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MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **June 20, 2003**

PERMIT NUMBER: **ME0000272**
LICENSE NUMBER: **W000634-5R-H-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):

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

The applicant has applied to the Department for renewal of Department Waste Discharge License (WDL) #W000634-43-C-R which was issued on December 11, 1997 and expired on December 11, 2002. The 12/11/97 WDL authorized the discharge of up to a daily maximum flow of 530 million gallons per day (MGD) of cooling water and up to 7.4 MGD of treated miscellaneous process waste water from an oil-fired power plant to the Casco Bay, Class SB, in Yarmouth, Maine.

2. PERMIT SUMMARY

a. Regulatory - On January 12, 2001, the Department received authorization from the U.S. Environmental Protection Agency (EPA) to administer the National Pollutant Discharge Elimination System (NPDES) permit program in Maine. From this point forward, the program will be referenced as the Maine Pollutant Discharge Elimination System (MEPDES) permit program and permit #ME0000272 (same as NPDES permit number) will be utilized as the primary reference number. NPDES permit #ME0000272 last issued on September 23, 1996, will be replaced by the final MEPDES permit upon issuance. Once replaced, all terms and conditions of the NPDES become null and void.

b. Terms and Conditions - This permitting action is carrying forward all the terms and conditions of the 12/11/97 WDL action and subsequent modifications with the following exceptions:

Outfall #001, #002, #003

Eliminating the monthly average and daily maximum temperature differential limitations for the discharges as they are unnecessary.

Outfall #002

Increasing the monthly average flow limit from 0.42 MGD to 1.0 MGD.

Outfall #004

Establishing monthly average water quality based mass limits for arsenic and nickel.

c. History – The most current relevant regulatory actions include the following:

September 23, 1996 - The EPA issued 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.

2. PERMIT SUMMARY (cont'd)

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 EPA to renew the NPDES permit. It is noted the EPA never acted on the application as the Department would be issuing a MEPDES permit upon renewal of the State WDL.

July 9, 2002 – FPL Energy Wyman, LLC, submitted a timely application to the Department to renew the WDL.

d. Source Description: The FPLE Energy Wyman LLC facility (formerly Wyman Station) occupies a 50-acre site on Cousin's 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 site location plan.

FPLE Wyman LLC 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 geneated 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 (See Attachment A of this Fact Sheet for a site plan identifying the location of each outfall and Attachment B for schematic of water flows for the facility) include the following:

OUTFALL #001-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.

2. PERMIT SUMMARY (cont'd)

OUTFALL #002-Intake Screen Wash

FPL Energy Wyman 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 #003-Circulating Cooling Waters Serving Generating Units #3 and #4

This outfall is similar to Outfall #001 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 #004-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.

2. PERMIT SUMMARY (cont'd)

OUTFALL #005-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 #004. Outfall #005 and Outfall #004 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 and #0012 – Storm Water

These outfalls discharge storm water runoff from various catchment areas throughout the 50-acre site.

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

Outfalls #004 and #005 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.

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

3. CONDITIONS OF PERMITS

Maine law, 38 M.R.S.A. Section 414-A, requires that the effluent limitations prescribed for discharges require application of best practicable treatment, 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, Maine law, 38 M.R.S.A., Section 420, and Department Regulation Chapter 530.5, *Surface Water Toxics Control Program* requires the regulation of toxic substances at the levels set forth for Federal Water Quality Criteria as published by the U.S. Environmental Protection Agency pursuant to the Clean Water Act.

4. RECEIVING WATER STANDARDS

Maine law, 38 M.R.S.A., §469 states that the marine waters at the point of discharge are classified as a Class SB waterway. Maine law, 38 M.R.S.A., §465-A(2) describes the classification standards for Class SB waters.

5. EXISTING WATER QUALITY CONDITIONS

Table Category 3 entitled, *Estuarine and Marine Water With Insufficient Data or Information to Determine Attainment*, in a document entitled, State of Maine Department of Environmental Protection, 2002 Integrated Water Quality Monitoring and Assessment Report, published by the Department lists Cousins & Littlejohn Islands in Yarmouth (DMR area #16A) with insufficient data to determine attainment. Attainment in this context is in regard to the designated use of harvesting of shellfish. Currently, DMR shellfish harvesting area #16C is closed to the harvesting of shellfish due to insufficient (limited) ambient water quality data to meet the standards in the National Shellfish Sanitation Program. Therefore, areas #16C remains closed. The FPL Energy Wyman facility will not cause or contribute to the shellfish harvesting closure as all waste waters containing bacteria are disposed of in an on-site sub-surface waste water disposal system that has been operated and maintained as designed with no visible signs of malfunctioning.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS:

The EPA has developed National Effluent Guidelines and Standards found at 40 CFR, Part 423, *Steam Electric Power Generating Point Source Category,* for facilities such as the FPL Energy Wyman facility. Effluent limitations and monitoring requirements in Special Condition A of this licensing action were derived as follows:

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

a. Flow: The daily maximum limit of 95 MGD and monthly average limit of 90 MGD in the previous permitting action are being carried forward in this permitting action. Both limitations are representative of flows during normal operating conditions. Discharge Monitoring Report (DMR) data for the period 6/98 through the present indicates the daily maximum flow discharged ranges from 21 MGD – 94 MGD and the monthly average flow discharged ranges from 6.9 MGD – 88 MGD.

b. Temperature: The seasonal monthly average and daily maximum effluent temperature limitations were established in previous permitting actions and were based on a best professional judgment by the Department and FPL Wyman of the current operational levels. The limits are as follows:

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

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

The DMR data for the period 6/98 through the present indicates the monthly average and daily maximum summer temperatures range as follows:

Season	Monthly Average	Daily Maximum
Summer (June 1 – August 31)	64°F - 81°F	76°F - 92°F
Winter (September 1 – May 31)	46°F - 81°F	49°F - 90°F

c. Total Residual Chlorine: The daily maximum technology based TRC limit of 0.2 mg/L is being carried forward from the previous licensing action and is 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.

d. pH: The technology based limitation range of 6.0-9.0 standard units (SU) is being carried forward from the previous licensing action.

e. Temperature differential – The previous licensing action contained seasonal monthly average and daily maximum temperature differential (ΔT°F) limitations (established by the EPA in the 9/23/96 NPDES permit) as follows:

Season	Monthly Average	Daily Maximum
Summer (June 1 – August 31)	35°F	40°F
Winter (September 1 – May 31)	42°F	47°F

The Department has concluded that the limitations are unnecessary and is more closely associated with determining the efficiency of the heat exchange systems in the power plant rather than a limitation necessary to protect water quality in Casco Bay. Therefore, the limitations are being deleted in this permitting action.

OUTFALL #002-Intake Screen Wash

a. Flow: The previous licensing action contained monthly average and daily maximum flow limitations of 0.42 MGD and 5.0 MGD respectively, for this outfall. The permittee has requested an increase in the monthly average flow limitation from 0.42 MGD to 1.0 MGD. The permittee has indicated that during certain times of the year, leaves and other debris avoid the floating booms and intake racks and clog the traveling screen structure. The current limit of 0.42 MGD is not enough flow to backwash and clear the traveling screens to allow the facility to continue to operate at its maximum capacity.

The Department is increasing the monthly average flow limit from 0.42 MGD to 1.0 MGD in this permitting action and is carrying forward the daily maximum limit of 5.0 MGD from the previous licensing action as both limits are remains representative of the discharge during normal operating conditions.

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

The DMR data for the period 6/98 through the present indicates the daily maximum flow discharged ranges from 0.01 MGD – 2.0 MGD and the monthly average flow discharged ranges from 0.07 MGD – 0.39 MGD.

b. Temperature: The daily maximum temperature increase of <1°F above the ambient receiving water temperature in the previous licensing action is not being carried forward in this permitting action as it is unnecessary due to the fact the backwash consists of raw intake water. The daily maximum temperature limit of 123°F in the previous licensing action is being carried in this permitting action for periods when the outfall is backwashed with non-contact cooling water to control mussel growth.

c. pH: The pH limitation range of 6.0 - 9.0 standard units with swing of <1 standard unit from the ambient receiving water pH is also being carried from the previous licensing action and remains representative of the discharge during normal operating conditions.

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

a. Flow: The daily maximum limit of 435 MGD and the monthly average limit of 300 MGD are being carried forward from the previous licensing action. Both limitations are representative of expected flows during normal operation conditions. The DMR data for the period 6/98 through the present indicates the daily maximum flow discharged ranges from 69 MGD – 329 MGD and the monthly average flow discharged ranges from 42 MGD – 279 MGD.

b. Temperature: The seasonal monthly average and daily maximum effluent temperature limitations were established in previous permitting actions and were based on a best professional judgment by the Department and FPL Wyman of current operational levels. The limits are as follows:

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

The DMR data for the period 6/98 through the present indicates the monthly average and daily maximum summer temperatures range as follows:

Season	Monthly Average	Daily Maximum
Summer (June 1 – August 31)	71°F - 84°F	72°F - 92°F
Winter (September 1 – May 31)	49°F - 79°F	55°F - 90°F

c. Total Residual Chlorine: The daily maximum technology based TRC limit of 0.2 mg/L is being carried forward from the previous licensing action and is 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 this particular waste stream.

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

d. pH: The technology based limitation range of 6.0-9.0 standard units (SU) is being carried forward from the previous licensing action.

e. Temperature differential – The previous licensing action contained seasonal monthly average and daily maximum temperature differential (ΔT°F) limitations (established by the EPA in the 9/23/96 NPDES permit) as follows:

Season	Monthly Average	Daily Maximum
Summer (June 1 – August 31)	35°F	40°F
Winter (September 1 – May 31)	42°F	47°F

The Department and permittee have concluded that the limitations are unnecessary and is more closely associated with determining the efficiency of the heat exchange systems in the power plant rather than a limitation necessary to protect water quality in Casco Bay. Therefore, the limitations are being deleted in this permitting action.

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

Waste waters discharged from this outfall are categorized as low volume waste waters pursuant to federal regulation, 40 CFR, §423.12(b)(3). Limits on parameters are specified to ensure attainment of the in-stream water quality criteria and that best practicable treatment (BPT) technology is utilized. Permits issued by this Department impose the more stringent of the calculated water quality based or BPT based limits.

a. Flow: The previous licensing action established monthly average and daily maximum flow limitations of 1.0 MGD and 7.4 MGD respectively, with the daily maximum limitation being based on pump capacity. The limitations are being carried forward in this permitting action and remain representative of the discharge. The DMR data for the period 6/98 through the present indicates the daily maximum flow discharged ranges from 0.19 MGD – 1.7 MGD and the monthly average flow discharged ranges from 0.19 MGD – 0.47 MGD.

b. Total Suspended Solids (TSS) - The previous licensing action established monthly average and daily maximum technology based concentration limitations of 30 mg/L and 100 mg/L respectively, and are being carried forward in this permitting action. The limits are consistent with the BPT limits for TSS established in federal regulation 40 CFR §423.12(b)(3). The DMR data for the period 6/98 through the present indicates the daily maximum concentrations discharged ranges from <4 mg/L – 24 mg/L and the monthly average concentrations discharged ranges from <4 mg/L – 24 mg/L.

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

c. Oil and Grease: - The previous licensing action established monthly average and daily maximum technology based concentration limitations of 15 mg/L and 20 mg/L respectively, and are being carried forward in this permitting action. The limits are consistent with the BPT limits for oil & grease established in federal regulation 40 CFR §423.12(b)(3). The DMR data for the period 6/98 through the present indicates the daily maximum concentrations discharged ranges from <1.3 mg/L – 3.3 mg/L and the monthly average concentrations discharged ranges from <1.3 mg/L – 3.3 mg/L.

d. Temperature: A previous licensing action (5/19/99 administrative modification) established a daily maximum temperature limit of 105°F that is being carried forward in this permitting action. The DMR data for the period 6/98 through the present indicates the daily maximum temperatures range from 41°F to 88°F.

e. Whole effluent toxicity (WET) and chemical specific testing - Maine law, 38 M.R.S.A., Sections 414-A and 420, prohibits the discharge of effluents containing substances in amounts which 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 U.S. EPA. Department Rules, 06-096 CMR Chapter 530.5, *Surface Water Toxics Control Program*, set forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

WET and chemical specific (priority pollutant) monitoring, as required by Chapter 530.5, is included in order to fully characterize the effluent. The permit also 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 waste water, existing treatment and receiving water characteristics.

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*) and vertebrate species Inland silverside (*Menidia beryllina*). Chronic WET tests are performed on sea urchin (*Arbacia punctulata*) and Inland silverside. Chemical specific, or "priority pollutant (PP)," 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.

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

Department Regulation Chapter 530.5, *Surface Water Toxics Control Program*, §D(3)(b) states that for discharges to the ocean, dilution must be calculated as near-field or initial dilution, or that dilution available as the effluent plume rises from the point of discharge to its trapping level, at mean low water level and slack tide for the acute exposure analysis and at mean tide for the chronic exposure analysis using appropriate models determined by the Department such as MERGE or CORMIX. With a permitted flow of 1.0 MGD and the location and configuration of the outfall structure, the Department has established dilution factors as follow:

Acute = 47:1 Chronic = 222:1 Harmonic mean [(1)] = 666:1

Footnote:

(1) The harmonic mean dilution factor is approximated by multiplying the chronic dilution factor by three (3). This multiplying factor is based on guidelines for estimation of human health dilution presented in the USEPA publication *"Technical Support Document for Water Quality-based Toxics Control"* (Office of Water; EPA/505/2-90-001, page 88), and represents an estimation of harmonic mean flow on which human health dilutions are based in a riverine 7Q10 flow situation.

It is noted the FPL Wyman facility is not categorical subject to Chapter 530.5 however, WET and chemical specific testing over the last eight-year period indicate the discharge from this outfall has exceeded or has a reasonable potential to exceed ambient water quality thresholds and or ambient water quality criteria (AWQC). A recent review of FPL Wyman's data indicates that they have fulfilled the WET and chemical specific testing requirements specified in previous licensing/permitting actions. See Attachment C of this Fact Sheet for a summary of the WET test results and Attachment Dof this Fact Sheet for a summary of the chemical specific test dates.

Department Regulation Chapter 530.5 and Protocol E(1) of a document entitled *Maine Department of Environmental Protection, Toxicity Program Implementation Protocols*, dated July 1998, states that statistical evaluations shall be periodically performed on the most recent 60 months of WET and chemical specific data for a given facility to determine if water quality based limitations must be included in the permit for a facility.

Chapter 530.5 §C(2) states when a discharge *"...contains pollutants at levels that have a reasonable potential to cause or contribute to an ambient excursion in excess of a numeric or narrative water quality criterion, appropriate water quality based limits must be established in the permit upon issuance."*

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

Chapter 530.5 §C(3) also states that if data indicates that a discharge is causing an exceedance of applicable AWQC, then:*"(1) the Department must notify the licensee of the exceedance; (2) the licensee must submit a toxicity reduction evaluation (TRE) plan for review and approval within 30 days of receipt of notice and implement the TRE after Department approval; (3) the Department must modify the waste discharge license to specify effluent limits and monitoring requirements necessary to control the level of pollutant and meet receiving water classification standards within 180 days of the Department's approval of the TRE."*

On May 21, 2003, the Department conducted an evaluation on the aforementioned tests results (and test results for metals required by the 9/23/96 NPDES permit) in accordance with the statistical approach outlined in EPA's March 1991 document *entitled Technical Support Document (TSD) for Water Quality Based Toxics Control*, Chapter 3.3.2 and Maine Department of Environmental Protection Guidance, July 1998, entitled *Toxicity Program Implementation Protocols*.

WET testing
The 5/21/03 statistical evaluation indicates the following:

		A-NOEL		C-NOEL	
WET Species	Test Date	RP	Exc.	RP	Exc.
Sea Urchin	11/8/98	N/A	N/A	No	Yes
	2/21/99	N/A	N/A	Yes	No
Inland Silverside	6/20/99	Yes	No	No	No

Therefore, pursuant to Chapter 530.5§C(2), a C-NOEL limit of 0.45% for the sea urchin and an A-NOEL of 2.1% for the inland silverside are being established in this permitting action. The Department establishes monitoring frequencies in permits for WET species that exceed or have a reasonable potential to exceed critical water quality thresholds based on the timing, severity and frequency of the results of concern.

A more in-depth review of the WET data in Attachment B of this Fact Sheet indicates FPL Energy Wyman has conducted four (4) C-NOEL tests on the sea urchin and four (4) A-NOEL tests on the inland silverside subsequent to the test results of concern and none of the results exceed or have a reasonable potential to exceed the critical acute or chronic water quality threshold. As a result, the monitoring frequency of 1/Year (equivalent to surveillance level) is being established for the both sea urchin and inland silverside in this permitting action.

Pursuant to Chapter 530.5, §C(3), FPL Wyman submitted a TRE to the Department on June 30, 2003. The Department approved the TRE on July 7, 2003.

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

As for the remaining WET test species tested to date, none of the test results in the 60-month evaluation period exceed or have a reasonable potential to exceed applicable critical water quality thresholds. Therefore, this permitting action is establishing a surveillance level (1/Year) reporting and monitoring frequency for the term of the permit.

Chemical Specific

The 5/21/03 statistical evaluation indicates that the discharge from Outfall #004 has four data points in the five year time frame that have a reasonable potential to exceed the human health (organisms only) ambient water quality criteria (AWQC) for arsenic (critical threshold of 40 ug/L) and eight data points that have a reasonable potential to exceed the chronic AWQC for nickel (critical threshold of 1.0 mg/L). Pursuant to Chapter 530.5 §C(2), monthly average limits are being established as follows:

Parameter	Chronic[(1)] Criterion	Chronic Dilution Factor	Calculated EOP[(2)] Chronic Con.	Month Avg. Mass Limit
Arsenic	0.14 ug/L	666:1[(3)]	93 ug/L	0.78 lbs/day
Nickel	8.3 ug/L	222:1	1.8 mg/L	15 lbs/day

Example Calculation:

$$\text{Arsenic} - \frac{(0.14\ \text{ug/L})(666)(8.34)(1.0\ \text{MGD})}{1000} = 0.78\ \text{lbs/day}$$

Footnotes:

(1) Based on EPA's 1986 ambient water quality criteria (AWQC).
(2) End-of-pipe.
(3) Harmonic mean dilution factor

Department rule Chapter 523, §6(f)(2) which states that pollutants limited in terms of mass additionally may be limited in terms of other units of measurement and the permit shall require the permittee to comply with both limitations. In addition, *EPA's Technical Support Document For Water Quality Based Toxics Control*, March 1991, Chapter 5, Section 5.7, recommends that permit limits for both mass and concentration be specified for effluents discharging into waters with less than 100 fold dilution to ensure attainment of water quality standards. Being that the chronic and harmonic mean dilution factors are both greater than 100:1, the Department is not establishing concentration limits for arsenic and nickel at this time.

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

As with WET testing, the Department establishes monitoring frequencies in permits for chemical specific parameters that exceed or have a reasonable potential to exceed acute, chronic or human health AWQC based on the timing, severity and frequency of the results of concern. Due to the frequency of occurrence, this permitting action is establishing a 1/Quarter monitoring requirement for both arsenic and nickel.

As for the remaining chemical specific parameters tested to date, none of the test results in the 60-month evaluation period exceed or have a reasonable potential to exceed applicable acute, chronic or human health AWQC. Therefore, this permitting action is establishing a surveillance level (1/Year) reporting and monitoring frequency for the term of the permit.

f. pH: The technology based limitation range of 6.0-9.0 standard units (SU) is being carried forward from the previous licensing action. The DMR data for the period 6/98 through the present indicates the pH of the discharge has ranged from 6.3 to 8.9 standard units.

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

Waste waters discharged from this outfall are categorized as metal cleaning waste waters pursuant to federal regulation, 40 CFR, §423.12(b)(5). The permittee has indicated its application for permit renewal that boiler cleaning operations have not been conducted in the last ten-year period.

a. Flow: The previous licensing action established monthly average and daily maximum flow limitations of 0.5 MGD and 1.0 MGD respectively. The limitations are being carried forward in this permitting action and remain representative of the discharge if it were to occur.

b. Total Suspended Solids (TSS) - The previous licensing action established monthly average and daily maximum technology based concentration limitations of 30 mg/L and 100 mg/L respectively, and are being carried forward in this permitting action. The limits are consistent with the BPT limits for TSS established in federal regulation 40 CFR §423.12(b)(5).

c. Oil and Grease: - The previous licensing action established monthly average and daily maximum technology based concentration limitations of 15 mg/L and 20 mg/L that are being carried forward in this permitting action. The limits are consistent with the BPT limits for oil and grease established in federal regulation 40 CFR §423.12(b)(5).

d. Iron (Total) - The previous licensing action established monthly average and daily maximum technology based concentration limitations of 1.0 mg/L that are being carried forward in this permitting action. The limits are consistent with the BPT limits for TSS established in federal regulation 40 CFR §423.12(b)(5).

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

e. Copper (Total) - The previous licensing action established monthly average and daily maximum water quality based limits of 136 ug/L and 634 ug/L respectively, as they were more stringent than the monthly average and daily maximum technology based (BPT) limits of 1.0 mg/L. End-of-pipe water quality based thresholds for TRC may calculated as follows:

Acute (A) Criterion	Chronic (C) Criterion	A & C Dil. Factors	Calculated Acute Limit	Chronic Limit
2.9 ug/L	2.9 ug/L	47:1, 222:1	136 ug/L	643 mg/L

Example calculation: Acute (2.9 ug/L)(47) = 136 ug/L

f. Temperature: The previous licensing action established a year-round daily maximum effluent temperature limitation of 105°F which was based on a best professional judgment by the Department and FPL Wyman of the expected operational levels if a cleaning were to take place. The limit is being carried forward in this permitting action.

d. pH: The technology based limitation range of 6.0-9.0 standard units (SU) is being carried forward from the previous licensing action.

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted, the Department has made a determination based on a best professional judgment that the existing water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the waterbody to meet standards for Class SB classification.

8. PUBLIC COMMENTS

Public notice of this application was made in the Portland Press Herald newspaper on or about July 3, 2002. The Department receives public comments on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

9. DEPARTMENT CONTACTS

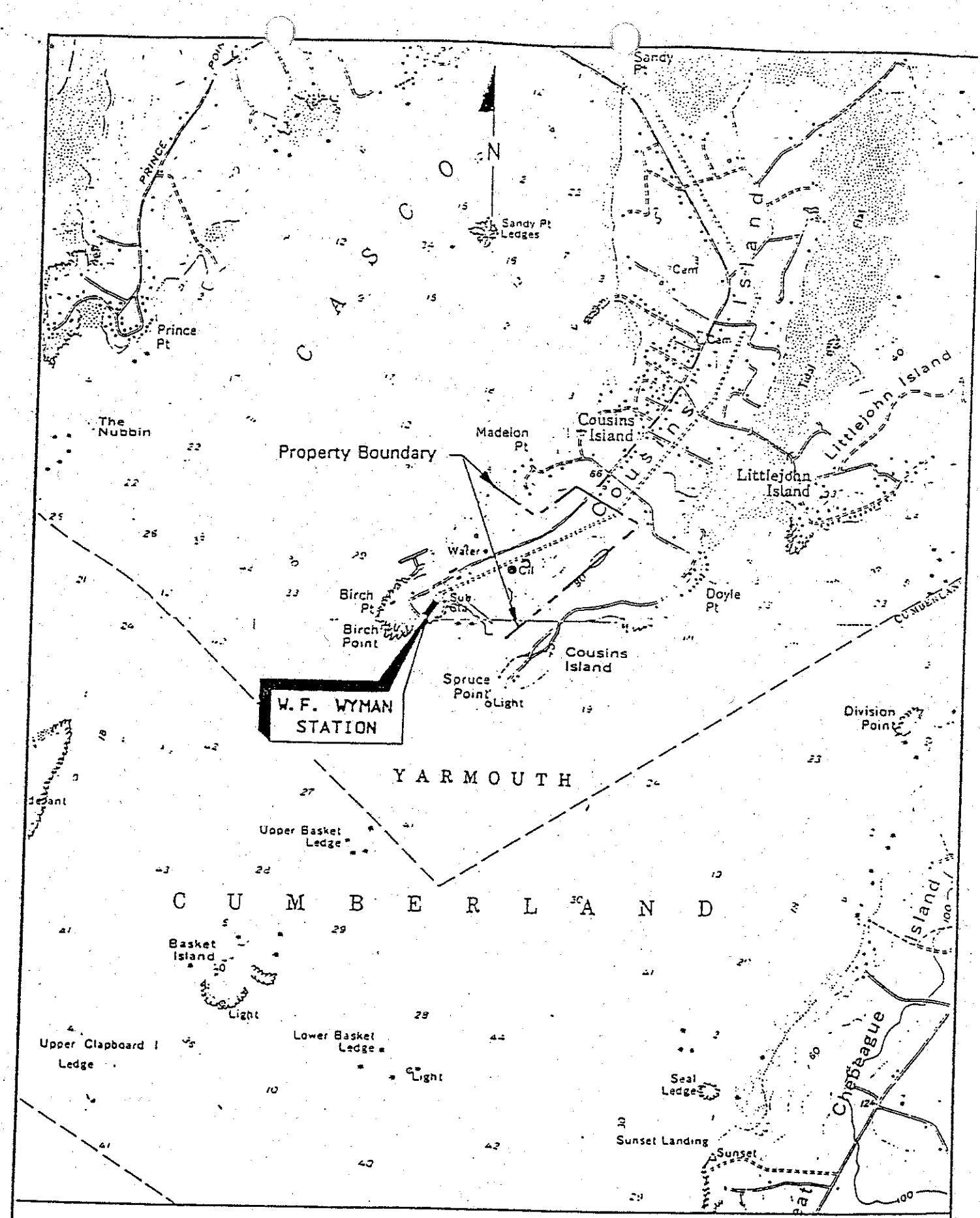
Additional information concerning this permitting action may be obtained from and written comments should be sent to:

Gregg Wood
Division of Water Resource Regulation
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone (207) 287-3901

10. RESPONSE TO COMMENTS

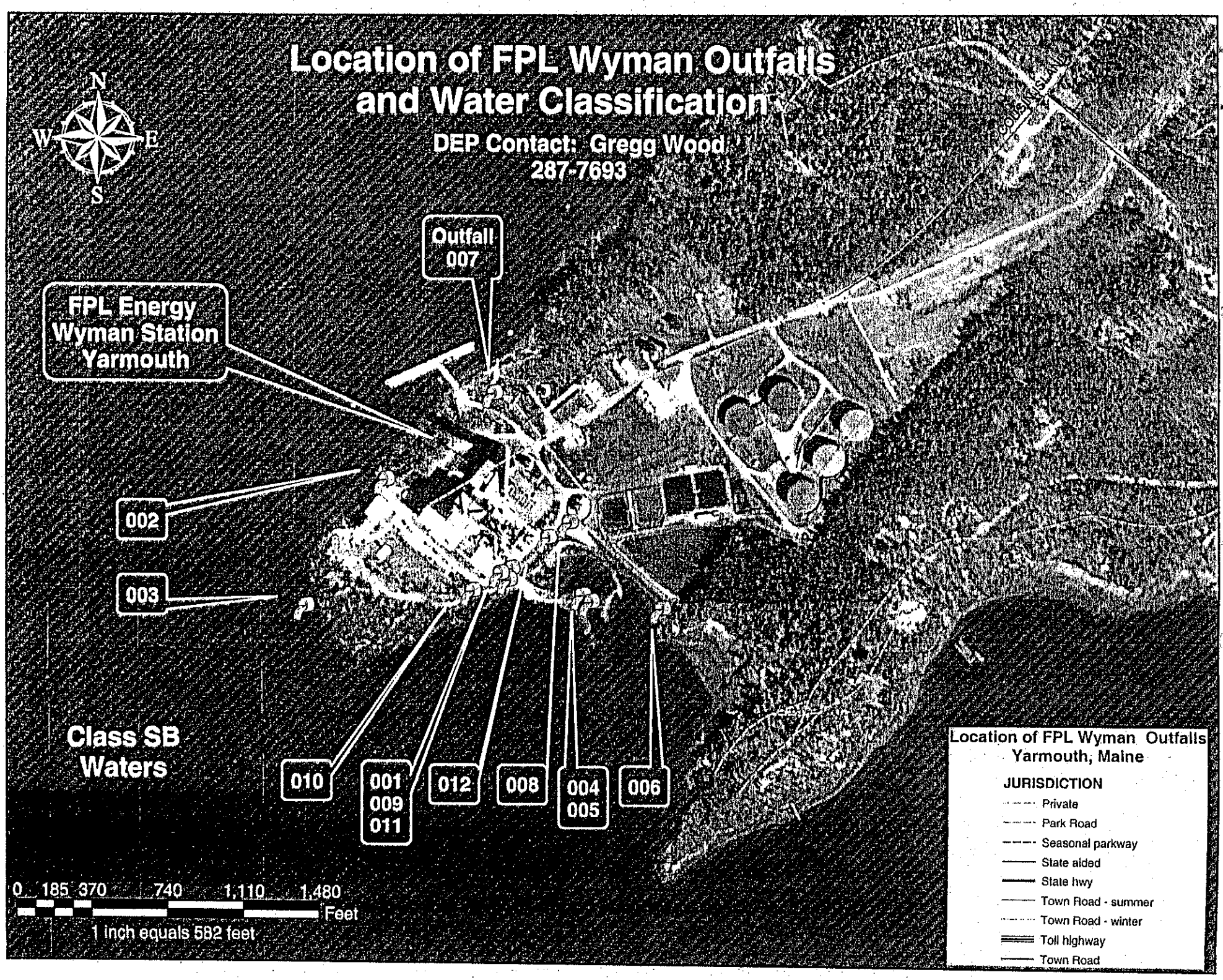
During the period of June 20, 2003 through July 20, 2003, the Department solicited comments on the proposed draft Maine Pollutant Discharge Elimination System permit to be issued to the FPL Energy Wyman LLC. The Department did not receive any comments from the permittee or other interested parties. Therefore, no Response to Comments has been prepared.

ATTACHMENT A



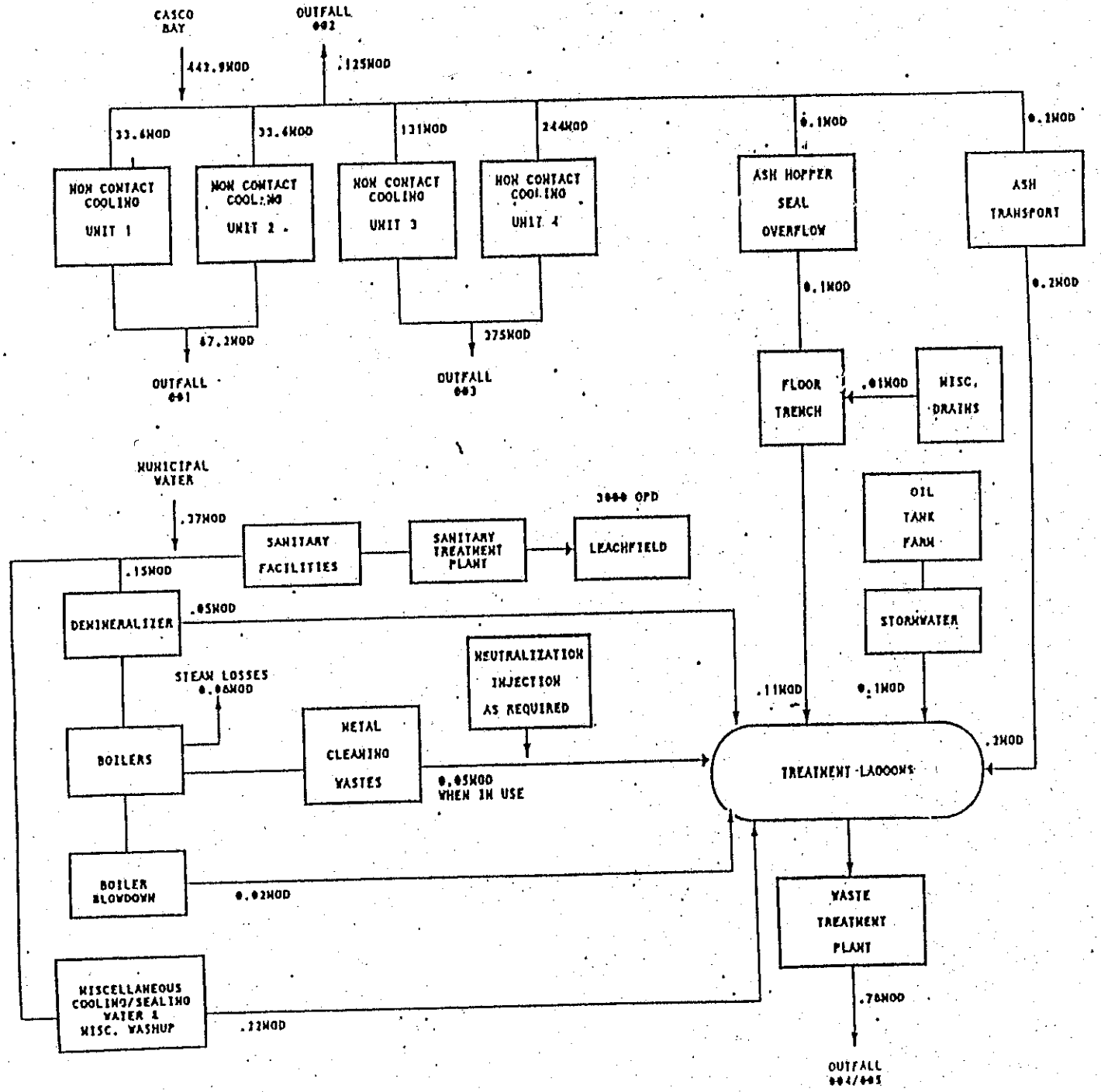
LOCATION MAP

W. F. WYMAN STATION
YARMOUTH, MAINE


Location of FPL Wyman Outfalls
and Water Classification
DEP Contact: Gregg Wood
287-7693
N
W
E
S
Outfall
007
FPL Energy
Wyman Station
Yarmouth
002
003
Class SB
Waters
010
001
009
011
012
008
004
005
006
0 185 370 740 1,110 1,480
Feet
1 inch equals 582 feet
Location of FPL Wyman Outfalls
Yarmouth, Maine
JURISDICTION
Private
Park Road
Seasonal parkway
State aided
State hwy
Town Road - summer
Town Road - winter
Toll highway
Town Road

ATTACHMENT B

SCHEMATIC OF WATER FLOW
W.F. WYM. STATION
YARMOUTH, MAINE ME 0000272



ATTACHMENT C

Species	Test	Test Result %	Sample Date	
SILVER SIDE	C_NOEL	25	05/13/1997	
MYSID SHRIMP	A_NOEL	68.2	11/30/1997	
SEA URCHIN	C_NOEL	100	11/30/1997	
SILVER SIDE	A_NOEL	37.5	11/30/1997	
SILVER SIDE	C_NOEL	10	11/30/1997	
MYSID SHRIMP	A_NOEL	50	05/17/1998	
SEA URCHIN	C_NOEL	5	05/17/1998	
SILVER SIDE	A_NOEL	10	05/17/1998	
SILVER SIDE	C_NOEL	10	05/17/1998	START 60 MONTH
MYSID SHRIMP	A_NOEL	100	11/08/1998	EVALUATION PERIOD
SEA URCHIN	C_NOEL	0.4 (EXC)	11/08/1998	
SILVER SIDE	A_NOEL	65.4	11/08/1998	
SILVER SIDE	C_NOEL	10	11/08/1998	
SEA URCHIN	C_NOEL	0.45 (RP)	02/21/1999	
MYSID SHRIMP	A_NOEL	32.5	06/20/1999	
MYSID SHRIMP	LC50	50	06/20/1999	
SILVER SIDE	A_NOEL	2.96 (RP)	06/20/1999	
SILVER SIDE	C_NOEL	2.13	06/20/1999	
SILVER SIDE	LC50	4.91	06/20/1999	
MYSID SHRIMP	A_NOEL	76.9	11/30/1999	
MYSID SHRIMP	LC50	>100	11/30/1999	
SEA URCHIN	C_NOEL	25.0	11/30/1999	
SILVER SIDE	A_NOEL	38.6	11/30/1999	
SILVER SIDE	C_NOEL	25.0	11/30/1999	
SILVER SIDE	LC50	>100	11/30/1999	
MYSID SHRIMP	A_NOEL	100	05/14/2000	
MYSID SHRIMP	LC50	>100	05/14/2000	
SEA URCHIN	C_NOEL	25	05/14/2000	
SILVER SIDE	A_NOEL	100	05/14/2000	
SILVER SIDE	LC50	>100	05/14/2000	
SILVER SIDE	A_NOEL	31.5	06/18/2000	
SILVER SIDE	C_NOEL	25	06/18/2000	
SILVER SIDE	LC50	57.4	06/18/2000	
MYSID SHRIMP	A_NOEL	100	02/06/2001	
MYSID SHRIMP	LC50	>100	02/06/2001	
SEA URCHIN	C_NOEL	2.13	02/06/2001	
SILVER SIDE	A_NOEL	100	02/06/2001	
SILVER SIDE	C_NOEL	25	02/06/2001	
SILVER SIDE	LC50	>100	02/06/2001	
MYSID SHRIMP	A_NOEL	100	12/16/2001	
MYSID SHRIMP	LC50	>100	12/16/2001	

Species	Test	Test Result %	Sample Date
SEA URCHIN	C_NOEL	25	12/16/2001
SILVER SIDE	A_NOEL	100	12/16/2001
SILVER SIDE	C_NOEL	25	12/16/2001
SILVER SIDE	LC50	>100	12/16/2001

ATTACHMENT D

Sample Date: 11/13/1998
Plant flows provided

Total Tests:	124	mon.(MGD)= 0.320
Missing Compounds:	0	day(MGD)= 0.430
Tests With High DL:	1	

M = 1 V = 0 A = 0
BN = 0 P = 0 other = 0

Sample Date: 06/20/1999
Plant flows provided

Total Tests:	134	mon.(MGD)= 0.420
Missing Compounds:	1	day(MGD)= 0.660
Tests With High DL:	0	

M = 0 V = 0 A = 0
BN = 0 P = 0 other = 0

Sample Date: 07/12/2000
Plant flows not provided

Total Tests: 124
Missing Compounds: 0
Tests With High DL: 0

M = 0 V = 0 A = 0
BN = 0 P = 0 other = 0

Sample Date: 12/16/2001
Plant flows provided

Total Tests:	132	mon.(MGD)= 0.070
Missing Compounds:	0	day(MGD)= 0.220
Tests With High DL:	0	

M = 0 V = 0 A = 0
BN = 0 P = 0 other = 0

Sample Date: 12/11/2002
Plant flows provided

Total Tests:	124	mon.(MGD)= 3.000
Missing Compounds:	0	day(MGD)= 0.440
Tests With High DL:	0	

M = 0 V = 0 A = 0
BN = 0 P = 0 other = 0

Data for "Hits" Only

MP FLP WYMAN STA 004

ASCO BAY

RSENIC
DL = 5 ug/l

	Conc, ug/l	MDL	Sample Date	Date Entered
	2.000000	OK	12/11/2002	01/27/2003
	5.000000	OK	06/20/1999	08/03/1999
	90.000000	OK	07/12/2000	09/05/2000
<	1.000000	OK	12/16/2001	03/14/2002
<	5.000000	OK	11/13/1998	01/25/1999

ICKEL
DL = 5 ug/l

Conc, ug/l	MDL	Sample Date	Date Entered
130.000000	OK	12/16/2001	03/14/2002
170.000000	OK	12/11/2002	01/27/2003
210.000000	OK	11/26/2000	03/07/2001
220.000000	OK	05/14/2000	07/27/2000
310.000000	OK	05/17/1998	02/16/1999
320.000000	OK	06/20/2000	07/27/2000
330.000000	OK	11/13/1998	01/25/1999
430.000000	OK	11/30/1999	02/01/2000
640.000000	OK	06/20/1999	08/03/1999
670.000000	OK	07/12/2000	09/05/2000
1080.00000	OK	06/20/1999	08/06/1999