment and 06-096 CMR 530);

OUTFALL #005A

- 9. the monthly average and daily maximum discharge flow limitations;
- 10. the monthly average and daily maximum concentration limitations for TSS and O&G;
- 11. the monthly average and daily maximum concentration limitations for total iron;
- 12. the year-round daily maximum effluent temperature limitation;
- 13. the daily maximum pH range limitation; and

STORM WATER OUTFALLS

14. authorization to discharge an unspecified quantity of storm water runoff via Outfalls #006 - #012, inclusive. Note that this permit serves to clarify that the 9/3/03 permit did not assign a separate outfall identifier for Storm Water Outfalls #006 and #013 (see below).

This permitting action is different from the 9/3/03 permitting action and 4/10/05 permit amendment in that it is:

OUTFALL #001A and OUTFALL #003A

- 1. eliminating the daily maximum concentration limitation and monitoring requirement for total residual chlorine (TRC) and establishing Special Condition I, *Monitoring Waiver For Certain Guideline-Listed Pollutants*, pursuant to 40 CFR Part 122.44 (a)(2);
- 2. eliminating the daily maximum pH range limitation;

OUTFALL #004A

3. establishing monthly average and daily maximum mass limitations for TSS and O&G;

- 4. eliminating the monthly average mass limitations for total arsenic and total nickel, and the daily maximum water quality limitation for the sea urchin based on the results of facility testing;
- 5. establishing water quality-based daily maximum concentration and mass limits for total copper based on the results of facility testing;
- 6. establishing Special Condition H, *Statement for Reduced/Waived Toxics Testing*, for waived surveillance level toxics testing;
- 7. revising the minimum monitoring frequency requirement for TSS and O&G from once per month to once per calendar quarter;

OUTFALL #005A

- 8. establishing monthly average and daily maximum mass limitations for TSS and O&G;
- 9. establishing monthly average and daily maximum mass limitations for total iron;
- 10. revising the monthly average and daily maximum water quality-based concentration limitations and establishing monthly average and daily maximum mass limitations for total copper based on current ambient water quality criteria;

STORM WATER OUTFALLS

- 11. correcting an oversight in the previous permit (two storm water outfalls identified as #006) by assigning one of the two pipes previously labeled #006 a new outfall identifier of #013; and
- 12. establishing Special Condition G, *Storm Water Associated with Industrial Activity Plans and Monitoring Requirements*, which contains visual monitoring requirements for the authorized storm water outfall points.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated June 16, 2008 and subject to the Conditions listed below, the Department makes the following CONCLUSIONS.

- 1. The discharges, either by themselves or in combination with other discharges, will not lower the quality of any classified body of water below such classification.
- 2. The discharges, either by themselves 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, *Classification of Maine waters*, 38 M.R.S.A. § 464(4)(F), will be met, in that:
 - (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;
 - (b) Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected;
 - (c) 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 discharges 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 discharges will result in lowering the existing water 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 discharges will be subject to effluent limitations that require application of best practicable treatment as defined in 38 M.R.S.A. § 414-A(1)(D).

ACTION

THEREFORE, the Department APPROVES the application of FPL ENERGY WYMAN, LLC, to discharge up to a daily maximum flow of: 1) 530 million gallons per day (MGD) of cooling waters; 2) 7.4 MGD of treated miscellaneous process waste waters; 3) 1.0 MGD of treated boiler chemical cleaning waste waters; and 4) 5.0 MGD of intake screen backwash waters from an oil-fired power plant, as well as an unspecified quantity of storm water runoff via eight (8) outfall points (#006 - #013) to Casco Bay, Class SB, in Yarmouth, Maine, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

- 1. Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits, revised July 1, 2002, copy attached.
- 2. The attached Special Conditions, including any effluent limitations and monitoring requirements.
- 3. This permit expires five (5) years from the date of signature below.

DONE AND DATED AT AUGUSTA, MAINE, THIS <u>17th</u> DAY OF <u>June</u>, 2008.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_	
	DAVID P. LITTELL, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: February 25, 2008
Date of application acceptance: March 7, 2008

Date filed with Board of Environmental Protection:

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SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge **steam generating Units #1 & #2 condenser cooling waters** via **OUTFALL #001A** to Casco Bay. Such discharges shall be limited and monitored by the permittee as specified below⁽¹⁾:

OUTFALL #001A - Condenser Cooling Waters (Unit #1 & Unit #2)

Effluent Characteristic		Discharge 1	Monitoring Requirements			
	Monthly Average as specified	Daily Maximum as specified	Monthly Average as specified	Daily Maximum as specified	Measurement <u>Frequency</u> as specified	Sample Type as specified
Flow [50050]		as specified	90 MGD	95 MGD	Continuous	Pump Logs
Daily Effluent Temperature ⁽²⁾ (June 1 - August 31) [00011]			100°F	105°F	Continuous	Calculated [CA]
Daily Effluent Temperature ⁽²⁾ (September 1 - May 31) _[00011]			85°F	90°F	Continuous	Calculated [CA]

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

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SPECIAL CONDITIONS

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

2. The permittee is authorized to discharge **intake screen backwash waters** via **OUTFALL #002A** to Casco Bay. Such discharges shall be limited and monitored by the permittee as specified below⁽¹⁾:

OUTFALL #002A - Intake Screen Backwash Waters

Effluent Characteristic		Discharge Limitations				Monitoring Requirements	
	Monthly <u>Average</u>	Daily <u>Maximum</u>	Monthly Average	Daily <u>Maximum</u>	Measurement Frequency	Sample <u>Type</u>	
	as specified	as specified	as specified	as specified	as specified	as specified	
Flow			1.0 MGD	5.0 MGD	1/Day	Pump Logs	
[50050]			[03]	[03]	[01/01]	[PL]	
Daily Effluent Temperature ⁽²⁾				123°F	1/Discharge	Measure	
(Year-round) [00011]				[15]	[01/DS]	[MS]	
рН				6.0-9.0 SU			
[00400]				[12]			

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

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SPECIAL CONDITIONS

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

3. The permittee is authorized to discharge **steam generating Units #3 & #4 condenser cooling waters** via **OUTFALL #003A** to Casco Bay. Such discharges shall be limited and monitored by the permittee as specified below⁽¹⁾:

OUTFALL #003A - Condenser Cooling Waters (Unit #3 & Unit #4)

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	Monthly	Daily	Monthly	Daily	Measurement	Sample
	Average	Maximum	Average	Maximum	Frequency	Type
	as specified	as specified	as specified	as specified	as specified	as specified
Flow			300 MGD	435 MGD	Continuous	Pump Logs
[50050]			[03]	[03]	[99/99]	[PL]
Daily Effluent Temperature ⁽²⁾			105°F	110°F	Continuous	Calculated
(June 1 - August 31) [00011]			[15]	[15]	[99/99]	[CA]
Daily Effluent Temperature ⁽²⁾			85°F	90°F	Continuous	Calculated
(September 1 - May 31) [00011]			[15]	[15]	[99/99]	[CA]

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

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SPECIAL CONDITIONS

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

4. The permittee is authorized to discharge **treated low volume waste waters from ash transport, boiler blowdown, ash hopper seals, and floor drain regeneration waters** from the oil tank farm waters via **OUTFALL #004A** to Casco Bay. Such discharges shall be limited and monitored by the permittee as specified below⁽¹⁾:

OUTFALL #004 – Miscellaneous Process Waste Waters

Effluent Characteristic		Discharge 1	Monitoring R	Requirements		
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample <u>Type</u>
	as specified	as specified	as specified	as specified	as specified	as specified
Flow			1.0 MGD	7.4 MGD	Continuous	Record
[50050]			[03]	[03]	[99/99]	[RC]
Total Suspended Solids	250 lbs./day	834 lbs./day	30 mg/L	100 mg/L	1/Quarter	Composite
[00530]	[26]	[26]	[19]	[19]	[01/90]	[MS]
Oil & Grease	125 lbs./day	167 lbs./day	15 mg/L	20 mg/L	1/Quarter	Grab
[00552]	[26]	[26]	[19]	[19]	[01/90]	[GR]
Daily Effluent Temperature ⁽²⁾				105°F	Continuous	Calculated
[00011]				[15]	[99/99]	[CA]
рН				6.0-9.0 SU	1/Week	Grab
[00400]		_ 	===	[12]	[01/07]	[GR]
Copper (Total)		1.7 lbs./day		205 ug/L	1/Year	Composite
[01042]		[26]		[28]	[01/YR]	[24]

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

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SPECIAL CONDITIONS

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

4. The permittee is authorized to discharge **treated low volume waste waters from ash transport, boiler blowdown, ash hopper seals, and floor drain regeneration waters** from the oil tank farm waters via **OUTFALL #004A** to Casco Bay. Such discharges shall be limited and monitored by the permittee as specified below⁽¹⁾ (cont'd):

OUTFALL #004 – Miscellaneous Process Waste Waters

SCREENING LEVEL - Beginning 12 months prior to permit expiration of the current permit or in the fifth year since the last screening test, which ever is sooner.

Effluent Characteristic		Discharge		Monitoring Requirements		
	Monthly	Daily	Monthly	Daily	Measurement	Sample
	Average	<u>Maximum</u>	<u>Average</u>	Maximum	Frequency	Type
	as specified	as specified	as specified	as specified	as specified	as specified
Whole Effluent Toxicity(3)						
Acute – NOEL				D 40/	1 /\$7	<i>C</i> :
Mysidopsis bahia (Mysid Shrimp)				Report % [23]	1/Year [01/YR]	Composite [24]
[TDA3E]						
<u>Chronic – NOEL</u> <i>Arbacia punctulata</i> (Sea Urchin)				Report% [23]	1/Year _[01/YR]	Composite [24]
[TBH3A]						
Priority Pollutants ⁽⁴⁾				Report ug/L	1/Year	Composite/
[50008]				[28]	[01/YR]	Grab _{[24/GR)}
Analytical Chemistry ⁽⁵⁾				Report ug/L	1/Quarter	Composite/
[51477]				[28]	[01/90]	Grab [24/GR]

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

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

5. The permittee is authorized to discharge **treated waste waters associated with boiler chemical cleaning operations** via **OUTFALL #005A** to Casco Bay. Such discharges shall be limited and monitored by the permittee as specified below (1):

OUTFALL #005A – Boiler Chemical Cleaning Operations

Effluent Characteristic		Discharge I	Limitations		Monitoring R	Requirements
	Monthly	Daily	Monthly	Daily	Measurement	Sample
	Average	Maximum	<u>Average</u>	Maximum	Frequency	Type
	as specified	as specified				
Flow			0.5 MGD	1.0 MGD	Continuous	Record
[50050]			[03]	[03]	[99/99]	[RC]
Total Suspended Solids	125 lbs./day	417 lbs./day	30 mg/L	100 mg/L	1/Discharge	Grab
[00530]	[26]	[26]	[19]	[19]	Day [01/DD]	[GR]
Oil & Grease (100552)	63 lbs./day	84 lbs./day	15 mg/L	20 mg/L	1/Discharge Day	Grab
[00552]	[20]	[20]	[19]	[19]	[01/DD]	[GK]
Iron (Total)	4.2 lbs./day	4.2 lbs./day	1.0 mg/L	1.0 mg/L	1/Discharge Day	Grab
[01045]	[26]	[26]	[19]	[19]	[01/DD]	[GR]
Copper (Total)	2.6 lbs./day	0.9 lbs./day	622 ug/L	205 ug/L	1/Discharge Day	Grab
[01042]	[26]	[26]	[28]	[28]	[01/DD]	[GR]
Daily Effluent Temperature ⁽²⁾				105°F	Continuous	Record
[00011]				[15]	[99/99]	[RC]
pН				6.0-9.0 SU	1/Week	Grab
[00400]				[12]	[01/07]	[GR]

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

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

FOOTNOTES:

1. **Sampling** – Sampling and analysis must be conducted in accordance with; a) methods approved by 40 Code of Federal Regulations (CFR) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Health and Human Services.

All detectable analytical test results shall be reported to the Department including results which are detected below the respective reporting limits (RLs) specified by the Department. See Attachment A of this permit for a list of the Department's current RLs. If a non-detect analytical test result is below the respective RL, the concentration result shall be reported as <Y where Y is the actual detection limit achieved by the laboratory 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. For mass, if the analytical result is reported as <Y or if a detectable result is less than a RL, report a <X lbs/day, where X is the parameter specific limitation established in the permit. Compliance with this permit will be evaluated based on whether or not a compound is detected at or above the Department's RL.

Sampling locations for compliance demonstration purposes are as follows. Any change in sampling locations must be approved by the Department in writing.

Outfall #001A – At the end of the condenser outlets.

Outfall #002A – Pump logs.

Outfall #003A – At the end of the condenser outlets.

Outfall #004A – From the discharge pit.

Outfall #005A – From the discharge pit.

- 2. **Special Definitions** See Special Condition B, *Definitions* of this permit.
- 3. Whole Effluent Toxicity (WET) Testing Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions bracketing the critical acute and chronic thresholds of 2.1% and 0.45%, respectively), which provides a point estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. A-NOEL is defined as the acute no observed effect level with survival as the end point. C-NOEL is defined as the chronic no observed effect level with survival, reproduction and growth as the end points.

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

FOOTNOTES:

- a. **Surveillance level testing** Pursuant to 06-096 CMR 530(2)(D)(3)(b), the Department is waiving surveillance level WET testing.
- b. Screening level testing Beginning 12 months prior to permit expiration of the current permit or in the fifth year since the lat screening test, which ever is sooner, the permittee shall conduct screening level WET testing at a minimum frequency of once per year using the mysid shrimp (*Mysidopsis bahia*) and sea urchin (*Arbacia punctulata*).

Test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee shall evaluate test results being submitted and identify to the Department possible exceedences of the critical acute and chronic water quality thresholds of 2.1% and 0.45%, respectively.

Toxicity tests must be conducted by an experienced laboratory approved by the Department. The laboratory must follow procedures as described in the following USEPA methods manuals.

- a. U.S. Environmental Protection Agency. 2002. *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, 5th ed. EPA 821-R-02-012. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., October 2002 (the acute method manual)
- b. U.S. Environmental Protection Agency. 2002. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, 3rd ed. EPA 821-R-02-014. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., October 2002 (the marine chronic method manual)

Results of WET tests shall be reported on the "Whole Effluent Toxicity Report Marine Waters" form included as Attachment B of this permit each time a WET test is performed. The permittee is required to analyze the effluent for the analytical chemistry parameters specified on the "WET and Chemical Specific Data Report Form" form included as Attachment A of this permit each time a WET test is performed.

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

FOOTNOTES:

- 4. **Analytical Chemistry** Refers to a suite of twelve (12) chemical tests consisting of ammonia nitrogen (as N), total aluminum, total arsenic, total cadmium, total chromium, total copper, total cyanide, total lead, total nickel, total silver, total zinc and total residual chlorine.
 - a. **Surveillance level testing** Pursuant to 06-096 CMR 530(2)(D)(3)(b), the Department is waiving surveillance level analytical chemistry testing, except for those specific chemicals/compounds otherwise regulated in this permit.
 - b. Screening level testing Beginning 12 months prior to expiration of the current permit or in the fifth year since the lat screening test, which ever is sooner, the permittee shall conduct analytical chemistry testing at a minimum frequency of once per calendar quarter for four consecutive calendar quarters.
- 5. **Priority Pollutant Testing** Priority pollutants are those parameters specified at *Effluent Guidelines and Standards*, 06-096 CMR 525(4)(IV) (effective January 12, 2001).
 - a. Screening level testing Beginning 12 months prior to expiration of the current permit or in the fifth year since the lat screening test, which ever is sooner, the permittee shall conduct priority pollutant testing at a minimum frequency of once per year.

Surveillance level priority pollutant testing is not required pursuant to 06-096 CMR 530(2)(D)(1).

Analytical chemistry and priority pollutant testing shall be conducted on samples collected at the same time as those collected for whole effluent toxicity tests, when applicable, and shall be conducted using methods that permit detection of a pollutant at existing levels in the effluent or that achieve the most current minimum reporting levels of detection as specified by the Department.

Analytical chemistry and priority pollutant test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the laboratory reports for up to 10 business days of their availability before submitting them. The permittee shall evaluate test results being submitted and identify to the Department, possible exceedences of the acute, chronic or human health AWQC as established in 06-096 CMR 584. For the purposes of DMR reporting, enter a "1" for <u>yes</u>, testing done this monitoring period or "NODI-9" monitoring not required this period.

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

FOOTNOTES:

All mercury sampling required to determine compliance with interim limitations established pursuant to *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519 (last amended October 6, 2001), 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.

B. SPECIAL DEFINITIONS

- 1. **Daily Effluent Temperature** Daily Effluent Temperature is defined as the integer (rounded whole number in degrees Fahrenheit) mean value of hourly instantaneous effluent temperatures recorded during an operating day.
- 2. **Daily Temperature Increase** Daily Temperature Increase shall be the integer difference between the daily effluent daily temperature and the daily inlet temperature for the same operating day.
- 3. **Daily Inlet Temperature** Daily Inlet Temperature is defined as the mean integer value of hourly instantaneous (condenser) inlet temperatures recorded during an operating day.
- 4. Operating Day An Operating Day is defined as a 24-hour period.
- 5. **Monthly Average Daily Effluent Temperature** Monthly Average Daily Effluent Temperature shall be the mean value of the individual effluent daily temperatures for a calendar month. During any month when a discharge occurs for two or less days, the monthly average limit shall not be in effect and the permittee shall report the monthly average effluent temperature as "Not Applicable" in the monthly Discharge Monitoring Report (DMR).

B. SPECIAL DEFINITIONS (cont'd)

- 6. **Daily Maximum Daily Effluent Temperature** Daily Maximum Daily Effluent Temperature shall be the highest individual value of the daily effluent temperatures for a calendar month.
- 7. **Monthly Average Daily Effluent Temperature** Monthly Average Daily Effluent Temperature shall be the mean of the individual Daily Temperature Increases for a calendar month
- 8. **Daily Maximum Daily Temperature Increase** Daily Maximum Daily Temperature Increase shall be the highest individual value of the daily Temperature Increases for a calendar month.

C. NARRATIVE EFFLUENT LIMITATIONS

- 1. 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.
- 2. The effluent shall not contain materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the usages designated by the classification of the receiving waters.
- 3. The discharge shall not impart color, taste, turbidity, toxicity, radioactivity or other properties which cause those waters to be unsafe for the designated uses and characteristics ascribed to their classification.
- 4. Notwithstanding specific conditions of this permit, the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

D. UNAUTHORIZED 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 March 7, 2008; 2) the terms and conditions of this permit; and 3) only from Outfalls #001A, #002A, #003A, #004A, #005A, and storm water outfalls #006 - #013 (inclusive). Discharges of wastewater from any other point source are not authorized under this permit, and shall be reported in accordance with Standard Condition B(5), *Bypasses*, of this permit.

E. NOTIFICATION REQUIREMENT

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

F. MONITORING AND REPORTING

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

Maine Department of Environmental Protection Southern Maine Regional Office Bureau of Land & Water Quality Division of Water Quality Management 312 Canco Road Portland, Maine 04103

G. STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITY – PLANS AND MONITORING REQUIREMENTS

- 1. Storm Water Pollution Prevention Plan (SWPPP) Storm Water Outfalls #006 #013
 - a. The permittee shall maintain a current Storm Water Pollution Prevention Plan for the facility and all eight (8) storm water outfall points identified and authorized by this permit. The SWPPP shall be consistent with the Storm Water Pollution Plan Requirements established in the Maine Pollutant Discharge Elimination System Multi-Sector General Permit for Stormwater Discharge Associated with Industrial Activity, dated October 11, 2005. The permittee shall maintain a copy of the SWPPP on-site for Department or USEPA staff inspection.
 - b. **Within 60 days of any change** in design, construction, operation, maintenance, or 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.

2. Monitoring Requirements

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 (referenced as Outfalls #006 - #013 in this permit) in accordance with Department guidance document #DEPLW0768, *Instructions for Completing the Visual Monitoring Form.* 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. The report must include the examination date and time, examination personnel, the nature of the discharge (*i.e.*, rain runoff or snow melt), visual quality of the storm water discharge, and probable sources of any observed storm water contamination.

H. STATEMENT FOR REDUCED/WAIVED TOXICS TESTING

On or before December 31st of each year of the effective term of this permit *[PCS Code 95799]*, the permittee shall provide the Department with statements describing the following:

- a. Changes in the number or types of 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.

Further, the Department may require that annual testing be re-instituted if it determines that there have been changes in the character of the discharge or if annual certifications described above are not submitted.

I. MONITORING WAIVER FOR CERTAIN GUIDELINE-LISTED POLLUTANTS

Pursuant to 40 CFR Part 122.44(a)(2), this permit provides a waiver from monitoring for total residual chlorine (except as required for analytical chemistry testing established in this permit) for Outfalls #001A and #003A, which is listed in the effluent guideline limitations at 40 CFR Part 423.12. On or before December 31st of each year of the effective term of this permit [PCS Code 95799], the permittee shall provide the Department with a statement certifying that the facility does not anticipate utilizing (adding) chlorine or chlorine-based compounds to any process that generates wastewaters disposed of through the authorized outfall points in the permit.

J. OPERATION & MAINTENANCE (O&M) PLAN

The permittee shall have a current written comprehensive Operation & Maintenance (O&M) Plan for the waste water treatment system for Outfalls #004 and #005. The plan shall provide a systematic approach by which the permittee shall at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit.

By December 31 of each year, or within 90 days of any process changes or minor equipment upgrades, the permittee shall evaluate and modify the O&M Plan including site plan(s) and schematic(s) for the waste water treatment facility to ensure that it is up-to-date. The O&M Plan shall be kept on-site at all times and made available to Department and EPA personnel upon request.

Within 90 days of completion of new and or substantial upgrades of the waste water treatment facility, the permittee shall submit the updated O&M Plan to their Department inspector for review and comment.

K. REOPENING OF PERMIT FOR MODIFICATION

Upon evaluation of the tests results in the Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at any time 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.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT AND MAINE WASTE DISCHARGE LICENSE

FACT SHEET

DATE: **JUNE 16, 2008**

PERMIT NUMBER: #ME0000272 LICENSE NUMBER: #W000634-5R-I-R

NAME AND ADDRESS OF APPLICANT:

FPL ENERGY WYMAN, LLC 677 COUSINS STREET YARMOUTH, MAINE 04096

COUNTY: CUMBERLAND COUNTY

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

FPL ENERGY WYMAN, LLC 677 COUSINS STREET YARMOUTH, MAINE 04096

RECEIVING WATER(S)/CLASSIFICATION: CASCO BAY/CLASS SB

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: STEPHEN HOFACKER (207) 846-8129

1. APPLICATION SUMMARY

FPL Energy Wyman, LLC (FPL) has applied to the Department of Environmental Protection (Department) for renewal of Waste Discharge License (WDL) #W000634-5R-H-R / Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0000272, which was issued on September 3, 2003 and is scheduled to expire on September 3, 2008. The 9/3/03 permit authorized the discharge of up to a daily maximum flow of: 1) 530 million gallons per day (MGD) of cooling waters; 2) 7.4 MGD of treated miscellaneous process waste waters; 3) 1.0 MGD of treated boiler chemical cleaning waste waters; and 4) 5.0 MGD of intake screen backwash waters from an oil-fired power plant, as well as an unspecified quantity of storm water runoff via eight (8) outfall points to the Casco Bay, Class SB, in Yarmouth, Maine.

On April 10, 2006, the Department amended the 9/3/03 permit by incorporating the whole effluent toxicity (WET), analytical chemistry and priority pollutant testing requirements of *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective October 9, 2005).

2. PERMIT SUMMARY

a. <u>Terms and Conditions</u>: This permitting action is similar to the 9/3/03 permitting action and 4/10/05 permit amendment in that it is carrying forward:

OUTFALL #001A and OUTFALL #003A

- 1. the monthly average and daily maximum discharge flow limitations;
- 2. the seasonal monthly average and daily maximum effluent temperature limitations;

OUTFALL #002A

3. all effluent limitations and monitoring requirements (no changes);

OUTFALL #004A

- 4. the monthly average and daily maximum discharge flow limitations;
- 5. the monthly average and daily maximum concentration limitations for total suspended solids (TSS) and oil and grease (O&G);
- 6. the year-round daily maximum effluent temperature limitation;
- 7. the daily maximum pH range limitation;
- 8. whole effluent toxicity (WET), priority pollutant, and analytical chemistry testing requirements (screening level only pursuant to 4/10/05 amendment and 06-096 CMR 530);

OUTFALL #005A

- 9. the monthly average and daily maximum discharge flow limitations;
- 10. the monthly average and daily maximum concentration limitations for TSS and O&G;
- 11. the monthly average and daily maximum concentration limitations for total iron;
- 12. the year-round daily maximum effluent temperature limitation;
- 13. the daily maximum pH range limitation; and

STORM WATER OUTFALLS

14. authorization to discharge an unspecified quantity of storm water runoff via Outfalls #006 - #012, inclusive. Note that this permit serves to clarify that the 9/3/03 permit did not assign a separate outfall identifier for Storm Water Outfalls #006 and #013 (see below).

This permitting action is different from the 9/3/03 permitting action and 4/10/05 permit amendment in that it is:

OUTFALL #001A and OUTFALL #003A

- 15. eliminating the daily maximum concentration limitation and monitoring requirement for total residual chlorine (TRC) and establishing Special Condition I, *Monitoring Waiver For Certain Guideline-Listed Pollutants*, pursuant to 40 CFR Part 122.44 (a)(2);
- 16. eliminating the daily maximum pH range limitation;

OUTFALL #004A

- 17. establishing monthly average and daily maximum mass limitations for TSS and O&G;
- 18. eliminating the monthly average mass limitations for total arsenic and total nickel, and the daily maximum water quality limitation for the sea urchin based on the results of facility testing;
- 19. establishing water quality-based daily maximum concentration and mass limits for total copper based on the results of facility testing;
- 20. establishing Special Condition H, *Statement for Reduced/Waived Toxics Testing*, for waived surveillance level toxics testing;
- 21. revising the minimum monitoring frequency requirement for TSS and O&G from once per month to once per calendar quarter;

OUTFALL #005A

- 22. establishing monthly average and daily maximum mass limitations for TSS and O&G;
- 23. establishing monthly average and daily maximum mass limitations for total iron;
- 24. revising the monthly average and daily maximum water quality-based concentration limitations and establishing monthly average and daily maximum mass limitations for total copper based on current ambient water quality criteria;

STORM WATER OUTFALLS

- 25. correcting an oversight in the previous permit (two storm water outfalls identified as #006) by assigning one of the two pipes previously labeled #006 a new outfall identifier of #013; and
- 26. establishing Special Condition G, *Storm Water Associated with Industrial Activity Plans and Monitoring Requirements*, which contains visual monitoring requirements for the authorized storm water outfall points.
- b. History: The most current relevant regulatory actions include the following:

September 23, 1996 - The United States Environmental Protection Agency (USEPA) issued National Pollutant Discharge Elimination System (NPDES) permit #ME0000272 for a five-year term.

December 11, 1997 – The Department issued WDL #W000634-43-C-R for a five-year term.

August 17, 1998 – The Department issued WDL modification #W000634-5S-D-M that modified effluent limitations for whole effluent toxicity (WET), copper, nickel and zinc for Outfall #004.

November 19, 1998 - The Department issued WDL modification #W000634-5S-E-M that modified effluent limitations for whole effluent toxicity (WET), copper, nickel and zinc as a result of new dilution factors due to the relocation of the outfall pipe for Outfalls #004 and #005.

December 23, 1998 – The Department issued a License Transfer to FPL Energy Wyman, LLC for all licenses and permits issued by the Department to the former owner of the Wyman Station generating facility, Central Maine Power Company.

May 18, 1999 – The Department administratively modified WDL #W000634-43-C-R by increasing the daily maximum temperature limitation for Outfalls #004 and #005 from 84°F to 105°F.

November 21, 2000 – FPL Energy Wyman, LLC, submitted a timely application to the USEPA to renew the NPDES permit. It is noted the USEPA never acted on the application as the Department would be issuing a MEPDES permit upon renewal of the State WDL.

January 12, 2001 - The Department received authorization from the USEPA to administer the NPDES permit program in Maine. From that point forward, the program has been referenced as the Maine Pollutant Discharge Elimination System (MEPDES) permit program and permit #ME0000272 (same as NPDES permit number) is being utilized as the primary reference number for this facility's wastewater discharges.

April 10, 2006 – The Department modified the 9/3/03 permit to incorporate testing requirements of 06-096 CMR 530.

February 25, 2008 – FPL submitted a timely and complete General Application to the Department for renewal of the 9/3/03 MEPDES permit The application was accepted for processing on March 7, 2008, and was assigned WDL # W000634-5R-I-R / MEPDES #ME0000272.

c. <u>Source Description</u>: The FPL facility occupies a 50-acre site on Cousins Island in Yarmouth. The facility has been in operation since December of 1957. The four steam-driven turbine generators have a combined net generating capacity of 843,000 kilowatts. The facility consists of a power plant, an oil terminal, screen house, dock, six oil storage tanks with a total capacity of 39 million gallons and other related piping facilities. See Attachment A of this Fact Sheet for a map showing the location of the facility.

FPL is the largest fossil-fueled plant in the State of Maine and provides a significant share of Maine's electric energy needs through burning of oil. The electricity generated at the station is fed directly into Central Maine Power (CMP) Company's transmission grid which is interconnected with the rest of New England and New Brunswick.

The discharges from the facility to Casco Bay include the following:

OUTFALL #001A-Circulating Cooling Waters Serving Generating Units #1 and #2

This outfall consists of two side-by-side pipelines discharging once-through condenser cooling waters to Casco Bay from steam generating Units #1 and Unit #2 during normal operating conditions.

OUTFALL #002A-Intake Screen Wash

FPL has installed marine booms in front of the intake screens for the facility to minimize the potential for plugging the screens from excess debris trapped on the screens. However, debris does occasionally get past the boom and pressurized seawater is utilized to remove debris from the facility's intake screens. The wash water is discharged through the boomed containment area.

Periodically, the direction of the water flow in the intake tunnel is reversed and flushed with warm water (118°F) for a three- or four-hour period of time to control mussel growth. This water discharges through the intake screens and out through the intake racks of the screen house.

OUTFALL #003A-Circulating Cooling Waters Serving Generating Units #3 and #4

This outfall is similar to Outfall #001A in that it discharges once through condenser cooling waters to Casco Bay from steam generating Unit #3 and Unit #4 during normal operating conditions.

OUTFALL #004A-Treatment Lagoons A & B (Contact Waste Waters)

Municipal water is utilized for boiler make-up water and is used in the sanitary facilities throughout the plant. Waste waters discharged from this outfall consist of the following:

- 1. Tank farm storm water runoff and occasional blow down from steam heaters.
- 2. Ash transport system waters which utilizes sea water to transport fly ash and bottom ash from the five boiler units to the waste water treatment ponds.
- 3. Boiler water treatment system waste waters that include boiler blowdown and regeneration wastes from the demineralizer system which processes make-up water for the boilers.
- 4. Miscellaneous plant floor drains, cooling waters and washdown waters.

It is noted that in the fall of 1998, the former owner of the facility relocated the outfall pipe into deeper water to enhance the dilution factors associated with the discharge and the receiving water.

OUTFALL #005A-Treatment Lagoons A & B (Boiler Cleaning Chemicals)

Waste waters discharged from this outfall are generated as a result of periodic chemical cleaning of the boilers. Waste waters are conveyed to treatment lagoons and eventually discharge to the bay via the same pipe as used for Outfall #004A. Outfall #005A and Outfall #004A are physically the same outfall but have a different designation in this and previous licenses and permits as testing regimes for the different waste streams can be tracked independently. The boilers are normally scheduled to be cleaned once every three to five years however, this activity has not been conducted in the last ten year period.

OUTFALLS #006, #007, #008, #009, #010, #011, #012, and #013 – Storm Water

These outfalls discharge storm water runoff from various catchment areas throughout the 50-acre site. The following table provides an estimation of the total impervious area and total area drained for each outfall.

Outfall #	Total Impervious Area	Total Area Drained	Outfall #	Total Impervious Area	Total Area Drained
#006	116,100 sq. ft.	206,500 sq. ft.	#010	8,500 sq. ft.	8,500 sq. ft.
#007	84,700 sq. ft.	230,000 sq. ft.	#011	22,400 sq. ft.	22,400 sq. ft.
#008	18,000 sq. ft.	56,400 sq. ft.	#012	9,800 sq. ft.	9,800 sq. ft.
#009	22,400 sq. ft.	32,400 sq. ft.	#013	130,680 sq. ft.	130,680 sq. ft.

d. Waste Water Treatment: Outfalls #001A, #002A and #003A do not receive any form of conventional treatment as the only pollutant of concern is heat (#001A and #003A) and debris (#002A) originating from the receiving waters.

Outfalls #004A and #005A receive treatment in the four treatment ponds (A1,A2,B1,B2) by way of settling, neutralization with sodium hydroxide or sulfuric acid. If after visual inspection an oil sheen is deemed present in storm water runoff from the tank farm, the storm water passes through an oil water separator prior to entering the treatment ponds.

A schematic of waste water flow provided by FPL is included as Attachment B of this Fact Sheet.

Sanitary waste waters generated at the facility are treated in a subsurface disposal system and are not discharged to Casco Bay.

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3. CONDITIONS OF PERMITS

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

4. RECEIVING WATER QUALITY STANDARDS

Classifications of estuarine and marine waters, 38 M.R.S.A. § 469 classifies the marine waters at the point of discharge as Class SB waters. Standards for classification of estuarine and marine waters, 38 M.R.S.A. § 465-B(2)describes the classification standards for Class SB waters.

5. RECEIVING WATER QUALITY CONDITIONS

The State of Maine 2006 Integrated Water Quality Monitoring and Assessment Report, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists a 59.5-acre segment of the estuarine and marine waters at Cousins and Littlejohn's Islands in Yarmouth (Waterbody ID #802-3) as "Category 2: Estuarine and Marine Waters Attaining Some Designated Uses – Insufficient Information for Other Uses." In addition, all estuarine and marine waters of the State are listed as "Category 5-D: Estuarine and Maine Waters Impaired by Legacy Pollutants." Impairment in this context refers to the estuarine and marine waters partially supporting the designated use of fishing and harvesting of shellfish due to elevated levels of mercury, PCBs, dioxin, and other persistent bioaccumulating substances in tissues of some fish and in lobster tomalley. Pursuant to 38 M.R.S.A. § 420(1-B)(B), "a facility is not in violation of the ambient criteria for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to section 413 subsection 11." The Department has established interim monthly average and daily maximum mercury concentration limits for this facility.

The Maine Department of Marine Resources (DMR) assesses information on shellfish growing areas to ensure that shellfish harvested are safe for consumption. The DMR has authority to close shellfish harvesting areas wherever there is a pollution source, a potential pollution threat, or poor water quality. The DMR traditionally closes shellfish harvesting areas if there are known sources of discharges with unacceptable bacteria levels (instream thresholds established in the National Shellfish Sanitation Program) or maintains shellfish harvesting closure areas due to lack of updated information regarding ambient water quality conditions. In addition, the DMR prohibits shellfish harvesting in the immediate vicinity of all wastewater treatment outfall pipes as a precautionary measure in the event of a failure in the treatment plant's disinfection system. Thus, shellfish harvesting area #16-C is closed to the harvesting of shellfish due to insufficient or limited ambient water quality data to determine that the area meets the standards in the National Shellfish Sanitation Program.

a. <u>Applicability of National Effluent Guidelines:</u> The USEPA has promulgated Effluent Guideline Limitations (EGLs) at 40 CFR Part 423, *Steam Electric Power Generating Point Source Category*, which are applicable to the discharges from the FPL facility. Effluent limitations and monitoring requirements in Special Condition A of this licensing action were derived in consideration of these technology-based guidelines.

OUTFALL #001A-Circulating Cooling Waters Serving Generating Units #1 and #2

a. <u>Flow</u>: The previous permitting action established, and this permitting action is carrying forward, daily maximum and monthly average discharge flow limitations of 95 MGD and 90 MGD, respectively, for Outfall #001A. Both limitations are representative of flows during normal operating conditions.

A summary of discharge flow data for Outfall #001A as reported on the monthly Discharge Monitoring Reports (DMRs) for the period of January 2005 through January 2008 is as follows:

Discharge Flow	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	4 MGD	61 MGD	42 MGD	24
Daily Maximum	4 MGD	84 MGD	52 MGD	24

b. <u>Temperature</u>: The previous permitting action established, and this permitting action is carrying forward, seasonal daily maximum and monthly average effluent temperature limits, which are based on a best professional judgment by the Department and FPL of the current operational levels and that will comply with the requirements of *Regulations Relating to Temperature*, 06-096 CMR 582 (last amended February 18, 1989).

The limits are as follows:

<u>Season</u>	Monthly Average	Daily Maximum
Summer (June 1 – August 31)	100°F	105°F
Winter (September 1 – May 31)	85°F	90°F

A summary of Outfall #001A effluent temperature data as reported on the monthly Discharge Monitoring Reports (DMRs) for the period of January 2005 through January 2008 is as follows:

Summer Temperature (June 1 – August 31)	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	76°F	86°F	81°F	4
Daily Maximum	78°F	90°F	85°F	4
Winter Temperature (September 1 – May 31)				
Monthly Average	46°F	85°F	61°F	19
Daily Maximum	46°F	88°F	65°F	19

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

OUTFALL #001A (cont'd)

- c. Total Residual Chlorine (TRC): The previous permitting action established a daily maximum technology-based TRC limit of 0.2 mg/L and the fact sheet associated with the 9/3/03 permit stated that this limitations was "based in part on the best practicable treatment (BPT) limitation found in 40 CFR, §423.12(b)(6) and in part on a Department BPT determination for the this particular waste stream." However, the EGLs at 40 CFR Part 423.12(b)(6) establish best practicable control technology currently available (BPT)-based limits for free available chlorine (FAC) rather than TRC. The BAT effluent guidelines at 40 CRF Part 423.13(b)(1) specify that a daily maximum TRC concentration limit of 0.20 mg/L is applicable to the discharge of once through cooling waters.

 However, FPL has notified the Department that chlorine or chlorine-based compounds are no longer used at the facility for any processes. 40 CFR Part 122.44(a)(2), Establishing limitations, standards, and other permit conditions (applicable to State NPDES programs see §123.25), states;
 - (2) Monitoring waivers for certain guideline-listed pollutants.
 - (i) The Director may authorize a discharger subject to technology-based effluent limitations guidelines and standards in an NPDES permit to forego sampling of a pollutant found at 40 CFR Subchapter N of this chapter if the discharger has demonstrated through sampling and other technical factors that the pollutant is not present in the discharge or is present only at background levels from intake water and without any increase in the pollutant due to activities of the discharger.
 - (ii) This waiver is good only for the term of the permit and is not available during the term of the first permit issued to a discharger.
 - (iii) Any request for this waiver must be submitted when applying for a reissued permit or modification of a reissued permit. The request must demonstrate through sampling or other technical information, including information generated during an earlier permit term that the pollutant is not present in the discharge or is present only at background levels from intake water and without any increase in the pollutant due to activities of the discharger.
 - (iv) Any grant of the monitoring waiver must be included in the permit as an express permit condition and the reasons supporting the grant must be documented in the permit's fact sheet or statement of basis.

OUTFALL #001A (cont'd)

Therefore, this permitting action is carrying forward the daily maximum technology-based TRC limit of 0.2 mg/L but is waiving monitoring for this guideline-listed pollutant under the provisions of 40 CFR Part 122.44(a)(2). See Special Condition I, *Monitoring Waiver For Certain Guideline-Listed Pollutants*, in this permit which is being established to fulfill the requirements of 40 CFR Part 122.44 (a)(2)(iv) cited above. It is noted that analytical chemistry testing required by this permit includes testing for TRC.

d. <u>pH</u>: The previous permitting action established a technology-based pH range limitation range of 6.0-9.0 standard units (SU) based on Department best professional judgment of best practicable treatment. The previous permitting action did not establish pH monitoring requirements for Outfall #001A. It is noted that 40 CFR Part 423 does not specify a pH range limitation for once-through cooling waters. FPL does not alter the intake waters in any way that is anticipated to change the pH of once-through cooling waters, and the intake and receiving waters are the same waterbody. Therefore, this permitting action is eliminating the pH range limitation for Outfall #001A in consideration of the characteristics of this once-through cooling water discharge and lack of technology-based standards for this waste stream.

OUTFALL #002A-Intake Screen Wash

a. <u>Flow</u>: The previous permitting action established, and this permitting action is carrying forward, daily maximum and monthly average discharge flow limitations of 5.0 MGD and 1.0 MGD, respectively, for Outfall #002A. Both limitations are representative of flows during normal operating conditions.

A summary of discharge flow data for Outfall #002A as reported on the monthly Discharge Monitoring Reports (DMRs) for the period of January 2005 through January 2008 is as follows:

Discharge Flow	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	0.001 MGD	0.49 MGD	0.2 MGD	27
Daily Maximum	0.001 MGD	0.9 MGD	0.4 MGD	27

b. <u>Temperature</u>: The previous permitting action established, and this permitting action is carrying forward, a year-round daily maximum effluent temperature limit of 123°F for periods when Outfall #002A is backwashed with non-contact cooling water to control mussel growth. This limitation is based on a best professional judgment by the Department of an appropriate limit that will comply with the requirements of 06-096 CMR 582.

During the period of January 2005 through January 2008, FPL indicated that intake screen wash discharges via Outfall #002A were not performed using non-contact cooling waters. Thus, temperature data are not available for this outfall for said monitoring period.

OUTFALL #002A (cont'd)

c. <u>pH</u>: The previous permitting action established, and this permitting action is carrying forward, a technology-based pH range limitation range of 6.0-9.0 standard units (SU) based on 40 CFR Part 423.12(b)(1). This permitting action is not establishing routine monitoring requirements for pH for Outfall #002A in consideration of the source and receiving waters being the same.

OUTFALL #003A-Circulating Cooling Waters Serving Generating Units 3 and 4

a. <u>Flow</u>: The previous permitting action established, and this permitting action is carrying forward, daily maximum and monthly average discharge flow limitations of 435 MGD and 300 MGD, respectively, for Outfall #003A. Both limitations are representative of flows during normal operating conditions.

A summary of discharge flow data for Outfall #003A as reported on the monthly Discharge Monitoring Reports (DMRs) for the period of January 2005 through January 2008 is as follows:

Discharge Flow	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	19 MGD	284 MGD	177 MGD	28
Daily Maximum	9 MGD	395 MGD	236 MGD	28

b. <u>Temperature</u>: The previous permitting action established, and this permitting action is carrying forward, seasonal daily maximum and monthly average effluent temperature limits, which are based on a best professional judgment by the Department and FPL of the current operational levels and that will comply with the requirements of 06-096 CMR 582.

The limits are as follows:

<u>Season</u>	Monthly Average	Daily Maximum
Summer (June 1 – August 31)	105°F	110°F
Winter (September 1 – May 31)	85°F	90°F

A summary of Outfall #003A effluent temperature data as reported on the monthly Discharge Monitoring Reports (DMRs) for the period of January 2005 through January 2008 is as follows:

Summer Temperature (June 1 – August 31)	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	63°F	79°F	72°F	6
Daily Maximum	65°F	83°F	76°F	6
Winter Temperature (September 1 – May 31)				
Monthly Average	43°F	80°F	64°F	19
Daily Maximum	51°F	89°F	71°F	19

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

OUTFALL #003A (cont'd)

- c. <u>Total Residual Chlorine</u>: The previous permitting action established, and this permitting action is carrying forward, a daily maximum technology-based TRC limit of 0.20 mg/L on the same basis as described in the TRC section for Outfall #001A above (Fact Sheet Section 6, Outfall #001A c.). This permitting action is eliminating TRC monitoring requirements pursuant to 40 CFR Part 122.44(a)(2) and Special Condition I, *Monitoring Waiver For Certain Guideline-Listed Pollutants*.
- d. <u>pH</u>: The previous permitting action established a technology-based pH range limitation range of 6.0-9.0 standard units (SU) based on Department best professional judgment of best practicable treatment. The previous permitting action did not establish pH monitoring requirements for Outfall #003A. It is noted that 40 CFR Part 423 does not specify a pH range limitation for once-through cooling waters. FPL does not alter the intake waters in any way that is anticipated to change the pH of once-through cooling waters, and the intake and receiving waters are the same waterbody. Therefore, this permitting action is eliminating the pH range limitation for Outfall #003A in consideration of the characteristics of this once-through cooling water discharge and lack of technology-based standards for this waste stream.

OUTFALL #004A-Treatment Lagoons A & B (Contact Waste Waters)

Waste waters discharged via Outfall #004A are categorized as low volume waste waters pursuant to 40 CFR Part 423.11(b). 40 CFR Part 423.12(b)(3) establishes BPT-based effluent guideline limitations for oil and grease and total suspended solids for the discharge of low volume waste waters.

a. <u>Flow</u>: The previous permitting action established, and this permitting action is carrying forward, daily maximum and monthly average discharge flow limitations of 7.4 MGD and 1.0 MGD, respectively, for Outfall #004A. Both limitations are representative of flows during normal operating conditions and of the facility's pump capacities.

A summary of discharge flow data for Outfall #004A as reported on the monthly Discharge Monitoring Reports (DMRs) for the period of January 2005 through January 2008 is as follows:

Discharge Flow	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	0.08 MGD	0.49 MGD	0.24 MGD	36
Daily Maximum	0.38 MGD	1.7 MGD	0.80 MGD	36

b. <u>Total Suspended Solids (TSS):</u> The previous permitting action established, and this permitting action is carrying forward, daily maximum and monthly average technology-based TSS limitations of 100 mg/L and 30 mg/L, respectively, based on the effluent guidelines promulgated at 40 CFR Part 423.12(b)(3). *Waste Discharge License Conditions*, 06-096 CMR 523(6)(f)(1) (effective January 12, 2001) states that all pollutants limited in permits shall have limitations, standards or prohibitions expressed in

OUTFALL #004A (cont'd)

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terms of mass, except pollutants which cannot appropriately be expressed by mass. TSS can be expressed in terms of mass and MEPDES permits issued to other power generating facilities that are subject to the EGLs at 40 CFR Part 423 contain mass limits for TSS. Therefore, this permitting action is establishing daily maximum and monthly average mass limits for TSS as follows:

Daily Maximum Mass: (1.0 MGD)(8.34 lbs./gallon)(100 mg/L) = 834 lbs./dayMonthly Average Mass: (1.0 MGD)(8.34 lbs./gallon)(30 mg/L) = 250 lbs./day

A summary of TSS data for Outfall #004A as reported on the monthly DMRs for the period of January 2005 through January 2008 indicates both the daily maximum and monthly average results range from 4 mg/L to 12 mg/L with an arithmetic mean of 7 mg/L (#DMRs = 18). This permitting action is revising the minimum monitoring frequency requirement for TSS from once per month to once per calendar quarter in consideration of the test results on file.

c. Oil and Grease (O&G): The previous permitting action established, and this permitting action is carrying forward, daily maximum and monthly average technology-based O&G limitations of 20 mg/L and 15 mg/L, respectively, based on the effluent guidelines promulgated at 40 CFR Part 423.12(b)(3). Pursuant to 06-096 CMR 523(6)(f)(1), this permitting action is establishing daily maximum and monthly average mass limits for O&G as follows:

Daily Maximum Mass: (1.0 MGD)(8.34 lbs./gallon)(20 mg/L) = 167 lbs./dayMonthly Average Mass: (1.0 MGD)(8.34 lbs./gallon)(15 mg/L) = 125 lbs./day

A summary of O&G data for Outfall #004A as reported on the monthly DMRs for the period of January 2005 through January 2008 indicates both the daily maximum and monthly average results range from 1.3 mg/L to 4 mg/L with an arithmetic mean of 2 mg/L (#DMRs = 13). This permitting action is revising the minimum monitoring frequency requirement for O&G from once per month to once per calendar quarter in consideration of the test results on file.

d. <u>Temperature</u>: The previous permitting action established, and this permitting action is carrying forward, a year-round daily maximum effluent temperature limit of 105°F for Outfall #004A, which based on a best professional judgment by the Department of an appropriate limit that will comply with the requirements of 06-096 CMR 582.

A summary of effluent temperature data for Outfall #004A as reported on the monthly DMRs for the period of January 2005 through January 2008 indicates the results range from 45°F to 87°F with an arithmetic mean of 65°F (#DMRs = 35).

OUTFALL #004A (cont'd)

- e. <u>pH</u>: The previous permitting action established, and this permitting action is carrying forward, a technology-based pH range limitation range of 6.0-9.0 standard units (SU) based on 40 CFR Part 423.12(b)(1), and a minimum monitoring frequency requirement of once per week.
- f. Whole Effluent Toxicity (WET), Analytical Chemistry, and Priority Pollutant Testing:
 Maine law, 38 M.R.S.A., 38 M.R.S.A. § 414-A and 38 M.R.S.A. § 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. 06-096 CMR 530 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. 06-096 CMR 584 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 06-096 CMR 530, is included in this permit in order to characterize the effluent. 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 WET tests are performed on invertebrate species mysid shrimp (*Mysidopsis bahia*); chronic WET tests are performed on sea urchin (*Arbacia punctulata*). 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. Priority pollutant testing refers to the analysis for levels of priority pollutants listed in 06-096 CMR 525(4)(VI). Analytical chemistry refers to a suite of twelve (12) chemical tests for ammonia-nitrogen, total aluminum, total cadmium, total chromium, total copper, total lead, total nickel, total silver, total zinc, total arsenic, total cyanide and total residual chlorine.

06-096 CMR 530(4)(C), states "The background concentration of specific chemicals must be included in all calculations using the following procedures. The Department may publish and periodically update a list of default background concentrations for specific pollutants on a regional, watershed or statewide basis. In doing so, the Department shall use data collected from reference sites that are measured at points not significantly affected by point and non-point discharges and best calculated to accurately represent ambient water quality conditions." "The Department shall use the same general methods as those in section 4(D) to determine background concentrations. For pollutants not listed by the Department, an assumed concentration of 10% of the applicable water quality criteria must be used in calculations." The Department has insufficient information on the background levels of metals in the water column in Casco Bay. Therefore, a default background concentration of 10% of applicable water quality criteria is being used in the calculations of this permitting action.

OUTFALL #004A (cont'd)

06-096 CMR 530(4)(E), states "In allocating assimilative capacity for toxic pollutants, the Department shall hold a portion of the total capacity in an unallocated reserve to allow for new or changed discharges and non-point source contributions. The unallocated reserve must be reviewed and restored as necessary at intervals of not more than five years. The water quality reserve must be not less than 15% of the total assimilative quantity." Therefore, the Department is reserving 15% of applicable water quality criteria used in the calculations of this permitting action.

06-096 CMR 530(4)(F) requires evaluation of toxic pollutant impacts on a watershed basis. This section of the rule states, "Where there is more than one discharge into the same fresh or estuarine receiving water or watershed, the Department shall consider the cumulative effects of those discharges when determining the need for and establishment of the level of effluent limits. The Department shall calculate the total allowable discharge quantity for specific pollutants, less the water quality reserve and background concentration, necessary to achieve or maintain water quality criteria at all points of discharge, and in the entire watershed." The Department is currently working to construct a computer program model to conduct this analysis. Until such time the model is complete and a multi-discharger statistical evaluation can be conducted, the Department is evaluating the impact of FPL's discharge assuming it is the only discharger to the receiving water. Should the multi-discharger evaluation indicate there are parameters that exceed or have a reasonable potential to exceed applicable AWQC, this permit may be reopened pursuant to Special Condition K, Reopening of Permit For *Modifications*, to incorporate additional limitations and or revise monitoring requirements.

This permit provides for reconsideration of effluent limits and monitoring schedules after evaluation of toxicity testing results. The monitoring schedule includes consideration of results currently on file, the nature of the wastewater, existing treatment, and receiving water characteristics.

06-096 CMR 530(2)(B) categorizes dischargers subject to the toxics rule into one of four levels (Levels I through IV). Level III dischargers are those "those dischargers having a chronic dilution factor of at least 100 but less than 500 to 1...." The chronic dilution factor associated with the discharge from Outfall #004A is 222 to 1; thus, the facility is considered a Level III facility for purposes of toxics testing. 06-096 CMR 530(2)(B)(D) specifies default WET, priority pollutant, and analytical chemistry test schedules for Level III as follows:

OUTFALL #004A (cont'd)

Screening level testing – Beginning 12 months prior to permit expiration of the current permit or in the fifth year since the lat screening test, which ever is sooner.

Level	WET Testing	Priority pollutant testing	Analytical chemistry
III	1 per year	1 per year	4 per year

Surveillance level testing – Beginning upon issuance of the permit and lasting until 12 months prior to permit expiration.

Level	WET Testing	Priority pollutant testing	Analytical chemistry
III	1 per year	None required	1 per year

06-096 CMR(D)(3)(b) provides that "Dischargers in Levels III and IV may be waived from conducting surveillance testing for individual WET species or chemicals provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence...."

The previous permitting action established annual WET and priority pollutant testing requirements for Outfall #004A as well as acute (2.1%) and chronic (0.45%) water quality limits for the inland silverside and sea urchin, respectively. On April 10, 2006, the Department amended the 9/3/03 permit to establish testing requirements required by 06-096 CMR 530. The 4/10/06 amendment eliminated further surveillance level testing and established the default screening level WET, priority pollutant, and analytical chemistry testing requirements as described in the table above. It is noted that 06-096 CMR 530 does not require WET testing using the inland silverside.

WET Evaluation

06-096 CMR 530(3)(E) states:

For effluent monitoring data and the variability of the pollutant in the effluent, the Department shall apply the statistical approach in Section 3.3.2 and Table 3-2 of USEPA's "Technical Support Document for Water Quality-Based Toxics Control" (USEPA Publication 505/2-90-001, March, 1991, EPA, Office of Water, Washington, D.C.) to data to determine whether water-quality based effluent limits must be included in a waste discharge license. Where it is determined through this approach that a discharge contains pollutants or WET at levels that have a reasonable potential to cause or contribute to an exceedence of water quality criteria, appropriate water quality-based limits must be established in any licensing action.

OUTFALL #004A (cont'd)

On May 5, 2008, the Department conducted a statistical evaluation on the most recent 60 months of WET test results on file with the Department for the FPL facility in accordance with the statistical approach outlined above. The 5/5/08 statistical evaluation indicates the discharge from the FPLE Wyman Facility does not exceed or demonstrate a reasonable potential to exceed the critical acute or chronic water quality thresholds for the mysid shrimp or sea urchin, respectively. See Attachment C of this Fact Sheet for a summary of the WET test dates and results.

Therefore, this permitting action is eliminating the numeric limitation for the sea urchin and is waiving surveillance level WET testing pursuant to 06-096 CMR(D)(3)(b).

06-096 CMR 530(2)(D)(4) states, "all 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 establishes Special Condition H, *Statement for Reduced/Waived Toxics Testing*, pursuant to 06-096 CMR 530(2)(D)(4). It is noted, however, that if future WET testing indicates the discharge exceeds or demonstrates a reasonable potential to exceed the critical water quality thresholds for either test species, this permit will be reopened in accordance with Special Condition K, *Reopening of Permit For Modification*, to establish effluent limitations and revised monitoring requirements as necessary

Priority Pollutant Evaluation

The previous permitting action established water quality-based monthly average mass limits of 0.78 lbs./day and 15 lbs./day, respectfully, for <u>total</u> arsenic and total nickel based on a May 21, 2003 statistical evaluation of effluent data on file with the Department, which indicated reasonable potential to exceed the respective ambient water quality criteria (AWQC) for both pollutants.

On May 5, 2008, the Department conducted a statistical evaluation on the most recent 60 months of chemical-specific tests results on file with the Department for the FPL facility in accordance with the statistical approach outlined in the beginning of this section. The 5/5/08 statistical evaluation indicates that the discharge has on one (1) occasion (12/6/2007 test result of 155 μ g/L) demonstrated a reasonable potential to exceed the

OUTFALL #004A (cont'd)

acute AWQC for copper (total). It is noted, however, that the remaining nine other copper test results on file are 1-2 orders of magnitude lower than the 12/6/07 test result.

The 5/5/08 statistical evaluation indicates that the discharge does not exceed or have a reasonable potential to exceed the AWQC for any other parameters tested than those specified above. See Attachment D of this Fact Sheet for a summary of chemical-specific test dates and copper test results. It is noted that a 9/20/2004 test result of $0.07~\mu g/L$ for 4,4~DDT has been submitted by the permittee and has been entered into the Department's toxics database. However, the Department has no reason to believe that FPL discharges 4,4~DDT from it's Wyman Plant. FPL reported that the analytical laboratory that performed the sample analysis for the 9/20/04 sample as well as the Department's Division of Environmental Assessment suspect that the test result of $0.07~\mu g/L$ is a false positive result. Therefore, this permitting action is not establishing effluent limitations or monitoring requirements for 4,4~DDT. Priority pollutant testing required by this permit will provide screening for this pollutant to further confirm that DDT levels in the effluent are non-detectable.

06-096 CMR 530(3) states, "the Department shall establish appropriate discharge prohibitions, effluent limits and monitoring requirements in waste discharge licenses if a discharge contains pollutants that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an ambient excursion in excess of a numeric or narrative water quality criteria or that may impair existing or designated uses."

Therefore, this permitting action is:

- Eliminating the monthly average mass limits for total arsenic and total nickel. (Concentration limits were not established in the 9/3/03 permit.);
- Establishing daily maximum concentration and mass limits for total copper; and
- Waiving surveillance level analytical testing pursuant to 06-096 CMR(D)(3)(b).

End-of-pipe (EOP), water quality-based, concentration and mass limits for total copper may be calculated using the following formula:

EOP Concentration Limit = [(Dilution Factor)](0.75)(criterion)] + (0.25)(criterion)

EOP Mass Limit = (Conc. Limit, $\mu g/L$)(8.34 lbs./gallon)(Flow Limit, MGD) = Limit, lbs./day 1000 $\mu g/mg$

OUTFALL #004A (cont'd)

Total Copper

W000634-5R-I-R

Based on the acute AWQC for copper and the acute dilution factor, daily maximum water quality-based concentration and mass limits for total copper may be calculated as follows:

Daily Maximum Conc. = $[(47)[(0.75)(5.78 \mu g/L)] + (0.25)(5.78 \mu g/L)$

= 204 + 1.4= $205 \mu g/L$

Daily Max. Mass = $(205 \mu g/L)(8.34 \text{ lbs./gallon})(1.0 \text{ MGD}) = 1.7 \text{ lbs./day}$

 $1000 \mu g/mg$

This permitting action is establishing a minimum monitoring frequency requirement of once per year for total copper in consideration of the test results on file. Tests shall be scheduled to coincide with each of the four calendar quarters.

OUTFALL #005A-Treatment Lagoons A & B (Boiler Cleaning Chemicals)

Waste waters discharged via Outfall #005A are categorized as metal cleaning waste waters pursuant to 40 CFR Part 423.11(d). 40 CFR Part 423.12(b)(5) establishes BPT-based effluent guideline limitations for total suspended solids, oil and grease, total copper, and total iron for the discharge of metal cleaning waste waters.

- a. <u>Flow</u>: The previous permitting action established, and this permitting action is carrying forward, daily maximum and monthly average discharge flow limitations of 1.0 MGD and 0.5 MGD, respectively, for Outfall #005A. Both limitations are representative of anticipated flows during normal operating conditions. However, it is noted that the facility has not discharged metals cleaning waste waters since prior to the issuance of the 9/3/03 permit.
- b. Total Suspended Solids (TSS): The previous permitting action established, and this permitting action is carrying forward, daily maximum and monthly average technology-based TSS limitations of 100 mg/L and 30 mg/L, respectively, based on the effluent guidelines promulgated at 40 CFR Part 423.12(b)(5). Pursuant to 06-096 CMR 523(6)(f)(1), this permitting action is establishing daily maximum and monthly average mass limits for TSS as follows:

Daily Maximum Mass: (0.5 MGD)(8.34 lbs./gallon)(100 mg/L) = 417 lbs./dayMonthly Average Mass: (0.5 MGD)(8.34 lbs./gallon)(30 mg/L) = 125 lbs./day

OUTFALL #005A (cont'd)

c. Oil and Grease (O&G): The previous permitting action established, and this permitting action is carrying forward, daily maximum and monthly average technology-based O&G limitations of 20 mg/L and 15 mg/L, respectively, based on the effluent guidelines promulgated at 40 CFR Part 423.12(b)(5). Pursuant to 06-096 CMR 523(6)(f)(1), this permitting action is establishing daily maximum and monthly average mass limits for O&G as follows:

Daily Maximum Mass: (0.5 MGD)(8.34 lbs./gallon)(20 mg/L) = 84 lbs./dayMonthly Average Mass: (0.5 MGD)(8.34 lbs./gallon)(15 mg/L) = 63 lbs./day

- d. <u>Temperature</u>: The previous permitting action established, and this permitting action is carrying forward, a year-round daily maximum effluent temperature limit of 105°F for Outfall #005A, which based on a best professional judgment by the Department of an appropriate limit that will comply with the requirements of 06-096 CMR 582.
- e. <u>pH</u>: The previous permitting action established, and this permitting action is carrying forward, a technology-based pH range limitation range of 6.0-9.0 standard units (SU) based on 40 CFR Part 423.12(b)(1), and a minimum monitoring frequency requirement of once per week.
- f. Iron (Total): The previous permitting action established, and this permitting action is carrying forward, monthly average and daily maximum technology-based concentration limitations of 1.0 mg/L (1,000 μg/L) for total iron based on the effluent guidelines promulgated at 40 CFR Part 423.12(b)(5). Neither the Department nor USEPA has developed ambient water quality criteria for iron for marine waters. Pursuant to 06-096 CMR 523(6)(f)(1), this permitting action is establishing daily maximum and monthly average mass limits for total iron as follows:

Monthly Average and Daily Maximum Mass Limits: = $(1,000 \mu g/L)(8.34 \text{ lbs./gallon})(0.5 \text{ MGD}) = 4.2 \text{ lbs./day}$ $1000 \mu g/\text{mg}$

This permitting action is carrying forward the minimum monitoring frequency requirement of once per discharge day for total iron.

g. Copper (Total): The previous permitting action established monthly average and daily maximum water quality based limits of 136 μ g/L and 634 μ g/L, respectively, for total copper as these water quality-based limits were more stringent than the technology-based guidelines of 1.0 mg/L (1,000 μ g/L) promulgated at 40 CFR Part 423.12(b)(5). 06-096 CMR 584, which became effective on October 9, 2005, established revised AWQC for total copper for marine waters based on new information regarding copper toxicity in marine waters. The current marine acute and chronic AWQC for copper are 5.78 μ g/L and 3.73 μ g/L, respectively, which is less stringent than the criteria in effect at the time the previous permit was issued (2.9 μ g/L for both acute and chronic). Department

OUTFALL #005A (cont'd)

permitting actions impose the more stringent of either a water quality-based or technology-based limit. The AWQC for copper are more stringent than the BPT-based guidelines and are therefore being used to calculate appropriate effluent limits for this discharge.

Based on the acute and chronic AWQC for copper, monthly average and daily maximum water quality-based concentration and mass limits for total copper may be calculated as follows:

Monthly Average Conc. = $[(222)[(0.75)(3.73 \mu g/L)] + (0.25)(3.73 \mu g/L)$

= 621 + 0.9= 622 \text{ \text{\mug/L}}

Daily Maximum Conc. = $[(47)[(0.75)(5.78 \mu g/L)] + (0.25)(5.78 \mu g/L)$

= 204 + 1.4= $205 \mu g/L$

Monthly Avg. Mass = $(622 \mu g/L)(8.34 \text{ lbs./gallon})(0.5 \text{ MGD}) = 2.6 \text{ lbs./day}$

 $1000 \mu g/mg$

Daily Max. Mass = $(205 \mu g/L)(8.34 \text{ lbs./gallon})(0.5 \text{ MGD}) = 0.9 \text{ lbs./day}$

 $1000 \mu g/mg$

It is noted that the calculations above have been calculated correctly in that the daily maximum limitations are more stringent than the monthly average as a result of the relatively large difference between the ratio of the acute to chronic dilution factors compared to the relatively small difference between the acute and chronic AWQC for copper. This permitting action is carrying forward the minimum monitoring frequency requirement of once per discharge day for total copper.

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 water body to meet standards for Class SB classification.

8. ANTIDEGRADATION

Classification of Maine waters, 38 M.R.S.A. § 464(4)(F) contains what is referred to as the State's antidegradation policy. The Department has determined that the action of revising the total copper concentration limitations for Outfall #005A to be less stringent than those previously established is appropriate and justified at this time and will not cause or contribute to the failure of the receiving waterbody to meet the standards of its assigned water quality classification. The revised limitations are based on new information regarding the toxicity of copper in marine waters.

9. PUBLIC COMMENTS

Public notice of this application was made in the <u>Portland Press Herald</u> newspaper on or about <u>February 17, 2008</u>. The Department receives public comments on an application until the date a final agency action is taken on the application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to <u>Application Processing Procedures for Waste Discharge Licenses</u>, 06-096 CMR 522 (effective January 12, 2001).

10. DEPARTMENT CONTACTS

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

William F. Hinkel Division of Water Quality Management Bureau of Land & Water Quality Department of Environmental Protection 17 State House Station

Augusta, Maine 04333-0017 Telephone: (207) 287-7659 Fax: (207) 287-3435

e-mail: bill.hinkel@maine.gov

11. RESPONSE TO COMMENTS

During the period of May 14, 2008 through June 13, 2008, the Department solicited comments on the proposed draft Maine Pollutant Discharge Elimination System Permit to be issued to FPL Energy Wyman, LLC for the proposed discharges. The Department did not receive significant comments on the draft permit; therefore, a response to comments was not prepared.